

VET Data Report Germany 2015

Facts and analyses accompanying the Federal report on vocational education and training – selected findings

Federal Institute for
Vocational Education
and Training

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The Federal Ministry of Education and Research (BMBF) has the statutory duty to monitor developments in vocational education and training and to submit a report regarding such developments (Report on Vocational Education and Training) to the Federal Government on 1 April each year (§ 86 Vocational Training Act, BBiG).

The Federal Institute for Vocational Education and Training (BIBB) is required to assist in the preparation of the Report on Vocational Education and Training (§ 90 Paragraph 1, 1a). In the spring of 2008, the BMBF took the decision to reform and restructure the Report on Vocational Education and Training. The restructuring took account of the recommendation made by the BIBB Board that the Report on Vocational Education and Training should be separated into a political part to be consulted upon and adopted by the Federal Government and a non-political part for which BIBB would be responsible. Since 2009, BIBB has issued the "[Year] Data Report to accompany the Report on Vocational Education and Training. Information and analyses on the development of vocational education and training". This Data Report represents the central source of information and main data basis for the BMBF Report on Vocational Education and Training. The BMBF provides funding for the preparation and publication of the Data Report.

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Preface



Up-to-date education reporting, presented in a structured manner, is an indispensable precondition for identifying trends in the development of the VET system and for reacting to them adequately. The Data Report of the Federal Institute for Vocational Education and Training (BIBB) reports regularly and systematically on the current situation and the newest developments in vocational education and training. It is based on empirical data and social research analyses and forms the data basis for the Report on Vocational Education and Training of the Federal Ministry of Education and Research (BMBF). Both the editing of the Report on Vocational Education and Training by the BMBF and the participation of BIBB in preparing the Report on Vocational Education and Training are tasks regulated by law in the Vocational Training Act (BBiG §§ 86, 90).

This English version of the 2015 Data Report provides a selection of the main findings. The first chapter presents the current situation in initial vocational training and the second chapter presents the continuing vocational training and both highlight changes that have taken place over the course of time. Each year the VET Data Report includes a specific thematic focus. The 2015 edition considers the issue of mismatches in VET and its consequence on the labour market and economic development in Germany. Chapter 3 is dedicated to this thematic focus. Chapter 4 deals with VET innovation programmes and initiatives. Chapter 5 sets the German VET system in an international perspective by dealing with mobility and recognition issues. The full text of the report in German as well as additional information is available in the Internet portal at www.bibb.de/datenreport. The German version also includes references which are not included in this English summary.

Previous issues of the Data Report in English are available on the Internet portal http://datenreport.bibb.de/html/index_en.html. BIBB has increased the number of its publications in English to support international VET cooperation and research. Access is granted via the BIBB Internet website (www.bibb.de). The German language 2016 Data Report is available on the BIBB website (<https://www.bibb.de/datenreport/de/index.php>).

The 2015 Data Report in English provides valuable insights into the German VET system as a contribution to the debate on the role of VET in society and the economy. It is meant to support understanding of German VET system by practitioners, decision makers and researchers from abroad by providing updated data. We are looking forward to any feedback you may have on the Data Report. We will be pleased to receive ideas, remarks and constructive criticism (datenreport@bibb.de).

A handwritten signature in blue ink, appearing to read 'f.h. esser', written in a cursive style.

Prof. Dr. Friedrich Hubert Esser
President

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1. Initial vocational and training indicators

The dual system is at the core of vocational education and training in Germany. It is based on the Vocational Training Act of 1969 (amended in 2005) and is still the main pathway for the young generation into employment. Every young person who has completed full-time compulsory education has access to dual vocational training. A characteristic of this training path are two learning venues – the company and the part-time vocational school. The companies sign contracts with applicants under private law and train them in line with the binding provisions of vocational training directives which guarantee a national standard. This is monitored by the “competent bodies”, mainly the chambers (of industry and commerce, crafts, agriculture, doctors, lawyers) but also by competent bodies in the public service or via the purview of the churches.

The dual system provides broad vocational training and competences for 327 recognised training occupations (in 2014). The duration of programmes in the dual system is usually 3 years, although some last 2 and some 3 ½ years. After completing their training in the dual system, the majority of participants then take up employment as a skilled worker. Later on, many of them make use of the opportunities for continuing vocational training. Outside the dual system, there are also VET pathways in full-time vocational schools (about 15% of an age cohort). The programmes of these pathways take between 1 and 3 years, depending on the particular vocational orientation and objective.

1.1 Key facts in brief

- ▶ In 2014, the number of **newly concluded training contracts** decreased once more to around 522,200. This represented a fall of 7,200 (-1.4%) compared to 2013. The decrease in the West (-1.4%) was slightly steeper than that in the East (-1.2%).
- ▶ **Apprenticeship placements offered** declined by -0.7% in comparison with previous year to 559,300. As of 30 September 2013, the Federal Employment Agency still registered around 81,200 **unsuccessful training place applicants**. This figure was approximately 2,400 lower than the previous year. Many companies had problems in filling their training places. The number of **training places still vacant** as of 30 September 2014 was about 37,100. Considerable matching problems persist on the training market.
- ▶ In 2014, the **number of recognised training occupations** was 327. 9 updated occupations entered into force in the year 2014.
- ▶ In 2013, the **Vocational Education and Training Statistics** showed that 1,391,900 young people were in **dual vocational education and training**. The numbers for West Germany and East Germany were 1,197,900 and 194,000 respectively. The total number has fallen by 2.7% compared to the previous year.
- ▶ Of the trainees with a newly concluded training contract as of the cut-off date of 31 December 2013, 42.3% had an **intermediate secondary school leaving certificate** whilst 29.5% were in possession of the lower **secondary school leaving certificate**. The proportion of persons holding a **higher education entrance qualification** was 25.3 %. In 2013, 148,914 **training contracts were prematurely dissolved**.
- ▶ The **dissolution rate** was 25%. Consideration needs to be accorded to the fact that dissolution rates do not constitute drop-out rates. Large numbers of the young people subsequently continue training within the dual system.
- ▶ **Company participation in training** also declined in 2013. At the end of the reporting year, 438,000 companies were involved in delivering training. The proportion of companies providing training declined to 20.7%, whereby some companies were unable to fill the training places they had on offer.
- ▶ Data from the “**Integrated Training Reporting System**” (iABE) showed that the number of 2014 entrants to the transitional system was 256,100, approximately the same level as the previous year.
- ▶ Evaluations conducted by BIBB on the basis of the Microcensus show that the **proportion of unskilled workers** has fallen in recent years. In 2013, the proportion of persons in the 20 to 29 age group not in possession of a formal qualification was 12.7%.

Table 1: Development of VET market between 2009 and 2014 (cut-off date 30 September)

	2009	2010	2011	2012	2013	2014	Development in 2014 compared to 2013	
							abs.	in %
Germany								
Training place provision								
▶ Total	581,562	579,564	599,070	584,532	563,280	559,332	-3,948	-0.7%
▶ Filled (= newly concluded contracts)	564,306	559,959	569,379	551,259	529,542	522,231	-7,311	-1.4%
▶ Still unfilled as of 30.09	17,255	19,605	29,689	33,274	33,738	37,101	+3,363	+10.0%
▶ Company-based ¹	535,761	538,521	568,608	558,627	541,599	539,193	-2,406	-0.4%
▶ Extra company ²	45,801	41,043	30,459	25,905	21,681	20,142	-1,539	-7.1%
Training place demand³								
▶ Total	652,848	640,332	641,700	627,243	613,107	603,420	-9,687	-1.6%
▶ Successful (= newly concluded contracts)	564,306	559,959	569,379	551,259	529,542	522,231	-7,311	-1.4%
▶ Still searching as of 30.09	88,540	80,371	72,319	75,984	83,564	81,188	-2,376	-2.8%
Supply and demand ratio³								
▶ Total	89.1	90.5	93.4	93.2	91.9	92.7	+0.8	-
▶ Company-based	82.1	84.1	88.6	89.1	88.3	89.4	+1.0	-
Persons interested in training⁴								
Progression rate of persons interested in training in %	65.1	66.1	68.2	66.7	64.9	64.4	-0.5	-
Newly concluded training contracts	564,306	559,959	569,379	551,259	529,542	522,231	-7,311	-1.4%
West Germany								
Training place provision								
▶ Total	479,790	484,125	509,265	499,344	482,736	479,268	-3,468	-0.7%
▶ Filled (= newly concluded contracts)	465,309	468,297	484,884	472,353	455,298	448,908	-6,390	-1.4%
▶ Still unfilled as of 30.09	14,481	15,828	24,381	26,989	27,439	30,361	+2,922	+10.6%
▶ Company-based ¹	456,921	461,649	490,572	481,773	467,895	465,528	-2,367	-0.5%
▶ Extra company ²	22,869	22,476	18,693	17,568	14,841	13,743	-1,098	-7.4%
Training place demand³								
▶ Total	543,177	539,277	548,808	537,807	528,936	520,467	-8,469	-1.6%
▶ Successful (= newly concluded contracts)	465,309	468,297	484,884	472,353	455,298	448,908	-6,390	-1.4%
▶ Still searching as of 30.09	77,868	70,979	63,922	65,452	73,637	71,560	-2,077	-2.8%
Supply and demand ratio³								
▶ Total	88.3	89.8	92.8	92.8	91.3	92.1	+0.8	-
▶ Company-based	84.1	85.6	89.4	89.6	88.5	89.4	+1.0	-
Persons interested in training⁴								
Progression rate of persons interested in training in %	64.8	65.7	68.3	67.0	65.3	64.8	-0.5	-
Newly concluded training contracts	465,309	468,297	484,884	472,353	455,298	448,908	-6,390	-1.4%
East Germany (including Berlin)								
Training place provision								
▶ Total	101,643	95,325	89,670	85,068	80,472	79,980	-492	-0.6%
▶ Filled (= newly concluded contracts)	98,997	91,662	84,495	78,903	74,244	73,323	-921	-1.2%
▶ Still unfilled as of 30.09	2,644	3,662	5,175	6,163	6,227	6,657	+430	+6.9%
▶ Company-based ¹	78,711	76,758	77,904	76,731	73,632	73,581	-51	-0.1%
▶ Extra company ²	22,932	18,567	11,766	8,334	6,840	6,399	-441	-6.4%
Training place demand³								
▶ Total	109,653	101,037	92,874	89,415	83,877	82,668	-1,209	-1.4%
▶ Successful (= newly concluded contracts)	98,997	91,662	84,495	78,903	74,244	73,323	-921	-1.2%
▶ Still searching as of 30.09	10,656	9,374	8,380	10,510	9,633	9,345	-288	-3.0%
Supply and demand ratio³								
▶ Total	92.7	94.3	96.5	95.1	95.9	96.7	+0.8	-
▶ Company-based	71.8	76.0	83.9	85.8	87.8	89.0	+1.2	-
Persons interested in training⁴								
Progression rate of persons interested in training in %	66.8	68.5	67.6	65.1	63.3	63.5	+0	-
Newly concluded training contracts	98,997	91,662	84,495	78,903	74,244	73,323	-921	-1.2%

¹ Company-based = not (predominantly) publicly financed

² Extra-company = (predominantly) publicly financed. Value for West Germany in 2009 still under-reported.

³ In accordance with the new extended definition within the meaning of the Vocational Training Act (BbIG). Pursuant to §86, the Report on Vocational Education and Training is required to state the "number of persons registered with the Federal Employment Agency (as of 30 September) as seeking a training place".

⁴ (Institutionally recorded) persons interested in training are deemed to be all those who have either signed a training contract or who were at least registered as a training applicant with the Federal Employment Agency.

Retrospective corrections for earlier years were taken into account in the calculation.

Note: for data protection reasons, all values which relate to the BIBB survey as of 30 September have been rounded to a multiple of three.

Source: BIBB survey of newly concluded training contracts as of 30 September, Federal Employment Agency, training market statistics as of 30 September, calculations by the Federal Institute for Vocational Education and Training.

- ▶ According to the results of the BIBB **cost-benefits survey**, companies incurred **gross costs** in the amount of around €17,900 per trainee and year in the training year 2012/2013. After taking income from productive performance of the trainees into account, **net costs** were €5,200.

1.2 The VET market

2014¹ saw a continuation of the trend that had persisted on the training market over the past three years. Reasons for this included falling numbers of school leavers, a greater propensity to seek to enter higher education and the matching problem. Provision of and demand for training places both decreased, and the number of newly concluded training contracts fell once more. The figure for 2014 was 522,000, a new all-time low. In 2014, there was a particularly strong rise in the proportion of unfilled training places. At the same time, participation in dual VET (pursuant to the Vocational Training Act, BBiG, and the Crafts and Trades Regulation Code, HwO,) by persons interested in training decreased, meaning that fewer trainees were acquired for such training.

In 2014, training provision of 559,300 was registered. This included 539,200 company-based places and 20,100 “extra company” places (Table 1). Training place demand for 2014 was 603,400 persons. In arithmetical terms, there were 92.7 training places for every 100 potential training place applicants.

For a number of years, it has been possible to split the value of the extended supply-demand ratio into a company-based and an extra-company component. Calculation of a *company-based* supply-demand ratio is appropriate to the extent that only company-based provision forms the genuine core of market events. By way of contrast, extra-company places tend to be of a compensatory nature and are created on the basis of administrative decisions.

The 2014 *company-based* supply-demand ratio (eANR_b) also improved compared to 2013 (Table 1). It stood at eANR_b = 89.4, 1.0 percentage point higher than the year before. 522,231 new training contracts were concluded, 7,300

(-1.4%) fewer than in the previous year. The decrease in newly concluded contracts affected both West and East Germany. As had already been the case in 2012 and 2013, there was a significant fall in newly concluded training contracts in the area of trade and industry in particular (in 2014 these declined by 6,500 or -2.1% to 310,800). By way of contrast, the decrease in the craft trades sector was only 900 contracts, or 0.6%. In East Germany, the craft trades even recorded a slight increase (+1.4%). The decrease in trade and industry was mainly due to the fact that many occupations in the service sector reported fewer contracts, such as the newly regulated occupation of office manager, which amalgamated the three previous occupations of office management clerk, commercial clerk for office communication and specialist in office communication. The same applied to the occupations of bank clerk, hotel specialist, sales assistant for retail services, industrial clerk, management assistant for retail services and restaurant specialist. On the other hand, growth was achieved in some private sector technical occupations.

1.2.1 Supply of and demand for apprenticeship placement

Development on the training market has been influenced by the demographic situation for a number of years. As long ago as 2004, the number of general school leavers not in possession of a higher education entrance qualification – the main clientele of dual vocational education and training – fell by more than 163,000, or more than a fifth, and this negative trend will continue in the coming years. A further loss of over 100,000 persons is expected by 2025.

In 2014, the decrease in general school leavers without a higher education entrance qualification was 8,400 or 1.5%. The same year also saw a significant decline in general school leavers holding a higher education entrance qualification (by 40,400 or -12.9%). By way of contrast, the number of vocational school leavers rose slightly (+1,600), and the Employment Agency also once again registered slightly more training place applicants from previous school leaver cohorts (+3,900 in total). This was, however, insufficient to prevent a further decline in the number of persons interested in training. Within the course of the reporting year 2012/2013, the number of persons institutionally recorded as being interested in training fell once more by 4,800 or 0.6% (Table 2).

¹ Insofar as nothing to the contrary is explicitly indicated, the year stated refers to the reporting year of the official overall training market statistics, which commences on 1 October of the previous year and ends on 30 September.

Table 2: Development of the number of general and vocational school leavers, of registered training place applicants from previous school leaver cohorts and of persons institutionally recorded as being interested in training

	School leavers and those completing school leaving qualifications at general schools ¹		School leavers and those completing school leaving qualifications at vocational schools ¹		Registered training place applicants from previous school leaver cohorts ²		Persons institutionally recorded as being interested in training ³
	No higher education entrance qualification	Higher education entrance qualification	BVJ, BGJ und BFS	FOS and FGym	From previous year	From earlier years	
Germany							
2001	691,786	218,998	229,889	84,284	144,329	156,090	966,510
2002	689,770	229,227	238,818	86,443	140,056	164,313	936,147
2003	702,649	227,157	255,379	91,946	147,054	180,162	938,682
2004	714,789	230,592	280,231	101,186	150,938	187,918	945,531
2005	703,436	235,843	303,793	105,569	156,876	185,184	929,247
2006	696,817	249,949	312,659	107,827	171,789	213,459	973,647
2007	677,587	264,542	302,587	119,422	161,856	223,022	1,038,663
2008	634,609	272,474	291,495	121,522	128,539	191,854	954,351
2009	597,018	273,727	277,713	117,409	116,121	142,943	866,475
2010	568,787	273,616	267,363	121,931	110,218	150,724	846,858
2011	543,092	316,874	247,602	121,959	103,967	136,946	835,131
2012	535,590	310,576	229,664	125,703	99,101	134,445	825,993
2013	559,703	313,529	217,702	120,631	95,792	135,608	815,367
2014	551,309	273,132	217,690	122,247	95,331	139,937	810,540
Development	-8,394	-40,397	-12	+1,616	-461	+4,329	-4,827
2013 to 2014	-1.5%	-12.9%	-0.0%	+1.3%	-0.5%	+3.2%	-0.6%

¹ School leavers and those completing school leaving qualifications at general and vocational schools – actual figures until 2013, estimates for 2014. School leavers and those completing school leaving qualifications at vocational schools does not include those completing fully qualifying VET courses.

² Actual figures until 2014. 2005 to 2008 does not include applicants looked after by authorised local government providers.

³ Values rounded to a multiple of three.

Abbreviations: BVJ = prevocational training year, BGJ = basic vocational training year, BFS = full-time vocational school (not including fully qualifying courses), FOS = specialised upper secondary school, FGym = specialised grammar school

Source: Federal Statistical Office, Standing Conference of the Ministers of Education and Cultural Affairs, Federal Employment Agency, calculations by the Federal Institute for Vocational Education and Training

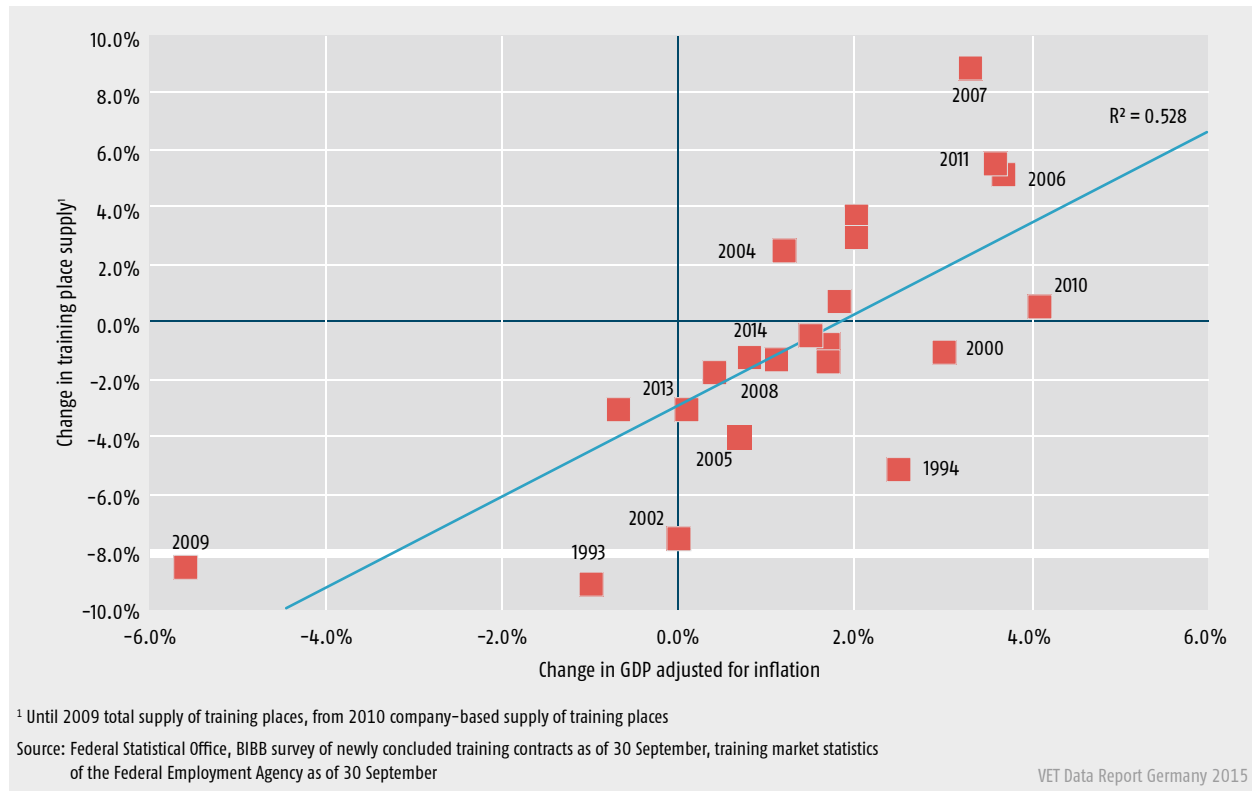
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Because slightly higher economic growth was achieved in 2014 (increase in gross domestic product adjusted for inflation of +1.5%), the reduction in the supply of training places was not as steep as in previous years. Nevertheless, this growth was not sufficient to bring about a rise. An increase in training places supply cannot usually be expected until economic output has gone up by a greater amount (Figure 1).

In 2014, 559,300 training places were on offer within the dual system of vocational education and training in Germany. This represented a fall of 3,900 or 0.7% com-

pared to the previous year. This meant that the **supply of training places** fell to its lowest level since reunification (Figure 2). Only seven years previously, in 2007, the corresponding figure was 644,200. The repeated decrease in 2014 is partially caused by a reduction in the number of training places that are predominantly publicly funded (“extra company”). There was a fall in the number of such places of 1,500 or 7.1% to 20,100. Company-based provision decreased by 2,400 places (-0.4%) to 539,200. Differentiated according to areas of responsibility, the following picture emerged for 2014. In the area of trade and industry, the supply of training places decreased

Figure 1: **GDP – supply of VET placements: Correlation between annual change to GDP and supply of training places 1993 to 2014**



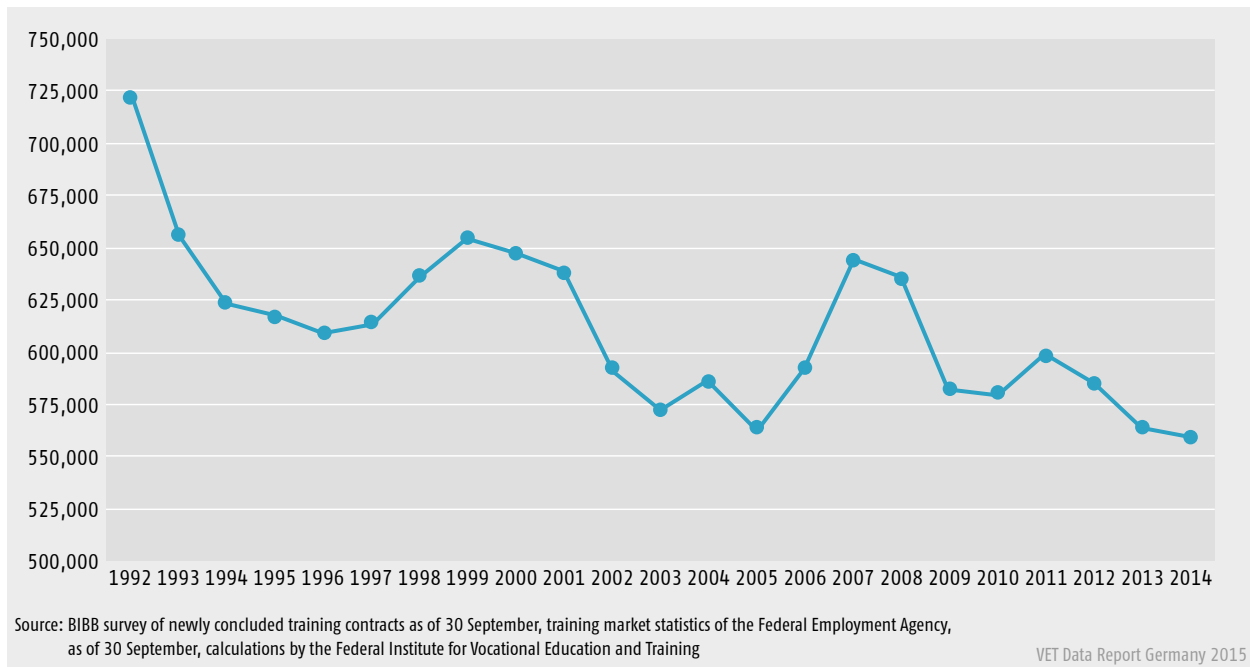
from 335,800 (2013) by 5,500 or 1.5% to 330,600. By way of contrast, the craft trades sector saw a small rise from 153,000 to 154,000 (+0.7%). Training place supply in the public sector in 2014 was 12,600. This represented a rise compared to the previous year (+100 or +0.9%). A slight increase compared to 2013 also occurred in agriculture (+100 or +0.6%). In the other areas (liberal professions, housekeeping, maritime sector), the supply of 48,400 was approximately at the same level as in the previous year.

In 2014, **demand for training places** – below solely based on the extended calculation which has been possible in this form since 2007 – fell by 9,700 persons or 1.6% to only 603,400. Compared to 2007, when a demand of 756,800 was recorded, this represents a fall of 153,400 or 20.3%. The main reason for this decrease is unfavourable demographic development and an associated continuous decline in the number of young people.

Because demand for training places fell even more sharply than supply, the arithmetic ratio between supply and demand rose in 2014. In 2014, there were 92.7 training places for every 100 potential applicants. The corresponding figure for the previous year was 91.9. This meant that there was once again a slight improvement in the training situation for potential applicants.

The number of registered (company-based) VET places still unfilled as of 30 September has risen significantly over recent years. The figure for 2014 was 37,100, almost three times higher than the low point reached in the year 2005. The last year in which there was a higher number of vacant apprenticeships is 1995. Compared to the previous year, the number of **unfilled company-based training places** increased by 3,400 or 10.0%. In 2014, the proportion of unfilled training places in relation to company-based provision was 6.9%. Differentiation by fields of responsibility shows that the public sector is the only area in which there was a fall in the number of unfilled places as a proportion of overall provision compared to the

Figure 2: VET placements 1992 to 2014



previous year. The craft trades recorded the highest proportion of unfilled training places at 8.7%. The causes for the increasing number of vacant places are multifarious. Statistical analyses at regional level (employment agency districts, federal states) show that the more training places there are on offer to young people in a region who are interested in entering training, the greater the problems in filling places will be. This is because competition between training place providers is exacerbated.

In 2014, the number of persons still seeking a VET place as of 30 September and therefore deemed to be unsuccessful training place applicants was 81,200. This figure represents a slight fall compared to the previous year (West -2,100 or -2.8%, East -300 or -3.0 %). Nevertheless, in 2014 the **proportion of unsuccessful training place applicants** made up 13.5% of official training place demand and thus remained at a comparatively high level. Differentiating registered training place applicants by school leaving qualification, it is noticeable that, within the group of applicants still seeking a place, there has been a continuous increase over the past five years in the proportion of persons with a University of Applied Sciences entrance qualification or a general higher education entrance qualification. Whereas in 2010 only 17.5% of unsuccessful applicants were in possession of an upper

secondary school leaving qualification (higher education entrance qualification), this figure was as high as 25.5% by 2014. One of the reasons for the increasing proportion of persons with a higher education qualification amongst unsuccessful training place applicants is the strong increase in this group of persons as a result of double upper secondary leaver cohorts. However, these proportions also raise questions with regard to the career choice behaviour of this group. We know from other analyses that those in possession of a higher education entrance qualification who are choosing an occupation within the dual system strongly concentrate on commercial and secondary service sector careers whilst mostly not considering manufacturing occupations. Although the craft trade sector has succeeded in attracting more apprentices with a higher education entrance qualification over the past few years, the proportion of such persons still remains low at about 10% in overall terms.

Within the training market statistics produced by the Federal Employment Agency, which provide information on the destination of all applicants registered with the labour administration authorities, the group of training place applicants still seeking an apprenticeship can be divided into two categories. These are the group of so-called “unplaced applicants” (20,900 persons in 2014)

and the group of “applicants with an alternative as of 30 September” (60,300 persons in 2014).

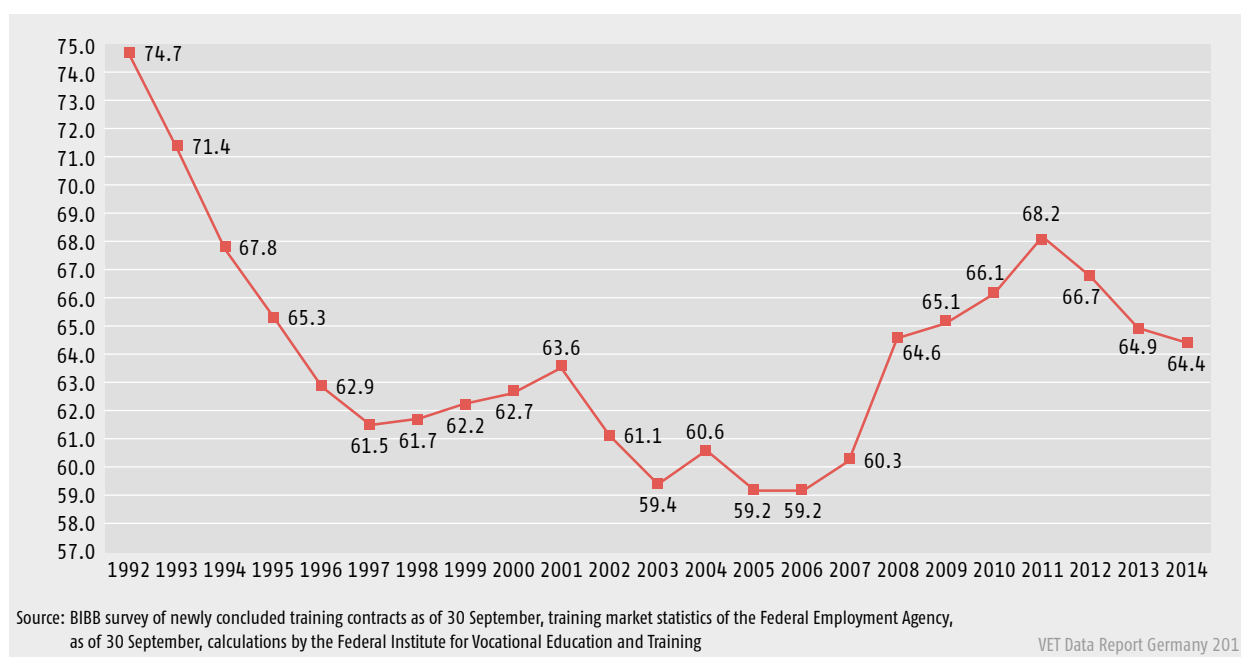
For young people still seeking a training place as of 30 September 2014 for the training year 2014/2015, which had already commenced, the labour administration bodies continued their endeavours after the cut-off date. The starting conditions for such subsequent placements were, however, not easy. Although the arithmetical gap between the number of training applicants still seeking a place at the end of September 2014 (81,200) and the number of unfilled training places (37,100) was smaller than one year previously (44,100 as opposed to 49,800), the deficit was still considerable.

The number of young people for whom a placement (temporary or permanent) was still actively being sought between October 2014 and January 2015 in order for them to enter for the training year 2014/2015 which had already commenced was 70,800. This was 1,200 fewer than in the previous year. The total number of subsequent placement assignments comprised 50,300 young people who had been registered as training place applicants for the past reporting year 2013/2014 and 20,500 for whom this was not the case.

Alongside the indicators relating to training place demand described above, progression or participation for young people interested in entering dual vocational education and training can also be calculated. Figure 3 shows the development since the 1990’s in the proportion of persons interested in training who had actually signed a new training contract as of the statistical cut-off date of 30 September and were able to commence dual VET.

There are various causes for the falling progression rates. There is fundamentally a close correlation between the progression rate and training places supply. The progression rate to dual VET of persons interested in training reacts to changes in the supply of training places and in the structure of characteristics of the applicants. For the coming years, in which the number of young people interested in training will continue to undergo a chronic fall for demographic reasons and as a consequence of the trend towards higher school leaving qualifications, it will in particular be an indicator of how successfully the constantly shrinking group of persons interested in training can be better exploited in order at least partially to offset the demographic effect and the effect of higher school qualification.

Figure 3: **Development of the progression rate to dual vocational education and training of young people interested in training (in %)**



1.2.2 BIBB forecast analysis – development of supply and demand potential

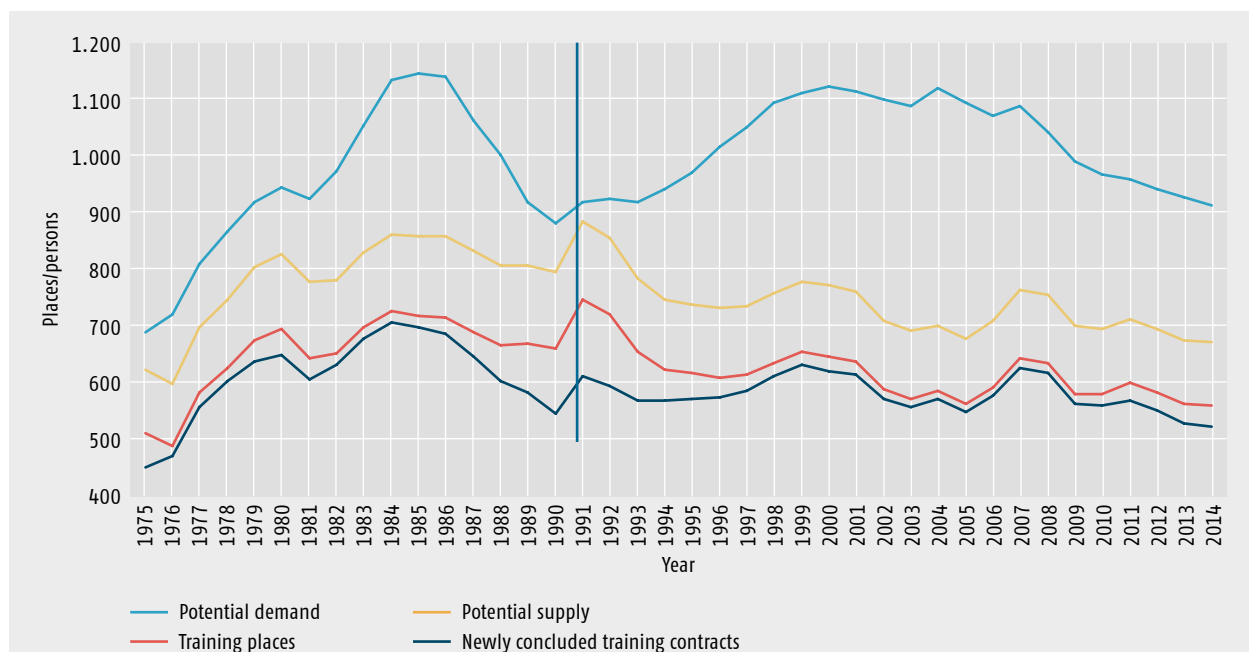
The amount of training place supply depends on numerous determinants. Some of these exert reciprocal effects on one another, and changes are difficult to predict in some cases. Determinants include development of the economy as a whole (e.g. changes to GDP and the order books of companies), development of the labour market (e.g. the number of employed and unemployed persons), developments in demographic conditions and previous experiences in filling training places. For this reason, BIBB has commissioned the establishment of an “Economic Prognosis and Simulation Model for the Training System” (PROSIMA) in order to assess training place supply. PROSIMA is a complex prognosis model based on time series which takes account of a wide range of cause variables influencing the development of the supply of training places.

It predicted a supply of 567,100 places for 2014. This was, however, accompanied by a warning that the supply

of training places could be lower “if companies row back their interest in recruiting skilled workers via dual training because of a lack of recruitment success in the past”. In such a case, development of new contracts would follow the demographic decline. This decrease in training places on offer seems to have occurred in that the prognosis has over-estimated the actual supply figure of 559,300 by around 8,000 places. The uncertainties in the prognosis are likely to have decreased following the overcoming of the economic crisis and the switch over to eight-year upper secondary education in the federal states. For this reason, the results for 2014 indicate that PROSIMA will be able to deliver reliable figures for 2015.

Supply and demand potential are latent values within PROSIMA. These contain the overall potential for training places which companies, professional practices and government bodies are thinking of establishing or re-offering as well as the overall potential of applicants who have displayed interest in training by the cut-off date. Every year, these values are estimated and updated via state space models. Figure 4 shows the **development of supply and demand potential**, development of overall provision

Figure 4: **Development of supply and demand potential, training places and newly concluded training contracts as of 30 September of a year**



Source: Federal Institute for Vocational Education and Training, Federal Employment Agency, Lösch/Maier (2015)

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Table 3: Evaluation of training market development as of 30 September 2015

	Actual value 2014	Prognosis for 2015				
		Lower limit of the confidence interval	Points estimate via PROSIMA	Upper limit of the confidence interval	Change compared to 2014	Standard deviation of points estimate ¹
Training place supply (in thousands)	559.3	524.7	542.3	560.0	-17.0	9.0
Unfilled training places (in thousands)	37.1	27.3	37.0	46.7	-0.1	4.9
Training place demand (extended definition) (in thousands)	603.4	568.9	583.5	598.1	-19.9	7.5
Training place demand (old definition) (in thousands)	543.1	511.4	524.9	538.3	-18.2	6.8
Unplaced applicants (in thousands)	20.9	15.2	19.5	23.8	-1.4	2.2
Applicants continuing to search with an alternative as of 30 September (in thousands)	60.3	54.4	58.6	62.9	-1.7	2.2
Supply and demand ratio (extended definition)	92.7	90.8	93.0	95.1	+0.3	1.1
Supply and demand ratio (old definition)	103.0	101.2	103.3	105.5	+0.3	1.1
Newly concluded training contracts (in thousands)	522.2	492.0	505.4	518.7	-16.8	6.8

¹ Measurement of the uncertainty of the points estimate. Doubling the standard deviation enables an approximate estimation of the upper and lower values area (confidence interval), within which the true value is assumed to lie (five percent probability of error).

Source: Federal Institute for Vocational Education and Training, Federal Employment Agency, Lösch/Maier (2015)

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of training places and development of newly concluded training contracts since 1975. It clearly demonstrates that supply potential or training places on offer between the start of the 1990's to the mid-2000's do not stringently follow the development on the demand side. Greater proportionality of developments is evident prior to German reunification, and this seems to have re-established itself since about 2007. This more recent development is likely to be predominantly due to a tightening of demand potential which reduces the choice opportunities for companies in the recruitment of young people. In addition to this, the familiar factor of demographic decline has also led to a reining back of extra-company training places on offer in the more recent past. Despite this decrease, demand potential for training places is still above supply potential, meaning that if demand potential can be better exploited the current level of newly concluded training contracts could be maintained, even in the medium term. Various factors play a role in predicting the variables relating to potential. On the one hand, supply potential is dependent on labour market factors (rate of unemployment and unfilled places) and on economic development (GDP). On the other hand, a part is also played by past

development in applicants for training places (school leavers) and successful exploitation from the company view, which is visible in the form of the lowest possible number of unfilled training places. Whereas Federal Government prognoses assume that GDP will grow by 1.5% in real terms in the year 2015 (2014 1.4%, 2013 0.1 percent), it seems likely that the number of school leavers with a lower or intermediate secondary school leaving certificate will fall by 2.2% from 2014 to 2015. In overall terms, the strong degree of demographic decline means that, in terms of determining supply potential, we can expect a relative loss of significance of economic components as compared to demographic components. As in the previous year, a crucial factor for 2015 will be the extent to which companies, professional practices and government bodies allow themselves to be discouraged by past attempts to fill training places that may have been unsuccessful and adjust their training offer accordingly. If they cut back provision on the basis of the rising number of unfilled training places in the recent past, development of supply potential will follow the development of demand potential in the long term.

Table 3 shows the results of the **Projection for the Year 2015** assuming that supply potential will decrease by 0.9% compared to the previous year in line with past development. The slight decrease in demand potential would mean that the number of unplaced applicants would also fall slightly to 19,500 persons and that the number of unplaced applicants with an alternative would fall to 58,600. The decrease in newly concluded training contracts and unfilled training places is mainly dependent on the willingness on the part of companies, professional practices and government bodies – a willingness which has been empirically demonstrated to be declining – to continue to seek persons interested in training despite unsuccessful recruitment processes in the past

and also to register their training places with the Federal Employment Agency.

1.2.3 Regional distribution of VET

Providing training places to young people interested in training is one of the most urgent objectives of VET policy. The challenge is to bring applicants and training place provision together at a local level in such a way so as to avoid problems in filling training places and ensure that there are no unplaced applicants. Constant mention is also made within this context of regional matching problems, i.e. supply and demand within individual regions do not fit together. This can result from quantitatively

Table 4: **Selected indicators for the 2014 training places market situation and development compared to 2013**

Indicator		Very imbalanced	Imbalanced	(Relatively) imbalanced	Total
Training market					
Company-based supply-demand ratio (extended definition) (eANRbetr)		81.5	88.5	98.3	89.2
	Change compared to 2013 in %	+0.5	+1.4	+1.4	+1.1
Supply-demand ratio (extended definition) (eANR)		85.7	92.9	101.8	93.5
	Change compared to 2013 in %	+0.5	+1.0	+1.2	+0.9
Supply-demand ratio (old definition) (ANR)		99.3	102.7	109.2	103.8
	Change compared to 2013 in %	+0.3	+1.0	+0.9	+0.7
Newly concluded training contracts		171,795	169,992	180,447	522,231
	Change compared to 2013 in %	-1.7	-0.3	-1.5	-1.2
Training provision					
Total provision		180,387	179,604	199,260	559,251
	Change compared to 2013 in %	-1.1	+0.3	-0.6	-0.5
Company-based training places offered (ANbetr)		172,626	172,656	193,830	539,109
Proportion of company-based training places as % of total provision		-1.1	0.7	-0.3	-0.2
	Change compared to 2013 in %	+95.2	+95.4	+96.6	+95.8
Unfilled training places (UBA)		8,593	9,612	18,813	37,018
	Change compared to 2013 in %	-14.4	+6.6	+5.8	-0.6
Unfilled training places per 100 company-based training places offered		5.4	6.2	10.3	7.3
	Change compared to 2013 in %	-12.9	+6.3	+6.4	+/- 0,0
Unfilled training places per 100 applicants by extended definition (UBA/UVBgesamt)		25.4	45.7	132.4	68.2
	Change compared to 2013 in %	-13.2	+7.4	+9.6	+1.3
Training demand					
Total demand (extended definition) (eNA)		210,945	194,886	197,307	603,138
	Change compared to 2013 in %	-1.7	-0.8	-1.8	-1.4
Total demand by old definition (Na)		183,558	176,040	183,297	542,895
	Change compared to 2013 in %	-1.5	-0.7	-1.5	-1.2
Unplaced applicants by extended definition (UVBgesamt)		39,150	24,894	16,860	80,904
	Change compared to 2013 in %	-1.9	-5.5	-6.0	-4.5
Unplaced applicants by extended definition per 100 applicants by extended definition (UVBgesamt/eNA)		18.7	12.7	8.5	13.2
	Change compared to 2013 in %	-0.1	-4.4	-4.1	-2.9

Source: Survey as of 30 September (Federal Institute for Vocational Education and Training) and training market statistics (Federal Employment Agency)
Absolute values rounded to a multiple of three.

Figure 5: **Change in the number of company-based training place offers per 100 applicants according to the extended definition in the employment agency districts in 2014 compared to 2013 (in %)**

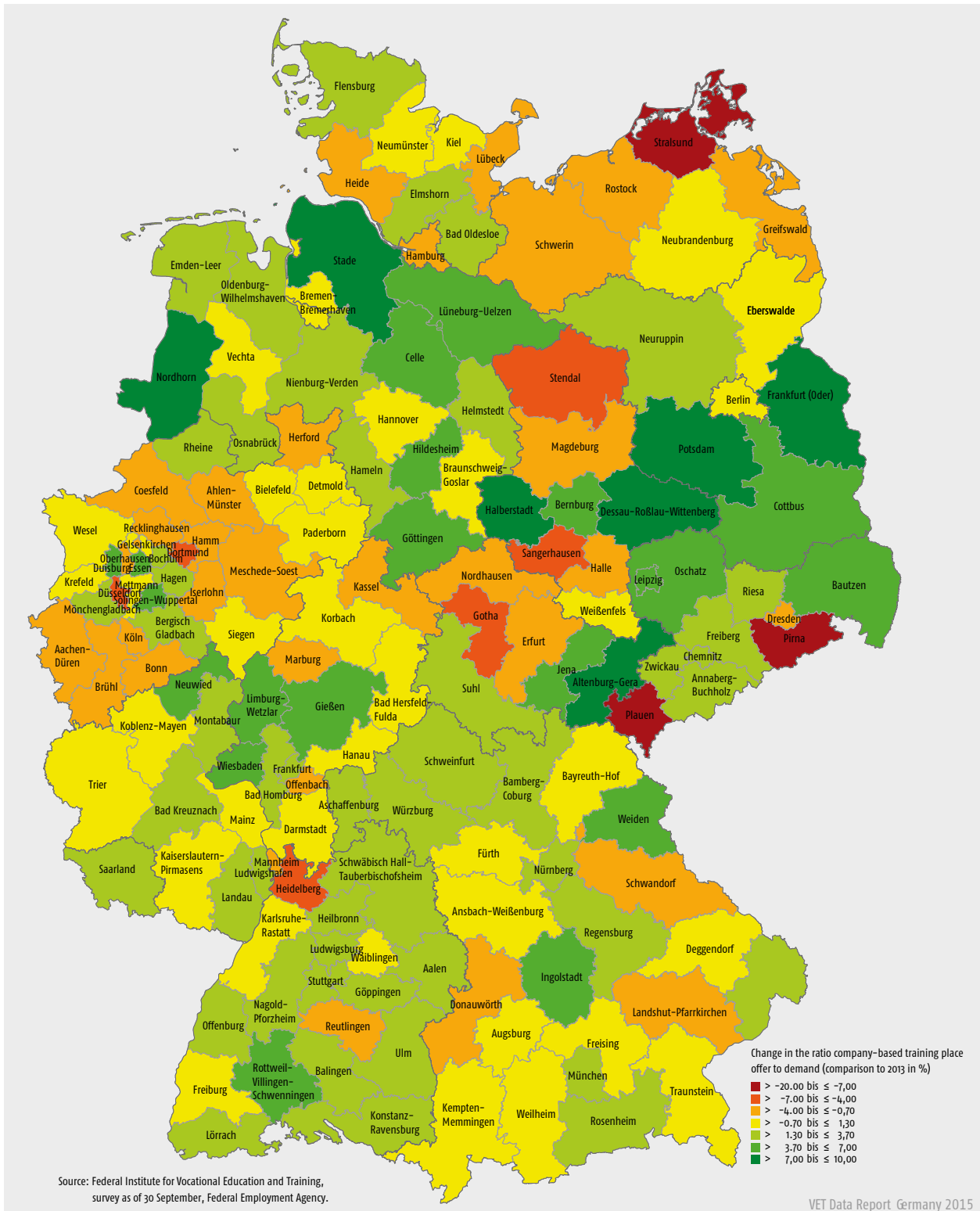
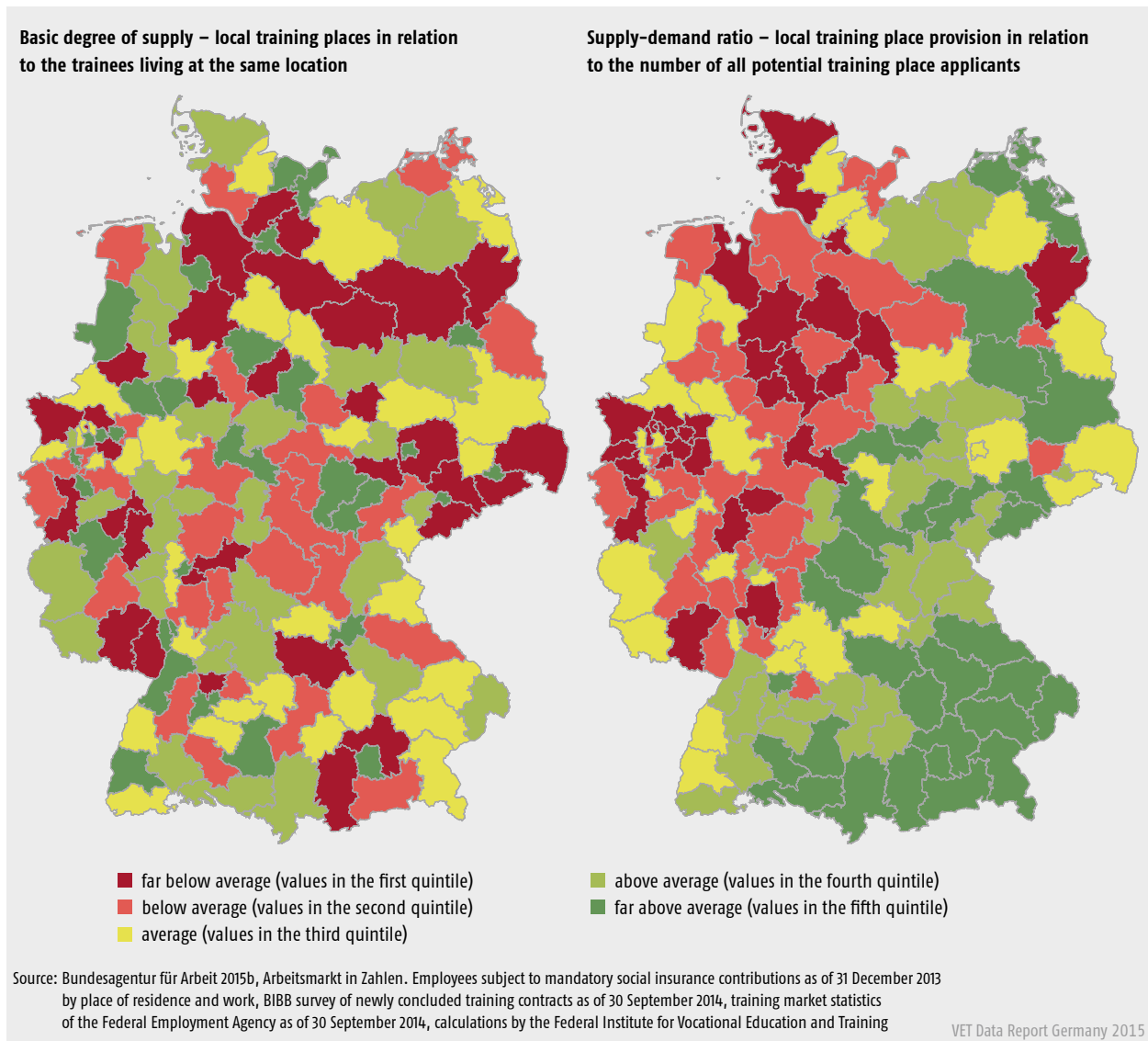


Figure 6: **Basic degree of supply (31 December 2013) and supply-demand ratio (30 September 2014) in comparative terms**



imbalanced training markets². The average picture for Germany is a somewhat skewed ratio of 89.2, in which demand exceeds supply. This means that there are 89.2 company-based training places on offer for every 100 potential applicants (Table 4).

A representation of the regional training markets is provided in Figure 5.

² The database is the Federal Institute for Vocational Education and Training survey as of 30 September and the Training Market Statistics of the Federal Employment Agency, cut-off date 31 December.

Training place supply is slightly down on 2013. 559,251 places were on offer in total, a fall of 0.5%. Once again, the regions most strongly affected are those with a highly imbalanced training market, where there has been a decrease of 1.1% down to 180,387 places on offer. A comparable trend is revealed in the case of company-based training, which offers 539,109 places, the bulk of the provision. On average, 95.8% of places provided are offered by companies. **Overall demand** by extended definition also takes account of unplaced applicants with an alternative. This overall demand stands at 603,138 and represents a slight decrease of 1.4% compared to 2013,

whereby it has fallen by -1.7% in regions with a highly imbalanced training market and by -1.8% in balanced regions. A stronger decrease can therefore be observed with regard to demand than is the case in respect of supply (-0.4%).

The **willingness of young people to be mobile**³ helps to alleviate regional imbalances between supply and demand on the training market. Around 365,700 of the 1,612,200 training places registered by the Federal Employment Agency in the 154 employment agency districts as of 31 December 2013 were filled by persons who commuted from outside the area rather than by trainees who resided in the relevant district. The *inward commuter rate* (proportion of training places in a region filled by persons from outside the region) is calculated in this way, although it varies very considerably from region to region. Inversely, around 365,700 of the 1,612,200 employees registered as trainees by the Federal Employment Agency in 2013 were completing their training in another district, not in the district where they themselves lived. The *outward commuter rate* thus defined (proportion of trainees in a region which commutes out of the region) also differs very significantly in the 154 regions. A regression analysis can be performed to determine the factors which favour a high *outward commuter rate* and therefore also a high level of mobility. As can be read from the constant, the mean outward commuter rate in rural regions (with a population density of less than 100 inhabitants per square kilometre) is 25.0%. This value relates to rural regions with an average basic degree of supply⁴ and an average inward commuter rate. Young people from large cities are therefore revealed to be somewhat more immobile than young people from rural regions, even if supply conditions are similar. In many regions, inward and outward commuter rates vary significantly and thus do not compensate for each other (Figure 6).

3 Important information regarding the mobility of young people in connection with their vocational education and training may be gleaned from the Employee Statistics of the Federal Employment Agency (cf. Statistik der Bundesagentur für Arbeit 2015 b). These indicate where young people live and where their training places are located. Commuter movements between regions (employment agency districts) and federal states are traced on this basis below. The cut-off date is 31 December 2013.

4 The basic degree of supply is defined as the ratio between the number of training places in a region and the number of trainees who live in the same region. If the basic degree of supply is high, a large number of training places is available to trainees residing in a certain region in purely arithmetical terms.

1.2.4 Developments in apprentices in the dual system of vocational education and training

On 31 December 2013, 1,391,886 persons were registered as trainees in dual vocational education and training pursuant to the Vocational Training Act (BbIG) or the Crafts and Trades Regulation Code (HwO). This represents a fall of 38,091 (-2.7%) compared to the previous year. Although the population data fluctuates considerably over the course of time, there has been a continuous decline since 2008. The consequence of this is that the 2013 reporting year saw the total number of trainees fall to its lowest level since 1992 (Table 5). From a regional perspective, there has been an increasing shift in the proportions for West and East Germany occasioned by the fact that the number of trainees in the federal states of the East has fallen more sharply than has been the case in the western part of the country. The largest area of responsibility is trade and industry, which as of December 2013 reported 825,156 trainees (around 60% of the total number).

1.2.5 Summary of integrated training reporting⁵

As a ratio of the residential population of the same age, about 64% of young people aged between 15 and 19 were in the training system in Germany in 2013. Arranged within the sectors of the training system, each respective age group exhibits a clear qualifications-specific characteristic.

- ▶ 79.2% of young people aged 15 were still in “lower secondary education”.
- ▶ The proportion of young people aged 17 who were in the transitional area was comparatively high (11.6%).
- ▶ 19-year olds were most commonly in “vocational education and training” (37.5%).
- ▶ As expected, the proportion of “others” increased amongst those who were older and reached 64.1% in the 24-year old age class.

5 “The “Integrated Training Reporting System” (iABE) is a nationally standardised reporting system which helps to map structures and developments in the training system. In the sectors and accounts covered by the iABE, data is available on persons commencing training, on persons participating in training – so-called “population data” – and on those who complete/leave training. The population data maps all pupils or participants in a training course as of a cut-off date, whereas the data on those commencing training only covers new entrants. The number of those completing/leaving training is made up of “successful” and “unsuccessful” participants in a training course.

Table 5: Trainees as of 31 December 2013 by areas of responsibility¹, whole of Germany

Year	Total number of trainees	Trade and industry	Craft trades	Public sector	Agriculture	Liberal professions	Housekeeping	Maritime sector ²
1992	1,666,209	841,605	553,449	71,355	32,604	154,560	12,072	570
1993	1,629,312	786,513	567,744	73,512	29,685	158,862	12,633	366
1994	1,579,878	723,981	588,102	66,732	29,409	158,973	12,351	327
1995	1,579,338	702,867	615,351	56,721	31,257	160,350	12,486	309
1996	1,592,226	707,322	627,813	49,374	33,894	160,593	12,903	327
1997	1,622,679	736,284	630,903	47,613	37,413	156,588	13,536	342
1998	1,657,764	778,884	624,981	48,183	40,089	151,137	14,097	390
1999	1,698,330	833,016	616,872	47,457	40,386	146,598	13,638	363
2000	1,702,017	860,811	596,163	46,320	38,922	146,247	13,170	387
2001	1,684,668	876,141	564,480	45,453	37,530	147,585	13,107	372
2002	1,622,442	850,158	527,853	45,237	37,053	148,812	12,945	387
2003	1,581,630	838,368	502,365	43,338	38,292	145,731	13,137	396
2004	1,564,065	837,915	489,171	44,019	40,398	138,711	13,362	486
2005	1,553,436	848,217	477,183	43,365	41,313	130,419	12,300	639
2006	1,570,614	872,805	476,616	42,972	42,024	123,642	11,778	780
2007 ³	1,594,773	910,320	475,065	38,994	42,894	114,870	11,667	963
2008	1,613,343	934,221	471,039	38,043	42,204	116,664	11,172	-
2009	1,571,457	909,072	455,568	37,980	41,028	117,015	10,794	-
2010	1,508,328	873,402	434,907	37,587	38,667	113,682	10,086	-
2011	1,460,658	850,689	414,207	37,998	36,624	111,861	9,276	-
2012	1,429,977	841,062	400,131	35,967	34,764	109,854	8,196	-
2013	1,391,886	825,156	381,387	34,932	33,585	109,443	7,386	-

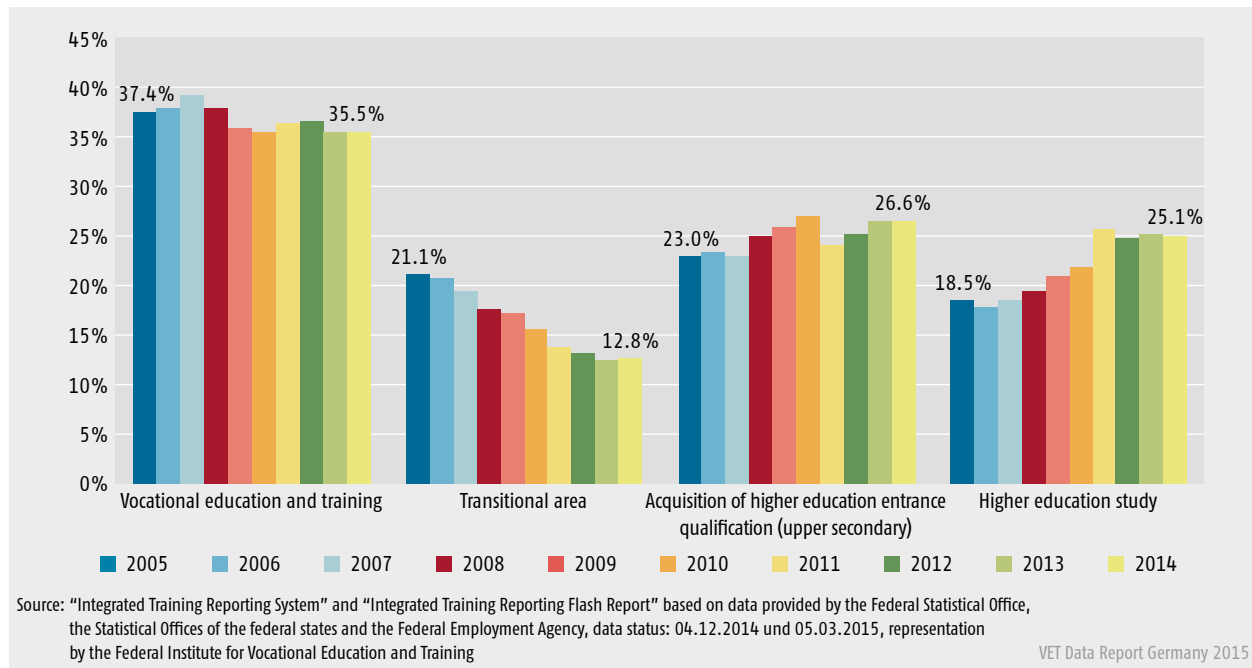
¹ Alignment of trainees to the areas of responsibility is generally determined by the competent body in charge of the training occupation rather than by the company providing training. Apprentices who are being trained in public sector companies or in liberal professions in the private sector economy are aligned to the areas of responsibility of trade and industry or craft trades.

² Since 2008, the area of responsibility of the maritime sector has no longer taken part in the Vocational Education and Training Statistics.

³ Since 2007, extensive technical reporting adjustments have meant that data is not precisely comparable with previous years.

Source: BIBB "Trainee Database" provided by the Federal Statistical Office based on data from the Vocational Education and Training Statistics of the Federal Statistical Office and the statistical offices of the federal states (survey as of 31 December), reporting years 1992 to 2013. For data protection reasons, absolute values are rounded to a multiple of three. For this reason, the overall value may deviate from the total of the individual values.

Figure 7: **Development of sectoral proportions in the training system from 2005 to 2014 (100 % = all persons entering the training system)**



In 2014, 35.5% of those entering the training system are undergoing fully qualifying vocational education and training (712,853), whereas 12.8% (256,110) are progressing to the transitional sector. 26.6% (533,445) aim to achieve a higher education entrance qualification. At the same time, 25.1% (503,888) are commencing a course of higher education study (Figure 7).

The significance of educational sectors in the federal states is revealed to be different. In the sectors "vocational education and training" and "integration into VET" (transitional area), for example, clear differences are shown between East and West Germany. The proportion of the training system made up by "vocational education and training" sector in the East is around 38.5%, whereas the corresponding figure for the West is 35.0%. East-West differences which have clearly emerged can partially be attributed to the variations in the "institutional approach" adopted towards unsuccessful training place applicants. In East Germany, young people who have not obtained a dual training place mainly progress to fully qualifying school based training or extra-company VET courses. They are accordingly included in the "vocational education and training" sector.

A more precise consideration of the transitional area in the individual federal states reveals considerable differences in the range of provision, even within the same sector. The basic vocational training year is, for example, only offered in around half of federal states. Compulsory work placements prior to training as a nursery school teacher at vocational schools are only established in two federal states. The only schemes available in all 16 federal states are those funded by the Federal Employment Agency (vocational preparation, introductory training). Some of the differences between East and West can be put down to different demographic developments. The situation on the labour market also determines the significance of the educational sectors. Above average numbers of young people progress to dual vocational education and training in federal states where the employment position is good.

1.3. The apprentices

1.3.1 Newly concluded training contracts

In the survey of newly concluded training contracts as of 30 September 2014, the competent bodies responsible for vocational education and training reported to the Federal Institute for Vocational Education and Training that there had been 522,231 such contracts during the period from 1 October 2013 and 30 September 2014 (Table 6 by spheres of competences, Table 7 by structural characteristics).

Compared to the 2013 survey, a decrease of 7,200 contracts was recorded. A sharper decline occurred in the West (-1.4%/-6,390 contracts) than in the East (-1.2%/-921 contracts). A major reason for the repeated fall in the number of newly concluded training contracts (compared with 2013) is the decrease in the number of those completing or leaving general schooling without acquiring a higher education entrance qualification (714,800 in 2004 as opposed to 551,300 in 2014). This makes demographic development a crucial factor (alongside the matching problems) in the decline once again in the number of newly concluded training contracts.

The BIBB survey of newly concluded training contracts as of 30 September also records training contracts that are agreed on the basis of a separate chamber **regulation for persons with disabilities**. In 2014, the chambers reported 9,024 contracts which had been concluded in accordance with this regulation. This corresponds to 1.7% of all newly concluded training contracts. Contracts are distributed as follows. Trade and industry: 3,912 contracts. Craft trades: 2,370 contracts. Housekeeping: 1,494 contracts. Agriculture: 1,248 contracts. No new contracts concluded in accordance with § 66 BBiG are reported in the areas of responsibility of the public sector, the liberal professions and the maritime sector.

As of 1 August 2014, **updated training regulations** entered into force for nine occupations, in which over 39,000 new training contracts were concluded. This accounts for 7.5 % of all training contracts newly concluded during the survey period. Training contracts which may have been concluded in predecessor occupations are taken into account. The most popular training occupation, in which 29,136 new training contracts were concluded (5.6% of all new contracts) was office manager, which amalgamated the three previous occupations of office management clerk, commercial clerk for office communication and specialist in office communication (Table 8).

Table 6: **Newly concluded training contracts by areas of responsibility in Germany from 1998 to 2014**

	Results in the counting period of 1 October of the previous year to 30 September									2014 vs. 2013	
	1998	2000	2002	2004	2006	2008	2010	2012	2014	Absolute terms	in %
Trade and industry	311,664	334,419	311,364	322,758	336,936	369,195	331,044	332,622	310,761	-6,507	-2.1
Craft trades	212,382	199,482	173,889	168,291	162,603	170,070	155,178	147,327	141,234	-903	-0.6
Public sector ^{1,2}	15,198	15,576	14,814	15,129	14,082	13,227	13,554	12,009	12,417	201	1.6
Agriculture	15,762	14,736	13,992	15,192	15,813	15,327	13,923	13,260	13,155	-3	0.0
Liberal professions ¹	51,861	52,494	53,253	46,539	42,111	43,947	42,441	43,095	42,051	0	0.0
Housekeeping ¹	5,505	4,848	4,830	4,875	4,320	4,272	3,582	2,763	2,433	-126	-4.9
Maritime sector	156	141	183	195	288	306	240	183	183	27	17.2
Total	612,528	621,693	572,322	572,979	576,153	616,341	559,959	551,259	522,231	-7,311	-1.4

¹ Not including new training contracts for which other bodies (chambers) are responsible.

² Not including career track training in the civil service.

For data protection reasons, absolute values are rounded to a multiple of three. For this reason, the overall value may deviate from the total of the individual values.

Source: Federal Institute for Vocational Education and Training (BIBB), survey as of 30 September

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Table 7: Newly concluded training contracts 2014 by structural characteristics (Part I)

	Baden-Württemberg	Bavaria	Berlin	Brandenburg	Bremen	Hamburg	Hessen	Mecklenburg-Pomerania	Lower Saxony	North Rhine-Westphalia	Rhineland-Palatinate	Saarland	Saxony	Saxony-Anhalt	Schleswig-Holstein	Thuringia	Federal States of West Germany	Eastern federal states including Berlin	All Germany		
All areas	New training contracts	73,197	91,815	15,840	10,239	5,733	13,401	37,887	7,815	55,812	117,396	26,550	7,317	18,075	11,025	19,797	10,332	448,908	73,323	522,231	
	With female trainees	30,006	37,620	7,122	3,729	2,499	5,859	14,946	3,081	22,125	46,554	10,461	2,901	6,786	4,125	8,064	3,663	181,035	28,503	209,538	
	With abbreviated term	16,131	15,771	3,051	975	582	1,671	5,031	753	9,921	17,976	4,101	1,614	1,263	897	2,496	930	75,294	7,863	83,157	
	In two-year occupations	5,244	6,621	1,014	1,080	459	1,260	3,099	945	4,452	11,067	2,376	543	1,989	1,476	1,950	1,464	37,074	7,968	45,039	
	Pursuant to § 66 BBiG/§ 42m HwO	1,200	1,017	219	474	138	57	519	372	795	1,689	369	147	726	438	468	390	6,405	2,619	9,024	
Primarily publicly financed	1,962	1,995	1,164	858	297	555	1,803	822	1,803	3,330	1,056	339	1,431	1,278	606	849	13,743	6,399	20,142		
Trade and industry	New training contracts	44,394	53,322	9,255	6,078	3,885	9,318	23,031	4,782	30,456	71,766	15,048	4,308	11,196	6,873	10,503	6,543	266,034	44,724	310,761	
	With female trainees	17,382	21,963	3,750	2,184	1,578	3,933	8,916	1,965	12,345	27,444	5,865	1,713	4,095	2,652	4,509	2,334	105,648	16,980	122,628	
	With abbreviated term	6,351	6,867	2,046	588	375	885	2,649	492	3,846	11,679	2,268	951	732	561	1,011	504	36,879	4,923	41,802	
	In two-year occupations	4,983	6,213	945	930	417	1,212	2,910	858	3,996	10,428	2,208	522	1,824	1,344	1,740	1,305	34,626	7,206	41,835	
	Pursuant to § 66 BBiG	420	399	111	258	69	-	279	207	219	912	93	66	390	60	270	156	2,727	1,185	3,912	
Primarily publicly financed	948	816	540	555	153	312	921	573	930	1,335	438	156	1,014	657	297	537	6,306	3,873	10,179		
Craft trades	New training contracts	19,518	26,571	3,771	2,568	1,176	2,535	9,966	1,872	16,926	30,084	7,791	2,157	4,668	2,868	6,252	2,514	122,970	18,264	141,234	
	With female trainees	5,199	6,405	1,107	555	354	684	2,253	420	3,969	7,107	1,821	522	1,233	705	1,455	567	29,769	4,587	34,356	
	With abbreviated term	8,367	6,738	600	297	162	546	1,941	168	4,695	4,974	1,473	573	405	249	1,179	309	30,648	2,028	32,676	
	In two-year occupations	261	411	69	84	42	48	192	87	456	639	168	21	165	132	210	159	2,445	759	3,207	
	Pursuant to § 42m HwO	429	297	21	84	39	24	138	87	207	396	114	6	141	216	84	84	1,737	636	2,370	
Primarily publicly financed	687	993	504	168	96	195	708	153	471	1,728	420	99	198	447	234	144	5,631	1,614	7,245		
Public sector	New training contracts	1,815	1,617	693	417	135	177	963	246	1,410	2,724	594	78	522	315	453	255	9,969	2,448	12,417	
	With female trainees	1,335	1,056	492	255	90	129	654	153	834	1,698	351	42	366	204	267	141	6,456	1,614	8,067	
	With abbreviated term	456	93	6	6	15	30	60	0	21	261	15	3	0	6	0	24	954	42	993	
	In two-year occupations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
	Pursuant to § 66 BBiG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Primarily publicly financed	0	0	0	0	0	0	6	0	0	30	0	0	0	0	0	0	39	39	0	39	

Table 7: Newly concluded training contracts 2014 by structural characteristics (part 1 – continuation)

	Baden- Württemberg	Bavaria	Berlin	Branden- burg	Bremen	Hamburg	Hessen	Mecklen- burg- Pomerania	Lower Saxony	North Rhine- West- phalia	Rhineland Palatinate	Saarland	Saxony	Saxony- Anhalt	Schles- wig- Holstein	Thuringia	Federal States of West Germany	Eastern federal states including Berlin	All Germany
Agriculture	New training contracts	1,473	2,121	231	510	39	135	726	405	2,091	687	159	699	453	792	465	10,392	2,763	13,155
	With female trainees	366	480	51	138	18	36	153	93	483	165	42	207	114	192	111	2,355	714	3,069
	With abbreviated term	468	1,128	33	42	6	30	180	78	1,002	201	30	108	66	201	66	3,603	390	3,993
	In two-year occupations Pursuant to § 66 BBIG Primarily publicly financed	147	159	30	60	6	57	15	186	180	78	48	78	78	84	48	942	306	1,248
Liberal professions	New training contracts	5,637	7,905	1,818	594	441	1,122	3,135	420	10,245	2,250	564	846	429	1,710	426	37,518	4,533	42,051
	With female trainees	5,391	7,458	1,650	537	417	1,035	2,913	378	9,519	2,094	531	756	375	1,581	390	35,112	4,086	39,198
	With abbreviated term	453	879	360	42	21	174	201	9	270	132	60	9	12	93	12	2,967	444	3,411
	In two-year occupations Pursuant to § 66 BBIG Primarily publicly financed	78	15	6	0	0	0	27	3	30	0	0	0	0	0	0	159	15	171
Housekeeping	New training contracts	360	276	72	72	42	42	66	81	348	177	51	144	84	72	129	1,845	588	2,433
	With female trainees	333	258	69	57	42	33	57	72	315	168	48	132	72	63	120	1,683	522	2,205
	With abbreviated term	33	66	6	3	3	3	3	3	87	18	3	6	6	9	18	243	39	282
	In two-year occupations Pursuant to § 66 BBIG Primarily publicly financed	204	165	57	72	30	27	42	63	186	201	84	27	117	33	102	999	495	1,494
Maritime	New training contracts	210	108	66	72	30	27	45	75	198	111	33	138	81	33	114	915	546	1,461
	With female trainees	-	-	-	-	15	75	-	6	75	-	-	-	-	15	-	177	6	183
	With abbreviated term	-	-	-	-	0	9	-	3	3	-	-	-	-	0	-	15	3	15
	In two-year occupations Pursuant to § 66 BBIG Primarily publicly financed	-	-	-	-	0	0	-	0	0	-	-	-	-	0	-	0	0	0

Source: Federal Institute for Vocational Education and Training (BIBB), survey as of 30 September 2014. For data protection reasons, absolute values are rounded to a multiple of three. For this reason, the overall value may deviate from the total of the individual values.

Table 8: Newly concluded training contracts in occupations which have entered into force or been updated in Germany since 2010

	2010			2011			2012			2013			2014		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
	Updated occupations 2010														
Cooper	3	0	3	0	0	0	3	0	3	6	0	6	3	0	3
Gunsmith	15	0	15	18	0	18	18	0	18	18	0	18	18	0	18
Precision machinist	2,460	93	2,553	2,991	99	3,090	2,922	132	3,054	2,718	105	2,820	2,628	165	2,793
Geomatics technician*	24	9	33	90	42	135	90	45	135	90	45	138	90	42	132
Dairy technologist*	186	63	249	195	51	249	192	57	249	177	72	249	219	69	288
Paper technician	198	21	219	219	12	231	219	24	243	228	12	240	201	18	219
Equine manager	111	606	717	138	663	801	111	663	774	105	660	765	117	618	735
Hunting ground supervisor	33	0	33	21	0	21	15	0	15	15	0	15	33	0	33
Sail maker	21	9	33	18	3	21	15	12	30	24	9	33	18	9	27
Technician in heavy-duty fabric goods manufacturing	54	15	69	57	15	75	36	24	60	39	24	63	36	18	54
Surveying technician*	492	177	669	435	135	570	432	117	549	483	144	627	471	162	630
Updated occupations 2010 in total	3,594	999	4,596	4,185	1,026	5,211	4,053	1,077	5,130	3,903	1,071	4,974	3,831	1,101	4,932
	New occupations 2011														
Media technologist in print processing	0	0	0	183	84	267	252	72	324	213	81	291	213	81	294
New occupations 2011 in total	0	0	0	183	84	267	252	72	324	213	81	291	213	81	294
	Updated occupations 2011														
Optician	675	1,848	2,520	618	1,803	2,421	615	1,764	2,379	675	1,725	2,400	648	1,725	2,373
Boat builder	114	9	123	135	15	150	156	24	180	138	21	156	138	18	156
Bookbinder	267	144	411	81	54	138	42	63	105	9	36	48	21	45	66
Bookseller	108	558	663	99	558	657	72	384	456	81	363	441	69	399	471
Leather working specialist*	0	9	9	0	15	15	0	9	9	0	3	6	0	9	12
Specialist in furniture, kitchen and removal services	519	3	522	525	6	528	498	9	507	504	3	507	438	3	444
Mechatronics technician	6,384	399	6,783	7,242	462	7,704	7,458	540	7,998	7,050	501	7,551	7,059	531	7,590
Media designer for flexography	0	0	3	3	3	3	0	3	3	0	3	3	3	0	3
Print media technologist*	942	102	1,044	990	111	1,101	879	99	981	771	105	876	753	123	879
Screen print media technologist*	108	36	144	108	36	144	102	45	147	93	51	144	84	45	129
Packaging materials technologist*	417	51	468	432	51	483	399	42	444	417	33	450	423	48	468
Technical product designer*	1,320	798	2,115	1,572	987	2,559	1,812	1,086	2,895	1,803	966	2,769	1,707	891	2,598
Technical system planner*	528	276	804	552	318	870	681	339	1,020	681	315	993	681	333	1,014
Textile designer in the craft trades*	0	6	9	0	3	6	0	3	3	0	3	6	0	9	9
Tourism services management clerk (management clerk for individual holidays and business trips)	330	1,632	1,959	342	1,797	2,139	342	1,773	2,115	324	1,683	2,007	294	1,653	1,944
Updated occupations 2011 in total	11,709	5,871	17,580	12,696	6,216	18,915	13,059	6,183	19,242	12,549	5,808	18,357	12,318	5,838	18,156

Table 8: Newly concluded training contracts in occupations which have entered into force or been updated in Germany since 2010 (continuation)

New and updated occupations from 2010 to 2014	2010			2011			2012			2013			2014		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Updated occupations 2012															
Specialist in labour market services*	306	852	1,158	210	501	711	123	336	459	42	126	171	69	183	252
Commercial employee in the pharmaceutical sector	60	1,638	1,698	66	1,554	1,620	54	1,311	1,368	57	1,293	1,353	66	1,281	1,347
Sign and luminous advertisement maker	273	132	405	270	141	408	231	150	381	243	129	375	219	135	354
Chimney sweep	519	84	603	549	60	612	693	69	762	816	105	921	729	105	834
Mechanic in plastics and rubber processing	2,220	144	2,367	2,532	183	2,712	2,343	189	2,532	2,175	189	2,364	2,346	210	2,556
Updated occupations 2012 in total	3,381	2,850	6,231	3,627	2,439	6,066	3,444	2,055	5,502	3,336	1,845	5,181	3,429	1,914	5,346
New occupations 2013															
Skilled metal worker*	1,632	36	1,668	1,275	42	1,317	1,080	39	1,119	1,056	42	1,101	1,305	75	1,380
Press tool operator and metal working mechanic	0	0	0	0	0	0	0	0	0	15	0	15	81	3	84
New occupations 2013 in total	1,632	36	1,668	1,275	42	1,317	1,080	39	1,119	1,074	42	1,116	1,386	78	1,464
Updated occupations 2013															
Production mechanic	900	108	1,008	861	123	981	774	129	900	756	105	864	681	129	810
Aircraft electronics technician*	120	18	141	132	21	153	105	15	117	117	9	123	99	15	114
Aircraft mechanic	648	72	720	636	60	693	594	81	675	588	84	672	555	81	639
Tinsmith	480	9	489	465	9	474	387	9	396	396	9	405	423	15	438
Motor vehicle mechatronics technician	18,159	588	18,747	19,788	678	20,466	19,320	729	20,049	18,588	696	19,287	19,272	921	20,193
Designer of digital and print media	1,665	2,100	3,768	1,632	2,226	3,858	1,488	2,127	3,615	1,377	1,992	3,366	1,374	1,893	3,267
Laboratory technologist in the dairy industry	33	132	165	33	126	159	39	138	177	39	132	171	33	132	165
Orthopaedic technology mechanic*	258	144	402	261	150	411	276	186	462	231	177	408	327	237	564
Plant technologist*	3	6	9	6	6	12	6	6	6	6	12	18	15	18	36
Ship's mechanic	234	6	240	237	12	249	168	15	183	147	9	156	168	15	183
Wine technologist*	54	12	69	42	12	54	57	12	69	48	9	54	51	12	63
Materials tester	198	66	267	261	87	351	282	93	378	228	78	306	243	84	327
Updated occupations 2013 in total	22,755	3,261	26,019	24,351	3,510	27,861	23,493	3,540	27,036	22,521	3,309	25,830	23,241	3,555	26,796
Updated occupations 2014															
Specialist in ice cream making*	15	12	30	21	9	27	24	12	36	12	6	18	9	9	15
Mechanic for motor vehicle body maintenance technology	1,353	30	1,383	1,407	39	1,446	1,329	45	1,374	1,332	48	1,383	1,293	60	1,353
Office manager*	8,994	26,409	35,403	8,763	25,734	34,497	8,163	24,519	32,682	7,698	22,959	30,657	7,455	21,681	29,136
Insurance and financial services broker	3,192	2,958	6,147	3,195	2,823	6,018	3,069	2,748	5,817	2,907	2,565	5,469	2,979	2,526	5,505
Agricultural and construction machinery mechatronics technician*	1,995	15	2,010	2,229	21	2,250	2,310	18	2,328	2,481	18	2,502	2,385	39	2,424
Upholsterer	81	18	99	93	39	132	69	18	84	69	21	90	60	24	84
Technologist in confectionery goods*	69	42	111	63	48	111	66	39	108	45	42	87	45	39	87
Maker of plucked musical instruments*	3	0	3	6	0	6	3	3	6	3	0	3	3	0	6
Cycle mechatronics technician*	642	51	693	624	30	654	606	45	648	645	60	705	651	48	699
Updated occupations 2014 in total	16,347	29,535	45,879	16,398	28,743	45,141	15,639	27,447	43,086	15,195	25,719	40,914	14,883	24,423	39,306

Explanations

* The previous names of the occupations listed here are included in the original Table A1.2-6 (2015 Data Report; pp. 41-43).

For data protection reasons, absolute values are rounded to a multiple of three. For this reason, the overall value may deviate from the total of the individual values.

Source: Federal Institute for Vocational Education and Training survey as of 30 September

Training placement

In the reporting year 2014, a total of 511,613 training places were registered with the employment agencies and Job Centres operating as joint institutions together with the employment, so-called 'registered training places' (see Table 9).

In the reporting year 2014, a total of 559,431 young people were registered with the employment agencies and Job Centres as training place applicants. The number of applicants decreased by only 0.3% and was therefore virtually at the same level as in the previous year. In West Germany, the number of registered applicants was 466,202, a fall of 0.5% compared to the year before. In East Germany, 90,164 applicants were recorded. This represents a decrease of 1.0% (Table 10).

By the end of the reporting year on 30 September 2014, 48.5% of applicants had progressed to vocational education and training. 30.3% of applicants opted for an alternative to VET. 17.5% of applicants did not contact the employment agencies or Job Centres again and thus waived

the right to receive further support in their search for training. For this reason, their destination was unknown. The remaining 3.7% of applicants were officially deemed to be unplaced at the end of the 2014 reporting year having not progressed either to VET or to an alternative.

Of the total of 81,188 **unplaced applicants** in the 2014 reporting year, 57.7% were young men and 42.3% young women. This was approximately in line with the distribution of all registered applicants (56.6% and 43.4% respectively). 29.3% of unplaced applicants were in possession of the lower secondary school leaving certificate. 40.7% had acquired the intermediate secondary school leaving certificate and 25.5% had obtained a higher education entrance qualification. The school qualifications achieved by the unplaced applicants were thus scarcely lower than those of the total group of registered applicants in overall terms. Nevertheless, it is conspicuous that a relatively large proportion of unplaced applicants (52.6%) had most recently attended a vocational school whilst relatively few (40.5%) had last attended a general school. With regard to the structure of characteristics exhibited by the unplaced applicants in the 2014 reporting

Table 9: Vocational education and training places¹ registered with the employment agencies and Job Centres in the reporting years 2014 and 2013

Areas of training	Reporting year 2014 ²						Reporting year 2013 ²					
	Germany		Federal states of West Germany		Federal states of East Germany		Germany		Federal states of West Germany		Federal states of East Germany	
	Absolute	in %	Absolute	in %	Absolute	in %	Absolute	in %	Absolute	in %	Absolute	in %
Trade and industry	289,890	56.7	240,236	56.3	49,562	58.6	285,885	56.4	237,008	56.1	48,748	57.5
Craft trades	119,768	23.4	102,234	24.0	17,514	20.7	117,052	23.1	99,744	23.6	17,283	20.4
Public sector	11,723	2.3	9,535	2.2	2,188	2.6	12,526	2.5	10,133	2.4	2,392	2.8
Agriculture	6,465	1.3	4,331	1.0	2,134	2.5	6,243	1.2	4,170	1.0	2,073	2.4
Liberal professions	35,041	6.8	31,129	7.3	3,906	4.6	34,741	6.8	30,625	7.3	4,115	4.9
Other body/no allocation possible	31,675	6.2	26,891	6.3	4,685	5.5	33,349	6.6	27,911	6.6	5,393	6.4
No information	17,051	3.3	12,485	2.9	4,566	5.4	17,467	3.4	12,744	3.0	4,723	5.6
Total³	511,613	100.0	426,841	100.0	84,555	100.0	507,263	100.0	422,335	100.0	84,727	100.0

¹ Not including places registered with Job Centres operated by authorised local government providers.

² Period in each case 1 October of the previous year to 30 September.

³ Because of cases that cannot be allocated, the total figures shown for West Germany and East Germany are slightly lower than the total stated for the whole of Germany.

Source: Federal Employment Agency, calculations by the Federal Institute for Vocational Education and Training

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Table 10: Gender, school qualification, school attended, nationality and age of applicants registered with the employment agencies and Job Centres in the 2014 and 2013 reporting years

Characteristics of applicants	Reporting year 2014 ¹⁾				Reporting year 2013 ¹⁾							
	Germany ²⁾		Federal states of West Germany		Germany ²⁾		Federal states of West Germany		Federal states of East Germany			
	Absolute	in %	Absolute	in %	Absolute	in %	Absolute	in %	Absolute	in %		
Gender												
Male	316,628	56.6	263,337	56.5	51,219	56.8	313,047	55.8	261,074	55.7	51,169	56.2
Female	242,803	43.4	202,865	43.5	38,945	43.2	248,121	44.2	207,685	44.3	39,929	43.8
School leaving qualification												
Not achieved lower secondary school leaving certificate	8,576	1.5	6,185	1.3	2,391	2.7	8,868	1.6	6,191	1.3	2,676	2.9
Lower secondary school leaving certificate	154,313	27.6	128,767	27.6	25,440	28.2	156,414	27.9	130,849	27.9	25,498	28.0
Intermediate secondary school leaving certificate	236,566	42.3	195,300	41.9	40,198	44.6	237,904	42.4	197,167	42.1	40,405	44.4
University of Applied Sciences entrance qualification	72,364	12.9	66,173	14.2	5,938	6.6	71,073	12.7	65,265	13.9	5,733	6.3
General higher education entrance qualification	67,317	12.0	54,037	11.6	12,168	13.5	65,377	11.7	52,959	11.3	12,005	13.2
No information available	20,295	3.6	15,740	3.4	4,029	4.5	21,532	3.8	16,328	3.5	4,781	5.2
School attended												
General school	289,791	51.8	223,595	48.0	64,390	71.4	292,456	52.1	226,530	48.3	65,361	71.7
Vocational school	233,423	41.7	214,441	46.0	18,718	20.8	233,772	41.7	214,991	45.9	18,655	20.5
Institute of higher education/Universities of Cooperative Education	22,681	4.1	18,221	3.9	3,998	4.4	19,840	3.5	15,875	3.4	3,782	4.2
No information	7,833	1.4	5,803	1.2	1,553	1.7	9,803	1.7	7,444	1.6	1,955	2.1
Nationality												
German	487,886	87.2	402,587	86.4	85,137	94.4	492,776	87.8	406,542	86.7	86,077	94.5
Foreign	70,572	12.6	62,791	13.5	4,878	5.4	67,432	12.0	61,408	13.1	4,870	5.3
<i>Of which:</i>												
Turkish	29,399	5.3	27,821	6.0	1,578	1.8	30,309	5.4	28,578	6.1	1,729	1.9
Italian	5,559	1.0	5,407	1.2	88	0.1	5,399	1.0	5,267	1.1	84	0.1
Age												
Aged 15 and below	15,744	2.8	14,907	3.2	832	0.9	15,880	2.8	15,079	3.2	790	0.9
Aged 16 to 18	274,999	49.2	229,187	49.2	45,663	50.6	276,611	49.3	231,874	49.5	44,613	49.0
Aged 19 to 20	127,711	22.8	110,144	23.6	17,198	19.1	132,788	23.7	114,811	24.5	17,759	19.5
Aged 21 to 24	108,683	19.4	89,101	19.1	18,683	20.7	109,069	19.4	87,836	18.7	20,849	22.9
Aged 25 and above	32,294	5.8	22,863	4.9	7,788	8.6	26,820	4.8	19,159	4.1	7,087	7.8
Total²⁾	559,431	100.0	466,202	100.0	90,164	100.0	561,168	100.0	468,759	100.0	91,098	100.0

¹⁾ Period in each case 1 October of the previous year to 30 September.

²⁾ Deviations between the overall figures and totals of individual values are caused by information that cannot be allocated.

Sources: Federal Employment Agency, calculations by the Federal Institute for Vocational Education and Training

Table 11: Gender, school qualification and destination of applicants registered with the Employment agencies and Job Centres in the 2014 reporting year¹ by year of leaving school – Germany

Characteristics of applicants	Total		Year of leaving school ²							
			Left school in the reporting year		Left school before the reporting year		of which:			
	Absolute terms	in %	Absolute terms	in %	Absolute terms	in %	Absolute terms	in %	Absolute terms	in %
Gender										
Male	316,628	56.6	182,959	57.0	131,728	56.0	52,719	55.3	79,009	56.5
Female	242,803	43.4	137,796	43.0	103,540	44.0	42,612	44.7	60,928	43.5
School leaving qualification										
Not achieved lower secondary school leaving certificate	8,576	1.5	2,112	0.7	6,012	2.6	2,096	2.2	3,916	2.8
Lower secondary school leaving certificate	154,313	27.6	68,418	21.3	85,109	36.2	25,998	27.3	59,111	42.2
Intermediate secondary school leaving certificate	236,566	42.3	152,789	47.6	83,369	35.4	32,797	34.4	50,572	36.1
University of Applied Sciences entrance qualification	72,364	12.9	51,179	16.0	21,125	9.0	12,069	12.7	9,056	6.5
General higher education entrance qualification	67,317	12.0	46,202	14.4	21,037	8.9	13,104	13.7	7,933	5.7
No information	20,295	3.6	55	0.0	18,616	7.9	9,267	9.7	9,349	6.7
Nature of destination										
School/higher education/practical placement	95,696	17.1	90,676	28.3	4,876	2.1	3,000	3.1	1,876	1.3
Vocational education and training	284,371	50.8	164,057	51.1	119,310	50.7	57,939	60.8	61,371	43.9
<i>Of which:</i>										
<i>Unfunded VET</i>	247,768	44.3	157,518	49.1	89,408	38.0	47,626	50.0	41,782	29.9
<i>Funded VET</i>	36,603	6.5	6,539	2.0	29,902	12.7	10,313	10.8	19,589	14.0
Employment	29,897	5.3	5,572	1.7	23,901	10.2	5,609	5.9	18,292	13.1
Charitable/social services	10,646	1.9	7,677	2.4	2,961	1.3	1,959	2.1	1,002	0.7
Support measures	19,847	3.5	11,787	3.7	7,966	3.4	3,254	3.4	4,712	3.4
No information regarding destination	118,974	21.3	40,986	12.8	76,254	32.4	23,570	24.7	52,684	37.6
Total	559,431	100.0	320,755	100.0	235,268	100.0	95,331	100.0	139,937	100.0

¹ Period in 1 October of the previous year to 30 September.

² In the 2014 reporting year, no information regarding year of leaving school was available for a total of 3,408 applicants.

Source: Federal Employment Agency, calculations by the Federal Institute for Vocational Education and Training

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year, no significant changes compared to the previous year could be ascertained. Of the total of 559,431 persons registered as VET applicants in the 2014 reporting year, 235,268 or 42.1% had already left general or vocational school prior to the reporting period (October 2013 to September 2014; Table 11).

At the end of the reporting year (cut-off date 30 September), the overall training place market figures are informed on the supply side by the training places reported as still being vacant by the employment agencies and Job Centres and on the demand side by the unplaced applicants registered at this time. The number of training contracts newly concluded between 1 October of the

previous year and 30 September are respectively added to these figures in order to determine total supply of and total demand for training places. On 30 September 2014, 37,101 or 7.3% of the total of 511,613 training places registered for placement in the reporting year remained vacant. This represented a higher proportion than in the previous year. Relating the unfilled training places to applicants still unplaced makes the extent to which placement of the unplaced applicants would have been possible discernible in purely arithmetical terms. In the 2014 reporting year, a significant deficit of training place provision was identified. The overall ratio between places and applicants was 0.46, meaning that there was only just under one vacant training place for every two unplaced applicants. This ratio only improved slightly compared to the previous year (0.40).

2013 training entrant rate

The training entrant rate is an indicator of the proportion of young people who commence dual vocational education and training. It does not, however, take account of the

age at which this takes place or of the length of the transition from general school to VET. If such rates are calculated using the aggregation method, only events that occur on a one-off basis in the biographies should be recorded. For this reason, the entrant rate is worked out on the basis of entrants rather than on newly concluded training contracts. Not all newly concluded contracts represent instances of training entry to the dual system. For the 2013 reporting year, the result is an arithmetical proportion of 54.4% of the resident population who at some point during the course of their biography commence dual vocational education and training. The longer-term decrease in training participation in the dual system by young people has been associated with a growing propensity towards higher education study on their part. Nevertheless, during the period from 2011 to 2013, the higher education entrant rate either stopped increasing or else rose only very slightly. For the 2013 reporting year, the Federal Statistical Office calculated a higher education entrant rate of 52.6% of the German resident population. This represents a proportion of 47.9% once the effect of the double upper secondary school leaving cohorts is stripped out.

Table 12: Training completion rate¹ by personal characteristic and region², 2009 to 2013 (in %)

Year	Training completion rate								
	Total	Germans of which:			Foreigners of which:			West	East
		Total	Men	Women	Total	Men	Women		
2009	45.6	49.2	55.7	42.4	16.5	17.5	15.5	46.7	41.6
2010	46.3	50.0	56.3	43.4	17.1	18.0	16.2	47.4	42.0
2011	47.8	50.5	57.7	43.0	22.2	23.4	21.0	48.7	43.4
2012	45.4	48.5	55.7	40.9	19.8	20.6	18.8	46.4	40.0
2013	44.5	48.1	55.0	40.8	18.1	18.7	17.3	45.7	37.9

¹ 1 Since the updating of the Vocational Education and Training Statistics in 2007 and the switch to recording individual data, the statistics have provided age information for those completing training, and those successfully completing training for the first time can also be delineated. Because of initial difficulties in implementing the revised statistics, training completion rate has only been calculated since the 2009 reporting year. During the course of 2011, however, the method of calculating the training completion rate was refined further with the result that the training completion rate presented in the 2011 BIBB Data Report, Chapter A4.5, was recalculated. The completion rates for the years 2011 and 2012 were also recalculated on the basis of the population forecast data for 2011 and 2012 taken from the 2011 census. They therefore deviate from the values published in the 2014 Data Report, Chapter A4.5. Because population forecast data was not corrected until the 2011 reporting year onwards on the basis of the 2011 census, rates prior and subsequent to 2011 cannot be directly compared with one another.

² 2 Commuter movements cannot be taken into account because the Vocational Education and Training Statistics do not record the place of residence of trainees. These movements may distort the rates calculated for individual regions due to the fact that commuters are allocated to the location of training for the purpose of training completion rates and recorded at their main place of residence in terms of the residential population. For this reason, no further regional differentiations are undertaken here. Distortions as a result of commuter movements can even arise in differentiating West and East Germany.

Source: BIBB "Trainee Database" provided by the Federal Statistical Office based on data from the Vocational Education and Training Statistics of the Federal Statistical Office and the statistical offices of the federal states (survey as of 31 December), reporting years 2009 to 2013, and Population Forecast of the Federal Statistical Office, reporting years 2009 to 2010 on the basis of the 1987 census (West Germany) and the 1990 census (East Germany); reporting years 2011 to 2013 on the basis of the 2011 census). Calculations by the Federal Institute for Vocational Education and Training.

Training completion rate

In the 2013 reporting year, 430,275 trainees passed their final examination in the dual system. For 407,280 of these persons, this constituted their first achievement of a vocational qualification in the system. This produces a training completion rate of 44.5% for the 2013 reporting year (Table 12). The training completion rate for the dual system is significantly higher than the higher education completion rate for 2013.

Newly commenced training contracts

In the 2013 reporting year, a total of 525,897 training places were newly commenced and remained undissolved as of 31 December 2013. Compared to the previous year, this represented a fall in the number of newly concluded contracts⁶ of just over 4 percent (549,003). With the exception of Saxony and Mecklenburg-Western Pomerania, decreases of around 7% to 9% were recorded in the federal states of East Germany compared to the year before. In most of the federal states of West Germany, the number of newly concluded training contracts fell by between 3% and 5%. The only somewhat deeper decrease was in the Saarland, where the figure was almost 8%.

Of all newly concluded training contracts for the 2013 reporting year, 4.5% were reported in the Vocational Education and Training Statistics as being mainly publicly funded. This represents a repeated fall in this proportion compared to the previous year (5.1%), although there is significant variation per federal state. For the 2013 reporting year, only 0.3% of all new contracts (1,638) are reported as being part-time training contracts. Within the Vocational Education and Training Statistics, 20.6% of all newly concluded contracts were reported as being

shortened⁷ by at least six months. Above-average rates of shortening of training contracts were reported from Baden-Württemberg, where the figure was 27.4%, and from Hamburg and Bavaria, each approximately 24%. In overall terms, such reductions in the duration of training were disproportionately likely to be recorded in the area of responsibility of agriculture (30.1%).

Newly concluded training contracts are frequently erroneously equated with training entrants. However, not all new training contracts are concluded by training entrants. In addition, some trainees in the dual system have previously concluded a course of training outside the system. Around 87% of newly concluded contracts can be identified as training entrants. The remaining 13% are distributed across those who have already successfully completed a course of VET (around 5%) and those who switch contracts (Table 13).

Age structure of apprentices

The Vocational Education and Training Statistics have surveyed the age or year of birth of trainees in the dual system (BBiG or HwO) since the 1993 reporting year. However, it has only been since 2007 that the year of birth has been collected for all trainees or examination candidates in the dual system. The average age of trainees concluding a new contract has risen virtually continuously over the past 20 years. Although differences in the surveying and calculation method mean that values prior to and after 2006 are not directly comparable, an increase in average age is revealed both for the period from 1993 (18.5) and 2006 (19.3) as well as for the time between 2007 and 2010. Since 2007, average age has been virtually constant at approximately 20. In 1993, more than half of trainees concluding a new contract were under 18. The corresponding figure for the 2013 reporting year is less than 30%. The rise in the average age of trainees concluding a new training contract has been caused by longer periods of schooling at upper

6 Training contracts commenced in the calendar year and undissolved as of 31 December are recorded as "newly concluded training contracts" by the Vocational Education and Training Statistics of the Federal Statistical Office and the statistical offices of the federal states. This means that the concept of newly concluded contracts as covered within the scope of the Vocational Education and Training Statistics and stated in the BIBB survey as of 30 September differs with regard to time reference and in respect of aspects such as the fact that, in the Vocational Education and Training Statistics, commencement of training is the determining factor rather than the date of conclusion of contract.

7 The Vocational Education and Training Statistics use the variable "Shortening of duration of training" to survey such reductions in the duration of training, which are agreed pursuant to § 8 or § 7 BBiG and stipulated in the training contract. Trainees and companies providing training may jointly apply for such reductions in duration of training in accordance with a legal ordinance issued by the respective federal state governments "permitting the full or partial crediting to the period of training of courses at vocational schools or of vocational education training at another institution" (§ 7 BBiG) or if "there is an expectation that the goal of training can be attained within the shortened period" (§ 8 BBiG).

Table 13: **Training entrants, follow-up contracts, multiple training courses and contract switches by areas of responsibility¹; as sub-groups of newly concluded contracts and sub-groups of training contracts commenced (in absolute terms and as a % of new or commenced contracts) 2013**

State/area of responsibility	Training entrants		Follow-up contracts ²		Multiple training courses within the dual system		Contract switches		Total new training contracts	
	Absolute terms	in %	Absolute terms	in %	Absolute terms	in %	Absolute terms	in %	Absolute terms	in %
Sub-groups of newly concluded contracts³										
Trade and industry	277,362	87.3	7,596	2.4	9,636	3.0	23,100	7.3	317,694	100.0
Craft trades	117,975	84.7	753	0.5	4,887	3.5	15,702	11.3	139,320	100.0
Public sector	11,529	94.7	0	0.0	576	4.7	69	0.6	12,174	100.0
Agriculture	11,712	88.2	0	0.0	840	6.3	729	5.5	13,278	100.0
Liberal professions	38,250	93.8	0	0.0	1,581	3.9	954	2.3	40,782	100.0
Housekeeping	2,454	92.6	0	0.0	57	2.2	138	5.2	2,649	100.0
Germany as a whole	459,279	87.3	8,349	1.6	17,577	3.3	40,692	7.7	525,897	100.0
Sub-groups of training contracts commenced³										
Trade and industry	297,429	85.9	7,929	2.3	10,614	3.1	30,159	8.7	346,134	100.0
Craft trades	123,777	79.1	813	0.5	5,427	3.5	26,475	16.9	156,492	100.0
Public sector	11,598	93.7	0	0.0	588	4.7	198	1.6	12,381	100.0
Agriculture	12,441	86.8	0	0.0	909	6.3	987	6.9	14,337	100.0
Liberal professions	41,697	90.6	0	0.0	1,818	4.0	2,499	5.4	46,014	100.0
Housekeeping	2,577	91.5	0	0.0	66	2.3	177	6.3	2,817	100.0
Germany as a whole	489,516	84.7	8,742	1.5	19,422	3.4	60,498	10.5	578,178	100.0

¹ Alignment of trainees to the areas of responsibility is generally determined by the competent body in charge of the training occupation rather than by the company providing training. Apprentices who are being trained in public sector companies or in liberal professions in the private sector economy are aligned to the areas of responsibility of trade and industry or craft trades. The area of responsibility of trade and industry reports the housekeeping occupations for the federal states of Hessen and Schleswig-Holstein.

² In this case, only continuations to follow-up contracts which are counted are those in which the training regulations explicitly provide for credit transfer of the two-year vocational education and training (§ 5 Paragraph 2 Clause 4 BBiG).

³ Training contracts commenced are all training contracts registered in a reporting year which have begun in the reporting year. New contracts include only the training contracts commenced in the reporting year which have not been prematurely dissolved by 31 December of the same year. The counting of the new contracts avoids double counting of persons who have concluded more than one training contract in the calendar year. It does not, however, encompass all training contracts commenced.

Source: Individual data set provided by the Federal Statistical Office based on the Vocational Education and Training Statistics of the Federal Statistical Office and the statistical offices of the federal states, reporting year 2013. For data protection reasons, absolute values are rounded to a multiple of three. For this reason, the overall value may deviate from the total of the individual values.

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secondary level as trainees achieve increasing higher school leaving qualifications and by longer durations of transition to VET. Serious changes in recording the prior learning of trainees, particularly since the 2007 training year, have made it more difficult to make a longer term time comparison. Taking only the years 2007 to 2013 into account, the proportion of trainees with a higher education entrance qualification (partially also caused by the double upper secondary school leaving cohorts) rose

from 19.4% to 25.3%. During the same period, the proportion of trainees reported to have previously taken part in a vocational preparation scheme or in basic vocational training fluctuated between 9% and 12%.

Gender distribution

In 2013, women made up 38.6% of all trainees in the dual system (537,663 female trainees). This was the

lowest proportion of women since 1992. Between 1992 and 2012, this figure fluctuated between 23% and 41%. Over the past 10 years (2003: 40.6%), this means that the proportion of women has fallen by two percentage points. According to the Applicant Survey carried out by the Federal Employment Agency (BA) and the Federal Institute for Vocational Education and Training (BIBB), the reasons for this gender imbalance also has much to do with different occupational wishes. Literature on career choice shows that women have a much lower propensity for technical occupations. They are primarily interested in commercial and service occupations and are disproportionately more likely to wish to enter the system of school-based vocational education and training. They pay very little consideration to technical private sector occupations, which continue to play a significant role in the dual VET system. The areas of responsibility differ significantly with regard to the proportion of women. In the liberal professions and in housekeeping occupations, the proportion of women was over 90%. In the area of responsibility of the public sector, women have also had above-average representation since 1998, reaching levels of between 63% and 65%. There has been a significant increase in this regard over the course of time compared to the figure for 1992 (50.7%). By way of contrast, proportions were lower in the major areas of responsibility of trade and industry and the craft trades. In the trade and industry sector, the proportion of women in 2013 was 38.1%. This was approximately in line with the overall average. In the craft trades, however, the number of women remained at the below-average level of 22.0%. This was almost precisely the same proportion as in 1992 (22.1%). For further data, see Table 8 in the VET Data Report Germany 2014.

Unplaced applicants from previous years and applicants whose destination is officially unknown

According to the training market statistics produced by the Federal Employment Agency (BA), applicants from previous school leaver cohorts made up 42.1% of all applicants registered with the employment agencies and Job Centres in the 2014 reporting year. BIBB bases its analyses conducted via the BA/BIBB Applicant Survey on the following definition. **Unplaced applicants from previous years** are “all persons who state that they have applied to commence training at an earlier point in time

than in the current training year”. On the basis of the 2014 BA/BIBB Applicant Survey, this definition indicates a proportion of unplaced applicants from previous years of 28% compared to all training place applicants in the 2014 reporting year. Amongst male applicants, the proportion of unplaced applicants from previous years was 26%. The corresponding figure for female applicants was noticeably higher at 30%. At the end of 2014, 37% of unplaced applicants from previous years included in the 2014 reporting year were in company-based training pursuant to the Vocational Training Act (BBiG) or the Crafts and Trades Regulation Code (HwO). 8% were in extra-company or school-based training in a BBiG/HwO occupation, and 7% were in training in a school-based occupation or in another form of fully qualifying training such as a civil service career track.

In the 2014 reporting year, no further placement endeavours were made in respect of 16% of applicants registered with the employment agencies and Job Centres operating as joint institutions because such applicants had failed to report back and were thus considered to be **applicants whose destination is officially unknown**. This meant that they were officially recorded as such according to the BA training market statistics at the end of the reporting year. At the end of 2014, only 15% of applicants whose destination was officially unknown were in fully qualifying training. The corresponding proportion for other applicants, whose destination was known to the employment agencies or Job Centres or for whom placement attempts continued to be made, was 65%. 19% of applicants whose destination was officially unknown had entered employment or a casual job. 34% were unemployed or not in work, and 7% were in another destination, e.g. had remained at home for personal reasons. The proportions of these somewhat less preferable forms of destination was thus considerably higher for applicants whose destination was officially unknown than for other applicants. Of the latter, only 5% were in work or casual employment, 4% were unemployed and merely 1% in another destination.

Previous education and training activities of apprentices

Amongst trainees with newly concluded training contracts, the **different types of school leaving qualifications** held varied considerably. Trainees in possession of

Table 14: Trainees with a newly concluded training contract by highest general school qualification and occupational groups, Germany 2013

Occupational group ¹	Total newly concluded contracts	Highest general school leaving qualification									
		Not achieved lower secondary school leaving certificate		Lower secondary school leaving certificate		Intermediate secondary school leaving certificate		Higher education entrance qualification		No information available ²	
		Absolute terms	Absolute terms	in %	Absolute terms	in %	Absolute terms	in %	Absolute terms	in %	Absolute terms
Manufacturing occupations	212,835	7,827	3.7	80,133	37.9	93,900	44.4	29,844	14.1	1,134	–
Service occupations	313,062	7,341	2.4	73,836	23.8	127,224	41.0	102,093	32.9	2,568	–
Primary service sector occupations	215,382	6,252	2.9	65,229	30.5	87,522	41.0	54,555	25.5	1,824	–
Secondary service sector occupations	97,680	1,089	1.1	8,607	8.9	39,702	41.0	47,535	49.0	744	–
Technical occupations	138,675	2,133	1.5	32,013	23.2	71,778	52.0	32,103	23.3	645	–
New occupations	62,085	1,500	2.4	11,175	18.1	25,968	42.1	23,019	37.3	426	–
Two-year occupations ³	45,126	2,403	5.4	26,007	58.2	14,142	31.7	2,133	4.8	441	–
Occupations for persons with disabilities	10,311	4,107	40.3	5,541	54.4	459	4.5	75	0.7	129	–
Training occupations overall	525,897	15,171	2.9	153,966	29.5	221,121	42.3	131,934	25.3	3,702	–

¹ For explanations of the sub-categorisation of the occupational groups.

² "No information available" also includes qualifications acquired abroad which cannot be aligned. Because it must be assumed that erroneous information has also been reported, these have not been included in the percentage calculations.

³ Two-year occupations do not include occupations for persons with disabilities.

Source: BIBB "Trainee Database" provided by the Federal Statistical Office based on data from the Vocational Education and Training Statistics of the Federal Statistical Office and the statistical offices of the federal states (survey as of 31 December), reporting year 2013. For data protection reasons, absolute values are rounded to a multiple of three. For this reason, the overall value may deviate from the total of the individual values.

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the intermediate secondary school leaving certificate accounted for 221.121 new contracts and formed the largest group. The development in the number of students with a higher education entrance qualification exhibited a different course. The proportion of such trainees has risen constantly since 2009 and reached a high point of 25.3% (131,934) in 2013. The main outcome was fiercer competition between applicants with a higher education entrance qualification for the often scarce places in occupations they particularly favoured (Table 14).

The **transitional sector** enables young people who do not succeed in entering VET directly after leaving school to improve their individual competences for commencement of training or employment. This transitional area expanded considerably from the start of the 1990's to the mid-2000's. The significance and effectiveness of measures to improve opportunities for young people were an object of controversial debate and led to different outcomes for different groups of persons. Nevertheless, the 2011 BIBB Transitional Study provides a basis for demonstrating favourable educational pathways follow-

ing participation, especially when such measures lead to a higher level school leaving qualification. In comparison to the base year of 2005, the number of entrants declined by 39.5% in 2013. Despite this trend reversal and the changed situation on the training market, many young people, including a significant proportion with a good level of prior learning, still progressed to measures within the transitional sector in 2013 (Table 15).

Persons in possession of a higher education entrance qualification have achieved the highest school certificate available in the German educational system in the form of the upper secondary school leaving certificate/general higher education entrance qualification or the University of Applied Sciences entrance qualification. This offers them a broad spectrum of vocational training options including a course of higher education study at a university or University of Applied Sciences, school-based or company-based vocational education and training, training at a University of Cooperative Education or College of Public Administration or a combination of higher education study and VET. Prior to this major decision

Table 15: Previous participation in vocational preparation training or basic vocational training by areas of responsibility¹, Germany

Competent body responsible	Total new training contracts	Previous participation in vocational preparation training or basic vocational training (multiple responses possible)											
		Total ²		of which:									
				Company-based training measure		Prevocational training measure		School-based vocational preparation year		School-based basic vocational training year		Full-time vocational school not leading to a full vocational qualification	
		Absolute	in %	Absolute	in %	Absolute	in %	Absolute	in %	Absolute	in %	Absolute	in %
Trade and industry	317,694	18,984	6.0	1,941	0.6	3,507	1.1	2,820	0.9	1,266	0.4	10,293	3.2
Craft trades	139,320	21,618	15.5	2,961	2.1	4,365	3.1	2,613	1.9	3,723	2.7	8,781	6.3
Public sector ³	12,174	276	2.3	27	0.2	45	0.4	45	0.4	45	0.4	129	1.1
Agriculture	13,278	2,568	19.3	204	1.5	660	5.0	345	2.6	1,218	9.2	207	1.6
Liberal professions	40,782	3,768	9.2	1,935	4.7	705	1.7	384	0.9	252	0.6	765	1.9
Housekeeping	2,649	1,437	54.2	54	2.0	786	29.6	381	14.4	72	2.7	216	8.1
Total	525,897	48,651	9.3	7,119	1.4	10,068	1.9	6,588	1.3	6,576	1.3	20,388	3.9

¹ Alignment of trainees to the areas of responsibility is generally determined by the competent body in charge of the training occupation rather than by the company providing training. Apprentices who are being trained in public sector companies or in liberal professions in the private sector economy are aligned to the areas of responsibility of trade and industry or craft trades.

² Because of the possibility of multiple responses, total values are lower than the line totals for the individual measures.

³ It should be noted that the public sector area of responsibility has recorded a very sharp drop in the number of new contracts reported to have been preceded by prior learning in a "company-based training measure". This particularly affects the occupation of specialist in social insurance. The presumption is that there was a reporting error in previous years (2007 to 2012). According to information provided by the competent body, only a few persons concluding new contracts were in possession of such prior learning in earlier years.

Source: BIBB "Trainee Database" provided by the Federal Statistical Office based on data from the Vocational Education and Training Statistics of the Federal Statistical Office and the statistical offices of the federal states (survey as of 31.12 December), reporting year 2013. For data protection reasons, absolute values are rounded to a multiple of three. For this reason, the overall value may deviate from the total of the individual values.

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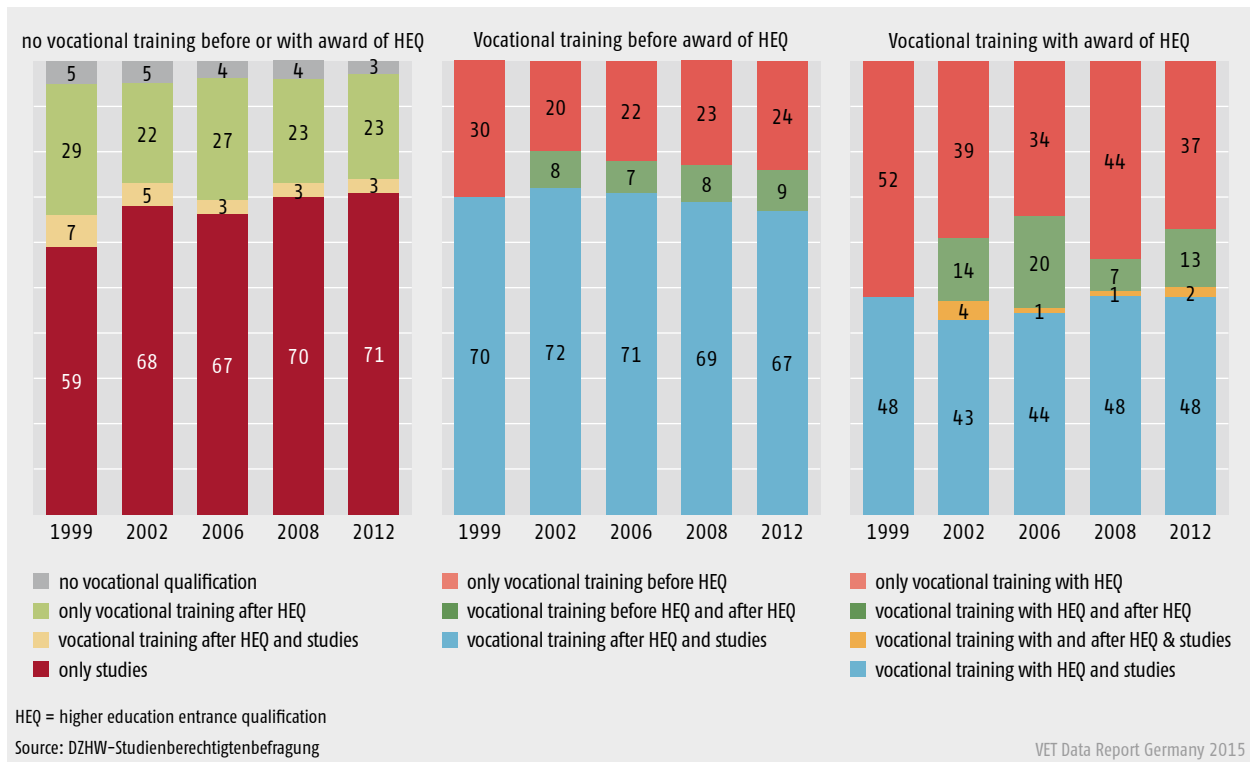
in their educational and occupational history, persons with a higher education entrance qualification form a highly heterogeneous group with regard to their previous educational biography. About one in five planned to enter vocational education and training, whilst 3% aspired to training at a University of Cooperative Education. Both of these proportions had fallen slightly compared to the 2008 cohort. Six months before the end of schooling, about one in ten persons in possession of a higher education entrance qualification stated that they definitely or probably wished to enter higher education and VET. This intention can be realised via a dual course or by completing vocational education with subsequent higher education study. Shortly before completion of schooling, however, it may also be the expression of continuing uncertainty or the lack of any decision regarding the post-school training pathway.

Most (82%) of the persons in the 2012 cohort with a higher education entrance qualification who stated during their upper secondary school leaving year that

they wished to complete VET after obtaining their upper secondary school leaving certificate/general higher education entrance qualification or University of Applied Sciences entrance qualification stuck with their intention after leaving school. This figure, however, includes 23% who wished to supplement training via a subsequent course of higher education study. A further 16% went on to abandon their VET plans and commenced a course of higher education study only. Compared to the previous cohorts of 2010 and 2008, this group proportionally reduced from a previous level of 20% in favour of a combination of VET and subsequent higher education study.

Just over two thirds of those in possession of a higher education entrance qualification who prior to completion of schooling had the intention to commence a course of study at a University of Applied Sciences actually went on to realise this plan once they had acquired their qualification. The vast majority of persons with a higher education entrance qualification who planned to enter university after completing their final year at school adhered to this

Figure 8: Post-school training pathways of persons in possession of a higher education entrance qualification in cohort comparative terms by prior vocational learning (in %)



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intention (81% in 2012). Those in possession of a higher education entrance qualification who, prior to completion of schooling, were aiming to proceed both to VET and higher education and study differed significantly from one another in accordance with the various opportunities to realise such an intention. This may be an expression of indecision. One fifth of these persons combined vocational education and training and higher education study at different times. One third commenced higher education study at a University of Applied Sciences (including dual programmes), and one third entered university only. A further 17% opted for vocational education and training without higher education study. After completion of schooling, the desire to pursue vocational training at a University of Cooperative Education mostly leads to a course of study at a University of Applied Sciences. Persons in possession of a higher education entrance qualification who come from an academic home background are less likely to express and realise plans to enter VET only than their counterparts whose parents have not achieved a higher education qualification (2012:

52% versus 61%). In Germany, it is possible to obtain a school-based higher education entrance qualification at a wide range of different types of school. Examples include upper secondary schools, intermediate secondary schools, evening upper secondary schools, specialised upper secondary schools and, depending on the federal state, trade and technical schools and full-time vocational schools. This diversity of schools takes account of aspects such as the varying prior learning of persons with a higher education entrance qualification (such as second-chance educational pathways for those who have completed VET). It also, however, contributes towards heterogenisation of those entitled to enter higher education (e.g. via provision of parallel vocational education and training). In fundamental terms, a differentiation in respect of prior vocational learning can be drawn between persons who have already completed VET prior to acquisition of a higher education entrance qualification, persons who have completed VET parallel to the acquisition of a higher education entrance qualification and persons who are not in possession of prior vocational

learning. The majority of school leavers with a higher education entrance qualification has not undergone any prior vocational learning (85 % in 2012). On the other hand, just over one in ten persons in possession of a higher education entrance qualification have completed vocational education and training prior to acquisition of the higher education entrance qualification and 4% have completed VET at the same time as acquiring the upper secondary school leaving certificate/general higher education entrance qualification or the University of Applied Sciences entrance qualification.

Post-school training pathways are influenced by factors such as the previous educational and occupational biography of the persons in possession of a higher education entrance qualification. Most of those with a higher education entrance qualification who have not undergone any prior vocational learning commence a course of higher education only after completing the upper secondary school leaving certificate/general higher education entrance qualification or the University of Applied Sciences entrance qualification. Between 1999 and 2012, this proportion also rose from 59% to 71%. Parallel to this, the pathway of post-school VET with subsequent higher education study lost significance (from 7% to 3%), and the choice of VET only without higher education study also became a less frequent one (from 29% to 23%).

If persons with a higher education entrance qualification have completed VET *before* obtaining their higher education entrance qualification, the expectation is that they are significantly less likely to commence further VET subsequent to completing schooling (Figure 8) (Centre).

1.3.2 Participation in and successful completion of final examinations

In the 2013 reporting year, nearly 260,000 young men and just fewer than 186,000 young women took part for the first time in the final examination in the occupation in which training had taken place. The vast majority (91.1%) of all first-time candidates were admitted to the final examination in a scheduled manner following completion of the regular or contractually agreed duration of training. 6.8% sat the first examination prematurely as a result of particularly good training performance. Statistics relating to this situation by federal state (Table 16, also cf. pp. 30 in the Data Report 2014) are set out below.

Alongside the final examination following regular training, the Vocational Training Act and the Crafts and Trades Regulation Code also provide an opportunity to be admitted to the final examination as an external candidate by the competent body. This possibility is particularly open to those who have completed full-time

Table 16: **First participation in final examinations in 2013 and examination success by areas of responsibility¹, Germany**

Area of responsibility ¹	Participants										
	Men	Women	Total	including:							
				Type of admission						Examination success	
	Number			Scheduled		Premature		Following extension		Passed	
			Number	in %	Number	in %	Number	in %	Number	in % ²	
Trade and industry ³	163,125	114,483	277,608	248,529	89.5	24,867	9.0	4,212	1.5	258,420	93.1
Craft trades	81,501	26,277	107,778	102,363	95.0	2,250	2.1	3,165	2.9	94,758	87.9
Public sector	4,308	8,115	12,423	11,382	91.6	837	6.7	204	1.6	11,874	95.6
Agriculture	8,883	2,499	11,382	10,839	95.2	201	1.8	342	3.0	10,023	88.1
Liberal professions	1,917	32,016	33,933	30,372	89.5	2,316	6.8	1,245	3.7	31,764	93.6
Housekeeping	195	2,352	2,547	2,472	97.1	6	0.2	69	2.7	2,382	93.5
All areas	259,929	185,742	445,671	405,954	91.1	30,480	6.8	9,240	2.1	409,221	91.8

¹ Alignment of trainees to the areas of responsibility is generally determined by the competent body in charge of the training occupation rather than by the company providing training. Apprentices who are being trained in public sector companies or in liberal professions in the private sector economy are aligned to the areas of responsibility of trade and industry or craft trades.

² Success rate for first examinations – successful first examinations as a proportion of all examinations

³ Including banking, insurance, transport and hotel and restaurant trade

Source: "Database of trainees" produced by the Federal Institute for Vocational Education and Training on the basis of the results from the Vocational Education and Training Statistics of the Federal Statistical Office and the statistical offices of the federal states (survey as of 31 December). For data protection reasons, absolute values are rounded to a multiple of three. For this reason, the overall value may deviate from the total of the individual values.

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Table 17: Participation in external examinations in 2013 by areas of responsibility, Germany

Area of responsibility ¹	Participation							Examination success			
	Men	Women	Total	including:				Examinations passed by type of admission		Total examinations passed	
				Type of admission		Completed school-based training course	Professional and occupational experience	in % ³	in % ³		
	Number		Number	in % ³	Number					in % ³	in % ³
Trade and industry ²	14,901	10,227	25,125	4,632	18.4	20,493	81.6	80.7	78.5	19,815	78.9
Craft trades	1,323	594	1,917	807	42.1	1,110	57.9	82.5	89.2	1,656	86.4
Public sector	201	249	450	132	29.3	318	70.7	81.8	92.5	399	88.7
Agriculture	762	468	1,227	132	10.8	1,098	89.5	84.1	89.9	1,098	89.5
Liberal professions	42	330	372	186	50.0	183	49.2	77.4	78.7	288	77.4
Housekeeping	75	2,220	2,295	1,071	46.7	1,224	53.3	89.6	85.0	2,001	87.2
All areas	17,301	14,088	31,386	6,960	22.2	24,429	77.8	82.2	80.0	25,257	80.5

¹ Alignment of trainees to the areas of responsibility is generally determined by the competent body in charge of the training occupation.

² Including banking, insurance, transport and hotel and restaurant trade

³ Calculation takes place on the basis of the rounded absolute values (see source information).

Source: "Database of trainees" produced by the Federal Institute for Vocational Education and Training on the basis of the results from the Vocational Education and Training Statistics of the Federal Statistical Office and the statistical offices of the federal states (survey as of 31 December). Absolute values are rounded to a multiple of three. For this reason, the overall value may deviate from the total of the individual values.

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Table 18: Premature contract dissolutions by areas of responsibility¹ and time of contract dissolution² (in absolute terms and in %³), Germany 2013

Competent body responsible	Total premature contract dissolutions		of which dissolved:									
			During the probationary period		After between 5 and 12 months		After between 13 and 24 months		After between 25 and 36 months		After more than 36 months	
	Absolute terms	in %	Absolute terms	in %	Absolute terms	in %	Absolute terms	in %	Absolute terms	in %	Absolute terms	in %
Trade and industry	77,286	100.0	27,162	35.1	25,176	32.6	18,363	23.8	5,547	7.2	1,038	1.3
Craft trades	54,774	100.0	16,497	30.1	16,533	30.2	14,325	26.2	6,378	11.6	1,044	1.9
Public sector	795	100.0	207	26.0	213	26.8	234	29.4	120	15.1	24	3.0
Agriculture	3,456	100.0	975	28.2	1,065	30.8	972	28.1	348	10.1	93	2.7
Liberal professions	11,733	100.0	4,992	42.5	3,264	27.8	2,316	19.7	987	8.4	174	1.5
Housekeeping	870	100.0	150	17.2	303	34.8	249	28.6	132	15.2	36	4.1
Total	148,914	100.0	49,983	33.6	46,551	31.3	36,462	24.5	13,512	9.1	2,406	1.6

¹ Alignment by responsibility for the respective training occupations

² Period between beginning and contract dissolution (in months)

³ Contract dissolutions the commencement of which is a certain number of months in the past as a proportion of all contract dissolutions (not the dissolution rate and not genuine continuous data)

Source: BIBB "Trainee Database" provided by the Federal Statistical Office based on data from the Vocational Education and Training Statistics of the Federal Statistical Office and the statistical offices of the federal states (survey as of 31 December), reporting year 2013. For data protection reasons, absolute values are rounded to a multiple of three. For this reason, the overall value may deviate from the total of the individual values.

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school-based training courses and to unemployed persons with occupational experience. Table 17 shows participation in external examinations in the 2013 reporting year in overall terms and differentiated according to areas of responsibility.

1.3.3 Termination of training contracts

The reduction of contract dissolutions or the avoidance of training drop-out's in dual VET remain high on the educational policy agenda and are also attracting a great deal of attention against the background of the feared shortage of skilled workers. In the 2013 reporting year, approximately 148,914 training contracts were dissolved prior to the expiry of the training time stated in the contract (Table 18). A consideration of the time which elapses between the beginning of training contracts and premature dissolution shows that most training contracts which are dissolved are dissolved within the first year.

In the 2013 reporting year, the total dissolution rate for dual vocational education and training, which may be

interpreted as an approximate value for the number of training contracts dissolved as a proportion of training contracts commenced, was 25.0% (LQ_{neu}). The dissolution rate during the probationary period is 8.6%, after the probationary period 16.3%. The 25% dissolution rate recorded in the 2013 reporting year is also within the usual fluctuation range which has applied since the beginning of the 1990's (20% to 25%). Over the course of time, the dissolution rate fluctuates significantly in line with the situation on the training market. The contract dissolution rate cannot be compared with the higher education drop-out rate since the latter does not include changes of institute of higher education and subject of study. Calculating a comparable drop-out rate for dual VET, something which can only take place in the form of a rough estimation due to the data situation, we arrive at a figure of approximately 16% for first-time completers in the 2012 cohort and at a drop-out rate of 17% for the cohort completing training in 2013. Significant differences in dissolution rates are also revealed in the case of trainees of German and foreign nationality (Table 19).

Table 19: **Contract dissolution rates (LQ_{neu} in %)¹ by personal characteristics and areas of responsibility², Germany 2013**

Personal characteristic	Total	Trade and industry	Craft trades	Public sector	Agriculture	Liberal professions	Housekeeping
Gender							
Male	24.7	21.0	31.9	8.0	22.7	28.0	36.6
Female	25.4	22.5	38.8	5.6	27.9	25.3	26.9
Nationality							
German nationality	24.5	21.2	33.2	6.4	23.8	25.3	27.8
Not German nationality (foreigners)	31.9	29.2	39.1	8.2	39.8	27.0	26.0
Highest general school leaving qualification							
Not achieved lower secondary school leaving certificate	38.3	35.7	43.6	7.5	35.5	33.3	32.1
Lower secondary school leaving certificate	35.9	34.0	39.0	15.5	27.1	34.2	26.2
Intermediate secondary school leaving certificate	21.8	19.8	27.6	6.7	19.9	24.4	23.6
With higher education entrance qualification	13.9	12.3	22.3	5.4	17.4	21.7	27.0
Total	25.0	21.6	33.6	6.4	23.9	25.5	27.7

¹ Multi-tier BIBB model based on the new method of calculation, in % of training contracts commenced

² Alignment by responsibility for the respective training occupations

Source: BIBB "Trainee Database" provided by the Federal Statistical Office based on data from the Vocational Education and Training Statistics of the Federal Statistical Office and the statistical offices of the federal states (survey as of 31 December), reporting years 2010 to 2013. Calculations by the Federal Institute for Vocational Education and Training.

1.3.4 Apprentices from a migrant background

The proportion of trainees holding a foreign passport⁸ has fallen sharply since the beginning of the 1990's. Whereas foreigners made up 8% of all trainees in 1994, this proportion had virtually halved by 2006 (4.2%). Over recent years, it has once again increased steadily to reach 5.7% (79,756 trainees) in 2013. This represented a further rise compared to the previous year (2012: 5.5 %) (Table 20). The interim decrease in the proportion of foreigners amongst trainees in the dual system since the 1990's is also partly due to the fact that more people have gained German citizenship. The proportion of foreigners amongst the general residential population fell likewise. The number of foreigners as a proportion of trainees is, however, not a suitable indicator for an assessment of the extent of integration into dual vocational education and

training. In order to respond to such a question, the proportion of foreigners amongst trainees needs to be related to the proportion of foreigners of relevant age within the residential population.

According to the 2014 BA/BIBB Applicant Survey, just over one third of applicants from a migrant background who were registered with the Federal Employment Agency (BA) had progressed to dual VET pursuant to the BBiG/HwO at the end of the year. Of these, 29% were in company-based training and 7% in non-company-based training. By way of contrast, the corresponding figures for those not from a migrant background were 51% (45% in company-based training and 6% in non-company-based training). Whereas the BA training market statistics merely state the nationality of registered applicants, the BA/BIBB Applicant Survey enables identification of the proportion of persons amongst registered applicants who are

Table 20: Foreigners as a proportion of all trainees by areas of responsibility¹, Germany 1993 to 2013 (in %)

Year	Total number of trainees	Trade and industry	Craft trades	Public sector	Agriculture	Liberal professions	Housekeeping	Maritime sector ²
1993	7.8	6.9	9.8	3.0	1.2	8.3	2.7	1.6
1995	7.7	7.0	9.0	3.1	1.8	8.6	3.6	1.0
1997	6.8	6.3	7.6	2.4	1.4	8.8	4.5	0.9
1999	5.9	5.6	6.6	2.3	0.9	8.0	3.9	1.7
2001	5.5	5.0	6.2	2.2	0.8	7.9	4.3	0.0
2003	5.0	4.4	5.7	2.1	0.8	8.3	4.1	2.3
2005	4.4	3.8	5.1	1.7	0.8	7.3	4.0	2.4
2007 ³	4.3	3.9	4.9	1.5	0.7	7.7	3.2	1.3
2009	4.8	4.3	5.5	1.8	0.8	8.5	4.1	–
2011	5.3	4.7	6.1	1.7	0.8	9.4	5.3	–
2013	5.7	5.1	6.7	2.0	0.9	9.8	6.1	–

¹ Alignment of trainees to the areas of responsibility is generally determined by the competent body in charge of the training occupation rather than by the company providing training. Apprentices who are being trained in public sector companies or in liberal professions in the private sector economy are aligned to the areas of responsibility of trade and industry or craft trades.

² Since 2008, the area of responsibility of the maritime sector has no longer taken part in the Vocational Education and Training Statistics.

³ Since 2007, extensive technical reporting adjustments have meant that data is not precisely comparable with previous years.

Source: BIBB "Trainee Database" provided by the Federal Statistical Office based on data from the Vocational Education and Training Statistics of the Federal Statistical Office and the statistical offices of the federal states (survey as of 31 December), reporting years 1992 to 2013.

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8 All trainees not in possession of a German passport are counted as foreign trainees. A migrant background is deemed to apply if respondents hold a foreign nationality or (also) if they have learned a language other than German whilst still a child. Trainees not from a migrant background are trainees who have German nationality and have also learned German as their first and only native language. Young people who hold both German and non-German citizenship are not recorded as foreign trainees.

from a migrant background. In line with this definition, it was ascertained that 26% of registered applicants for the 2014 reporting year were from a migrant background. The proportion of migrants amongst the registered applicants was twice as high as the proportion of applicants holding foreign citizenship (12.6%). Applicants for the 2014 reporting year who were from a migrant background were more likely to be older than applicants not from a migrant background (Table 21). One probable reason for this is the fact that transition to VET remains more difficult and protracted for migrants in comparison to young people not from a migrant background. Applicants from a migrant background fared somewhat worse with regard to school qualifications.

Table 21: Characteristics of applicants from a migrant background and not from a migrant background in the 2014 reporting year

Characteristics	Applicants from a migrant background	Applicants not from a migrant background
	in %	in %
Gender		
Male	51	52
Female	49	48
Age		
Aged 16 and below	14	20
17 years	19	25
18 years	18	15
Aged 19 to 20	25	23
Aged 21 and above	22	16
Highest school leaving qualification		
Not achieved a lower secondary school leaving certificate	3	2
Lower secondary school leaving certificate	31	27
Intermediate secondary school leaving certificate	49	54
University of Applied Sciences or general higher education entrance qualification	17	18
Total¹	100	100
¹ Missing information or discrepancies as a result of the rounding up or down of figures mean that the total of the individual percentage proportions does not always add up to precisely 100%.		
Source: 2014 BA/BIBB Applicant Survey		
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Data from the 2011 BIBB Transitional Study also provided a basis for investigating how promising the prospects

now are that young men and women from a migrant background and not from a migrant background will be able to find a company-based training place or indeed any opportunity to pursue fully qualifying training. It has long since been known that the transitional processes from school to VET are significantly more difficult and more protracted for young people from a migrant background than for young people not from a migrant background.

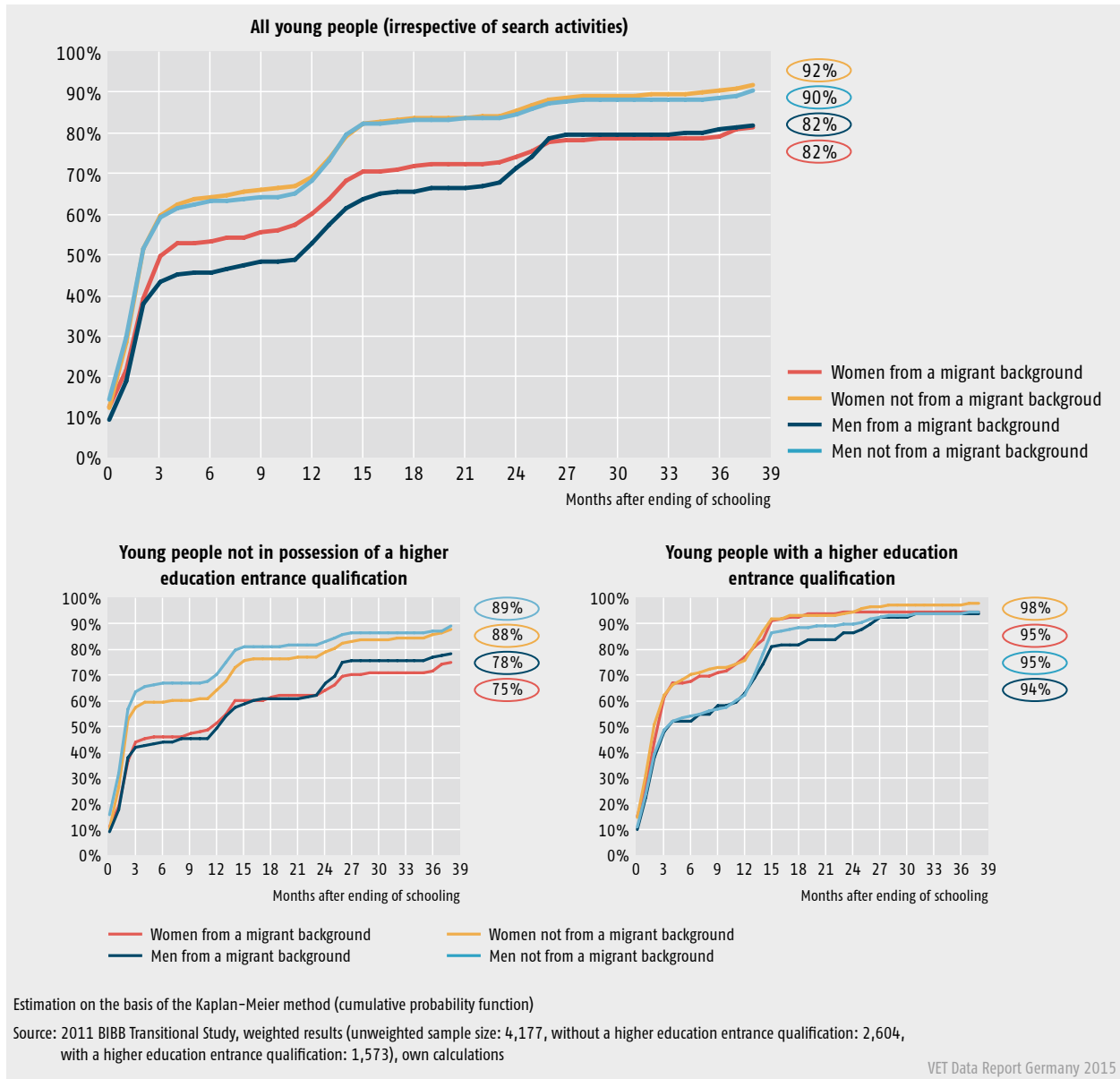
Of all young people from a migrant background who seek a company-based training place at the end of their schooling, an estimated 39% progress to such training within three months. The proportions after approximately one year (14 months), approximately two years (26 months) and approximately three years (38 months) are 55%, 66% and 69% respectively. Figure 9 summarises the progression pathways for young people from a migrant background and not from a migrant background.

Of male migrants in possession of a higher education entrance qualification, 91% commence fully qualifying training. The comparable figure for men not from a migrant background is 93%. The rate of transition of female migrants who hold a higher education entrance qualification is 95%. The rate for women with a higher education entrance qualification and not from a migrant background is 97%. At the point in time when the survey was conducted at the end of 2014, 29% of registered applicants from a migrant background were in company-based vocational education and training pursuant to BBiG/HwO, 7% were in extra-company or school-based VET pursuant to BBiG/HwO and 8% were in VET in the school-based occupation system or in another form of VET outside BBiG/HwO. Figure 10 presents the destination of applicants from a migrant background and not from a migrant background for the year 2014.

Central aspects of everyday company life of trainees are considered below on the basis of the 2011/2012 Youth Employee Survey conducted by the Federal Institute for Vocational Education and Training and the Federal Institute for Occupational Safety and Health (BIBB/BAuA Employee Survey)⁹. Although a series of correlations exists between trainees from a migrant background and trainees

⁹ The 2011/2012 BIBB/BAuA Youth Employee Survey included interviews with 1,119 young people in dual vocational education and training, 937 not from a migrant background and 182 from a migrant background (20.4%).

Figure 9: Likelihood and duration of transition to fully qualifying training including higher education study for all young people (irrespective of search activities) by gender and migration background (in %)



not from a migrant background in respect of the requirements and demands of daily work, there are also some differences which are significant statistically (Table 22).

No significant differences between trainees from a migrant background and not a migrant background are revealed with regard to available resources in the form of areas of scope for action or social support. The vast ma-

ajority of trainees feels that it is able to cope with the professional requirements (78.3%) and with the quantitative requirements in the company. Trainees from a migrant background are significantly more likely than trainees not from a migrant background to feel overstretched by the requirements produced as a result of quantity of work (from a migrant background 19.2% as opposed to not from a migrant background 11.2%) or understretched

Figure 10: Destination of applicants from a migrant background and not from a migrant background in the 2014 reporting year at the end of 2014 by school qualification (in %)¹

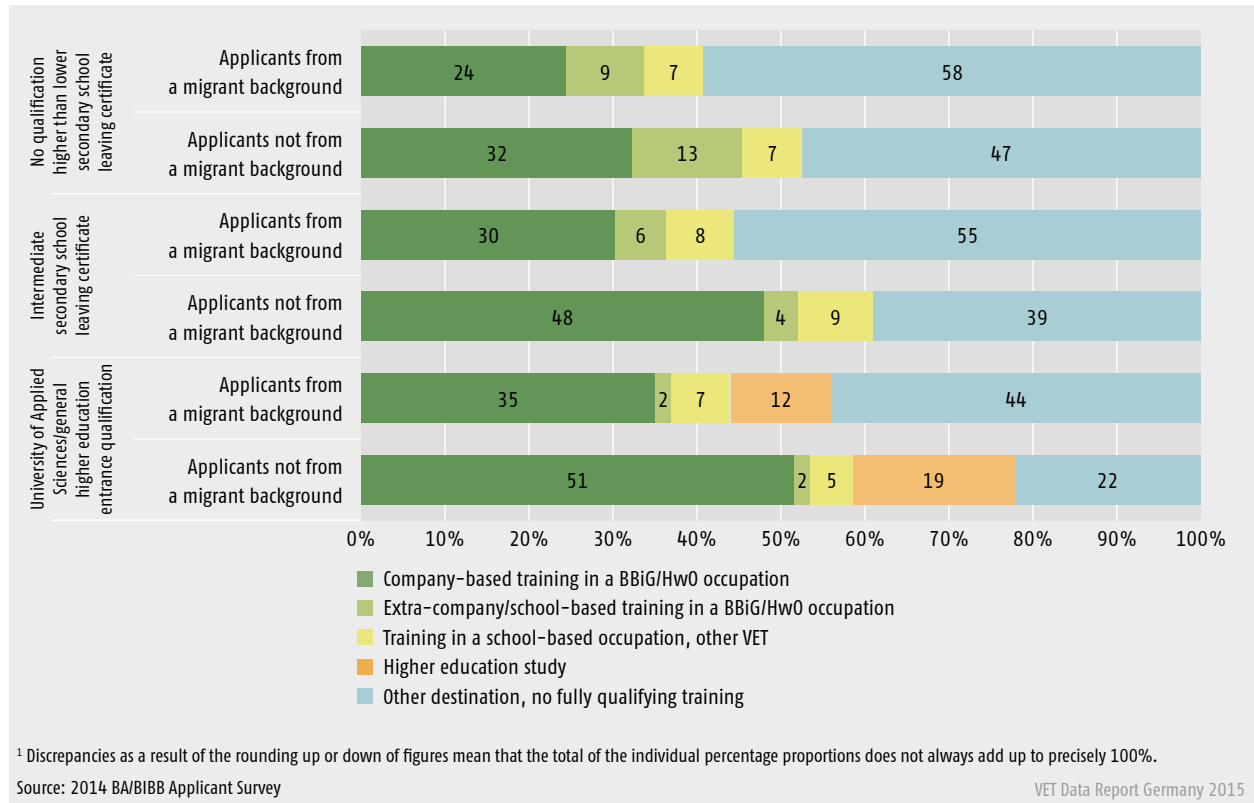


Table 22: Frequently occurring mental requirements and associated demands placed on trainees from and not from a migrant background (in %)

	Trainees not from a migrant background	of whom affected:	Trainees from a migrant background	of whom affected:
The same work process is repeated down to the last detail.	47.4	14.1	55.6	22.7
New tasks that you need to try to understand and come to grips with	46.5	7.8	39.4	11.4
You need to keep an eye on various jobs or processes at the same time.	36.5	19.4	40.9	21.0
Very rapid work	34.5	32.8	40.2	30.0
Strong deadline or performance pressure	32.6	48.2	36.2	54.2
Piece work, minimum performance or number	31.3	28.0	34.8	30.9
Disturbances or interruptions at work	30.7	40.9	33.2	53.0
Small errors associated with major financial loss	23	33.1	19.6	27.5
Needing to go to limits of performance power	11.5	59.6	17.7	62.9
Things are required which cannot be learned or mastered.	8.5	40.9	12.6	52.0

Source: 2011–2012 BIBB/BAuA Youth Employee Survey
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(17.7% and 9.8% respectively). Trainees from a migrant background are more likely to feel understretched by professional requirements (from a migrant background 20.1% as opposed to not from a migrant background 15.1%), something which can be explained by the higher proportion they represent in primary service sector occupations.

1.3.5 Entry into unemployment after completion of dual training

Extrapolations based on figures from the BA showed that 133,000 persons registered as unemployed following completion of extra-company or company-based vocational education and training in the 2013 reporting year. This represents an unemployment rate of 31.0% related to the total number of persons completing dual training (430,000 persons), a slight increase of 1.5 percentage points compared to the previous year (29.5%). The unemployment rate had fallen in the preceding years.

1.4. Training occupations

1.4.1 Developments in occupational structure in dual vocational education and training

The following chapter analyses developments in occupational structure within dual vocational education and training (pursuant to the BBiG and HwO) within the scope of long-term observations conducted by the Federal Institute for Vocational Education and Training on the basis of the Vocational Education and Training Statistics. Structural developments of this nature are of interest in terms of evaluating the development prospects of the dual system and enable the chances of different groups of young people to be assessed.

Since the 1980's, the **service sector** has increasingly taken on a dominant role within the employment system in Germany. This development can also be observed in

Table 23: Entry into unemployment after successful completion of dual training in Germany by gender 2009 to 2013

	Year	Men			Women			Total		
		West	East	Germany	West	East	Germany	West	East	Germany
Entry into unemployment after completion of extra-company/ company-based training	2013	60,765	14,269	75,034	46,901	11,502	58,403	107,666	25,771	133,437
	2012 ¹	55,123	16,822	71,945	46,359	12,916	59,275	101,482	29,738	131,220
	2011 ¹	60,765	21,490	82,255	51,208	16,176	67,384	111,973	37,666	149,639
	2010 ¹	71,624	27,438	99,062	56,644	19,193	75,837	128,268	46,631	174,899
	2009 ¹	72,812	30,766	103,578	57,105	20,915	78,020	129,917	51,681	181,598
Successful participants with prior training ²	2013	213,183	36,492	249,672	155,172	25,428	180,603	368,355	61,920	430,275
	2012 ¹	216,633	41,997	258,630	158,148	28,665	186,813	374,781	70,662	445,443
	2011 ¹	225,843	49,410	275,253	167,625	33,702	201,327	393,468	83,112	476,580
	2010 ¹	220,845	53,070	273,915	168,405	36,711	205,116	389,250	89,781	479,031
	2009 ¹	214,634	55,953	270,587	160,771	37,493	198,264	375,405	93,446	468,851
Rate: unemployed after successful completion of dual training	2013	28.5%	39.1%	30.1%	30.2%	45.2%	32.3%	29.2%	41.6%	31.0%
	2012 ¹	25.4%	40.1%	27.8%	29.3%	45.1%	31.7%	27.1%	42.1%	29.5%
	2011 ¹	26.9%	43.5%	29.9%	30.5%	48.0%	33.5%	28.5%	45.3%	31.4%
	2010 ¹	32.4%	51.7%	36.2%	33.6%	52.3%	37.0%	33.0%	51.9%	36.5%
	2009 ¹	33.9%	55.0%	38.3%	35.5%	55.8%	39.4%	34.6%	55.3%	38.7%

¹ Revised figures from the Federal Employment Agency for the years 2009 to 2012. This means that that are deviations from the values presented in the 2014 BIBB Data Report.

² For data protection reasons, the numbers completing VET as shown in the Vocational Education and Training Statistics are rounded to a multiple of three.

Table 24: **Newly concluded training contracts in manufacturing and service occupations¹, Germany 1980² and 1993 to 2013³**

Occupational group	Year												
	1980	1993	1996	1999	2002	2005	2008	2009	2010	2011	2012	2013	
Total, absolute terms													
Manufacturing occupations	342,030	272,907	287,607	295,530	251,874	241,575	257,412	232,140	226,938	230,856	223,125	212,835	
Service occupations	328,827	298,299	291,768	340,029	316,209	317,487	350,154	329,028	332,094	334,965	325,878	313,062	
Of which:													
Primary service sector occupations	240,369	197,214	199,194	237,516	215,274	228,258	249,198	234,780	236,847	235,293	225,267	215,382	
Secondary service sector occupations	88,458	101,085	92,574	102,513	100,935	89,229	100,956	94,248	95,244	99,672	100,611	97,680	
Total	670,857	571,206	579,375	635,559	568,083	559,062	607,566	561,171	559,032	565,824	549,003	525,897	
Total, in % of newly concluded contracts													
Manufacturing occupations	51.0	47.8	49.6	46.5	44.3	43.2	42.4	41.4	40.6	40.8	40.6	40.5	
Service occupations	49.0	52.2	50.4	53.5	55.7	56.8	57.6	58.6	59.4	59.2	59.4	59.5	
Of which:													
Primary service sector occupations	35.8	34.5	34.4	37.4	37.9	40.8	41.0	41.8	42.4	41.6	41.0	41.0	
Secondary service sector occupations	13.2	17.7	16.0	16.1	17.8	16.0	16.6	16.8	17.0	17.6	18.3	18.6	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

¹ Occupational group differentiation by main task focuses by BIBB, based on Kupka/Biersack (IAB) 2005, modified in accordance with Hall 2007, see Uhly/Troltsch 2009

² 1980 West Germany and West Berlin, newly concluded contracts for 1980 not reported in differentiated form by gender

³ For the complete time series from 1993 to 2008 cf. 2010 BIBB Data Report, Chapter A5.4

Source: BIBB "Trainee Database" provided by the Federal Statistical Office based on data from the Vocational Education and Training Statistics of the Federal Statistical Office and the statistical offices of the federal states (survey as of 31 December), reporting years 1980 (West Germany) and 1993 to 2013. For data protection reasons, absolute values are rounded to a multiple of three. For this reason, the overall value may deviate from the total of the individual values.

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the case of the service occupations in dual VET. Since the mid-1990's, there has been a virtually constant rise in the proportion of newly concluded training contracts in the service sector occupations, reaching a high point of 59.5% in the 2013 reporting year (Table 24).

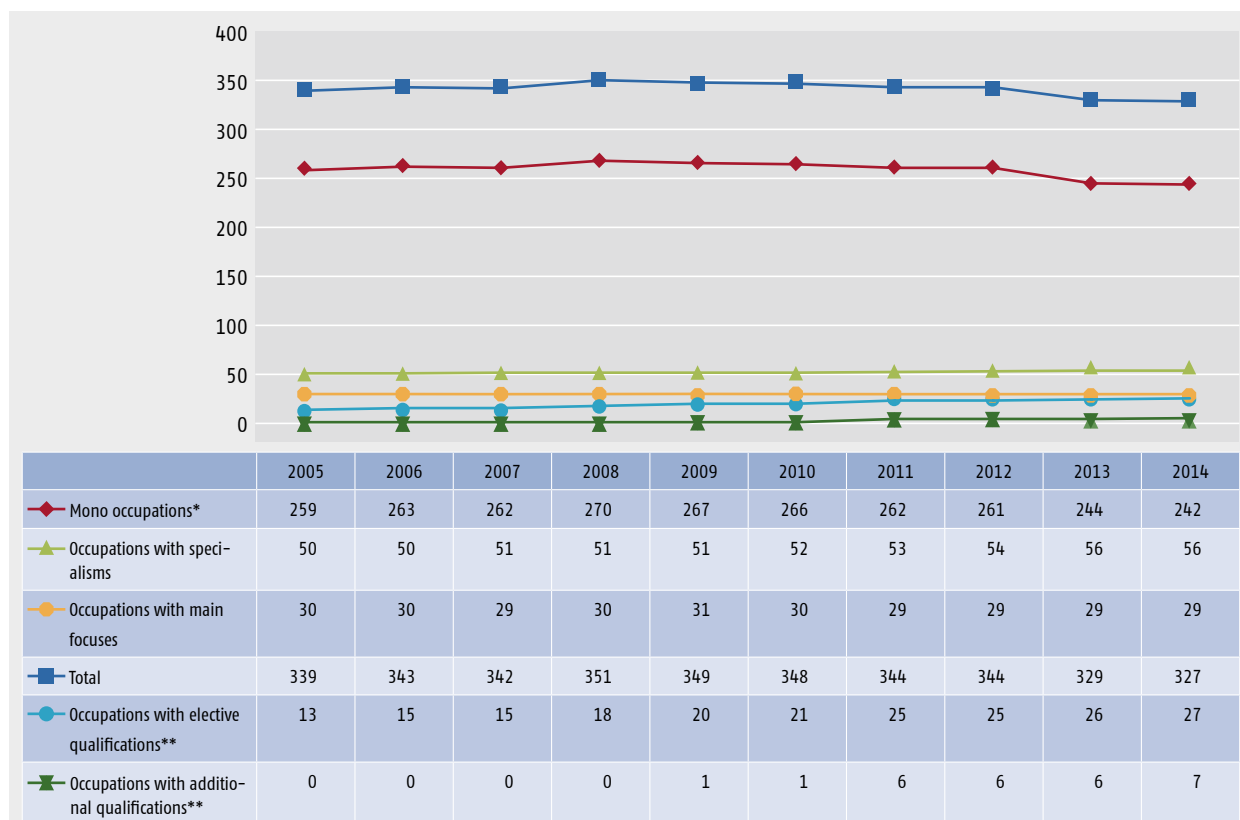
From 1980 to the mid-1990's, there was a sharp decline in the proportion of **newly concluded contracts in the technical training occupations in the dual system**. Modernisation of dual VET in the mid-1990's subsequently proved successful, particularly in the technical occupations, and this meant that rising proportions were recorded in such training occupations. The reverse development in newly concluded training contracts that has been in evidence since the start of the mid-2000's has also been revealed in the case of the technical occupations. This repeated drop in the number of newly concluded training contracts even affected the technical training occupations more severely than dual training occupations in overall terms. After rising from 2006 to 2008, newly concluded

contracts in the technical occupations fell once again in the subsequent years of 2009 and 2010. Although 2011 saw a strong increase, this was followed by a significant decline in 2012 and 2013. In the 2013 reporting year, 138,675 newly concluded training contracts were registered in technical occupations. This represented a significantly lower number than in the preceding years (2011: 145,686 2012: 144,861). Because this development was not solely in evidence in the technical occupations and in fact occurred to an even stronger extent in terms of the overall number of newly concluded training contracts, the significance of the technical training occupations has, measured by relative proportions, increased during this period. This means that although the number of newly concluded contracts in the technical occupations fell by 4.3% from 2012 to 2013, the number of technical training occupations as a proportion of all newly concluded training contracts rose to a 20-year high of 26.4% in 2013.

Since 1996, the **updating of training occupations** has led to more extensive modernisation of dual vocational education and training. 84 new training occupations were created between 1996 and 2013. In 2013, a total of 62,085 new training contracts were concluded in these occupations. This accounted for 11.8% of all new contracts. The most popular occupation was information technology specialist, introduced in 1997, in which 10,356 new training contracts were concluded. This was followed by the occupation of mechatronics fitter, which dates from 1998 and attracted 7,560 new training contracts. Lagging somewhat further behind are the training occupations of automobile business administrator (1998, 3,873 newly concluded contracts), machine and plant operator (2004, 3,351 contracts), designer of digital and print media (1998, 3,330 contracts) and technical product designer (2005, 2,667 contracts).

Since the 1950's, cancellation, integration or conversion into three-year occupations have significantly reduced the number of **two-year training occupations**. Nevertheless, greater attempts were made at the start of the 21st century to use two-year ("reduced theory") training occupations as a vehicle to create additional training place provision and in particular to improve training opportunities for disadvantaged young people. Nevertheless, the potential offered by these occupations in terms of improving opportunities for young people has been a controversial object of educational policy debate over recent years. In state recognised training occupations (or training occupations being piloted), 45,120 new training contracts of a maximum duration of 24 months were concluded in the 2013 reporting year. This meant that there was once again a fall in the number of new contracts in two-year training occupations as a proportion of all newly

Figure 11: **Structure of recognised training occupations (2004 to 2013)**



* Mono occupations include former training occupations (enacted prior to the BBiG of 1969) and a comparably regulated training occupation (pursuant Paragraph 1 BBiG).

** Elective and additional qualifications are not taken into account in the total number of training occupations.

concluded training contracts (8.7% as opposed to 9.2% in 2012). This trend has been discernible since 2010, when the proportion was still 9.6%.

In 2013, the **most popular training occupation** was once again sales assistant for retail services, in which there were 24,993 newly concluded contracts. Over half (55.4%) of all new contracts in two-year occupations were concluded in this training occupation. Following some distance behind, the next most popular occupations are warehouse operator (5,718 newly concluded contracts), machine and plant operator (2004, 3,351 contracts), specialist in the hospitality services industry (2,280 contracts) and skilled express and postal services employee (1,407 contracts).

1.4.2 Structure and number of training occupations pursuant to BBiG/HwO

The following descriptions refer to the training occupations that are government recognised under the Vocational Training Act (BBiG) or the Crafts and Trades Regulation Code (HwO) or are considered to be government recognised¹⁰. Compared to previous years, the number of recognised training occupations pursuant to the BBiG and HwO has once again seen a slight fall (status 1 August 2014). The reason for this is the amalgamation of the three previous office occupations of office management clerk, commercial clerk for office communication and specialist in office communication to form the single occupation of office manager. This was part of a decrease in the number of occupations from 339 to 327 between 2005 and 2014. His reduction is also reflected in the distribution of structural models of training occupations (Figure 11).

The number of training occupations for which credit transfer for further VET courses can be given has increased from 19 (2005) to 22 (2014). During the same period, there was also an increase in the number of training occupations which can be credited towards other training occupations from 44 (2005) to 67 (2014). Duration of training should be no longer than three years

¹⁰ According to § 104 Paragraph 1 BBiG, the apprenticeship occupations and semi-skilled occupations or similarly regulated occupations recognised before 1 September 1969 are also considered government recognised within the meaning of § 4 BBiG, and their job descriptions, vocational education plans, examination prerequisites and examination ordinances are to be applicable until training ordinances are adopted pursuant to § 4 BBiG.

and no shorter than two years in every case (§ 5 Paragraph 1 Clause 2 BBiG). Deviations from this rule are, however, possible. Ordinances are, for example, issued in respect of training occupations with a duration of three and a half years. From 2005 to 2014 the number of 42-month training occupations declined from 58 to 52. The number of training occupations with a training duration of 36 months remained relatively constant (247 in 2005 and 248 in 2014). The number of training occupations extending over a term of 24 months decreased from 32 in 2005 to 27 in 2014.

Between 2005 and 2014, a total of 155 training occupations were updated. These comprised 131 modernised training occupations and 24 new training occupations. 9 modernised occupations¹¹ entered into force in the year 2014. The average duration of an updating procedure (for the modernisation of an existing occupation or creation of a new occupation) is currently 10 months.

1.5. Companies in vocational education and training

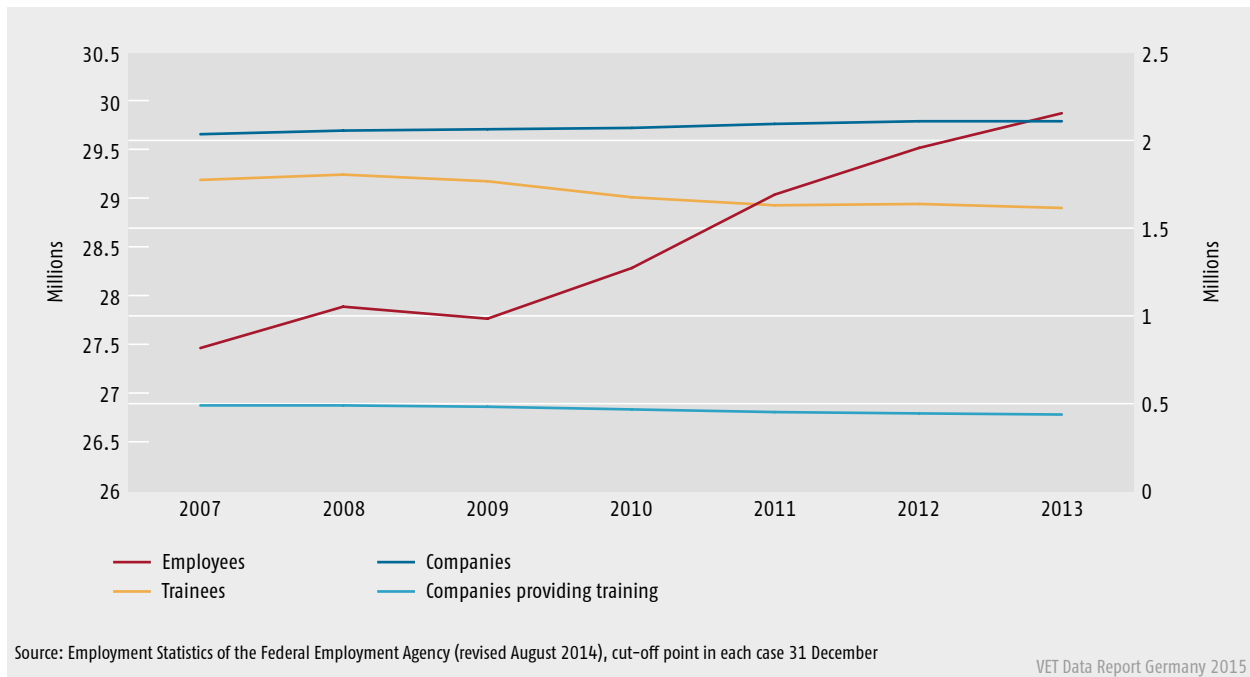
1.5.1 Participation of companies in VET

According to the revised Employee Statistics of the Federal Employment Agency, around 438,000 companies out of a figure of just over 2.1 million companies with at least one with one employee subject to mandatory social insurance contributions were participating in the vocational training of young people as of 31 December 2013 (Figure 12). Compared to the previous year, this represented a fall of 9,000 or 2.0% in the number of companies providing training. The proportion of companies providing training¹² declined by 0.5 percentage points compared

¹¹ Agricultural and construction machinery mechatronics technician, specialist in ice cream making, motor vehicle body and vehicle construction mechanic, office manager, insurance and financial services broker, upholsterer, technologist in confectionery goods, maker of plucked musical instruments, cycle mechatronics technician

¹² The proportion of companies providing training is defined as the number of companies providing training as a proportion of all companies with employees subject to mandatory social insurance contributions including companies providing training. In calculating the proportion of companies providing training, no differentiation is made between companies entitled to provide training and companies not entitled to provide training. To this extent, the proportion of companies providing training differs from so-called training activity, which denotes the number of companies providing training as a proportion of all companies entitled to provide training (cf. BIBB Data Report 2014, Chapter A 4.10.2).

Figure 12: **Employees (left-hand scale), companies, companies providing training and trainees (right-hand scale) between 2007 and 2013 in Germany (in millions)**



to 2012 to reach a new low of 20.7 %. The training rate¹³ also dropped further in 2012. Whereas the total number of trainees fell by 23,500 to around 1.612 million (-1.4%), the number of employees subject to mandatory social insurance contributions rose by 356,000 to reach 29.9 million (+1.2%). This training rate of 5.4% represents a further decline and is 0.1% below the figure recorded in the previous year. As in the preceding years, the federal states of both East Germany and West Germany were affected by the decrease in company participation in training.

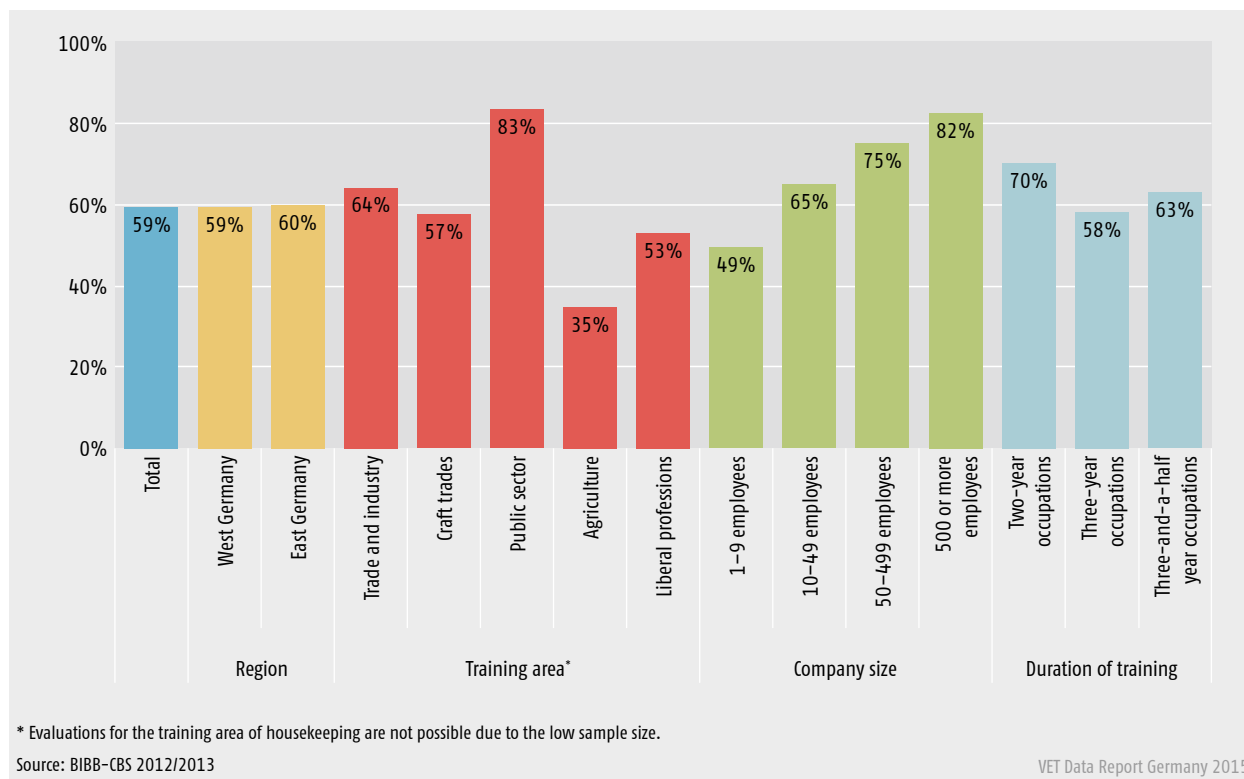
As in the previous year, the fall in the total number of companies providing training was almost entirely due to losses in the area of the smallest category of company (see 2014 Data Report, pp. 35–36). The development of companies providing training and of the training rate by economic sector essentially exhibits a certain pattern. Sectors of the economy which feature simple service sector activities are particularly affected by decrease in trainees and the number of companies providing training

(hotel and restaurant trade, retail and so-called personal services). The areas of the food, wood and paper industries, which form part of the manufacturing sector, have recorded a fall of 4.5%. The only areas to show positive development are “Research and development”, “Information and communication”, “Chemical and pharmacy branch”, “Engineering and automobile manufacture” and “Transport”. In terms of the overall figures, however, these are insufficient to balance out the fall in the total number of trainees and in the training rate.

On average, a company offers permanent employment to 59% of its successful trainees. Figure 13 shows the average likelihood of being given employment by the company providing training for all successful trainees in the period from 2011 to 2013.

¹³ The training rate denotes the proportion of trainees expressed as a percentage of all employees subject to mandatory social insurance contributions including trainees.

Figure 13: Average likelihood of being given employment per company providing training (2011 to 2013, in % of all successful trainees)



1.5.2 Training staff in company-based training

The statutory provisions specify that, along with professional knowledge, skills and competences, trainers in the dual system must also have the skills relating to occupational and work education which are necessary to convey the content of the vocational education and training. Personal aptitude is also required. Persons responsible for the vocational education and training in the companies must be able to prove that they are technically and personally suited for this task. This usually occurs via an examination in accordance with the Ordinance on Trainer Aptitude (AEVO).

In 2013, a total of 90,948 **trainer aptitude examinations** were conducted in the training areas of trade and industry, the craft trades, agriculture, the public sector and housekeeping. 65.4% of candidates were male, 34.6% female. A total of 85,548 persons passed the examination. This represented a pass rate of 94.1%;

14,253 examinations were passed in the federal states of East Germany. The proportion of women amongst those passing Ordinance on Trainer Aptitude (AEVO) examinations was 35%. The number of examinations rose slightly compared to the previous year. A total of 45,360 registered trained were not required to demonstrate their professional suitability via an examination pursuant to the AEVO. 35,733 of these persons exempted from the aptitude examination were from the training area of trade and industry.

In 2013, a total of 39,681 persons took part in **master craftsman examination** in the training areas of trade and industry, the craft trades, agriculture, the public sector and housekeeping. Of these, 85.4% were men and 14.6% women. 36,591 candidates passed the examination, representing a pass rate of 92.2%. The housekeeping sector once again had the highest proportion of successful female master craftsman at 100%. This was followed by the craft trades and agricultural sectors, where the corresponding figures were 18.3% and 17.9%

Table 25: Frequently occurring mental requirements placed on trainees by occupational field and gender and associated demands (in %)

	Manufacturing occupations	Primary service sector occupations	Secondary service sector occupations	Male trainees	Female trainees	All trainees	Feel requirement to be a burden	Trainees affected
The same work process is repeated down to the last detail.	39.9	60.4	48.9	45.3	55.2	49.0	16.2	7.9
New tasks that you need to try to understand and come to grips with	49.8	37.9	47.4	45.6	44.0	45.0	8.3	3.7
You need to keep an eye on various jobs or processes at the same time.	29.5	41.3	49.9	31.5	47.1	37.4	19.9	7.4
Very rapid work	33.9	37.9	35.8	33.3	39.8	35.7	32.3	11.5
Strong deadline or performance pressure	32.2	32.0	38.6	32.0	35.5	33.3	49.5	16.5
Piece work, minimum performance or number	40.1	23.1	29.3	34.2	28.3	32.0	28.7	9.2
Disturbances or interruptions at work	21.7	37.6	41.5	27.2	37.7	31.2	43.6	13.5
Small errors associated with major financial loss	28.3	15.2	22.2	26.8	15.2	22.4	31.9	7.1
Needing to go to limits of performance power	13.7	14.0	7.4	14.2	10.3	12.7	60.5	7.7
Things are required which cannot be learned or mastered.	11.5	7.6	7.4	10.0	8.1	9.3	44.5	4.2

Source: 2011–2012 BIBB/BAuA Youth Employee Survey

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respectively. 10.9% of the new female master craftsmen successfully completed their examination in the public sector and 4.6% in trade and industry.

In 2013, the total number of **registered trainers** in the training areas of trade and industry, the craft trades, agriculture, the public sector, the liberal professions and housekeeping in Germany was 662,148. The figure for the federal states of West Germany was 570,540 (86.2%), of which 43.8% were in the area of trade and industry, 35.3% in the craft trades and a further 13.8% in the liberal professions. The proportions for agriculture, the public sector and housekeeping were 3.5%, 3.1% and 0.5% respectively. The total figure for the federal states of East Germany was 91,608 (13.8%). The largest group of training staff was made up by persons aged over 50 (42.7%), followed by persons aged between 40 and 49 (35.1%) and persons aged between 30 and 39 (17.3%). 4.9% of trainers were aged under 30.

1.5.3 Requirements and matching in dual vocational education and training

Workers are subjected to various requirements and demands, which vary considerably according to occupational field. The 2011/2012 BIBB/BAuA Youth Employee Survey is used below to describe the situation for trainees.

One of the groups of respondents for the survey comprised 1,119 young people in dual vocational education and training. This sample is representative of trainees aged between 15 and 24 who have a training time of at least ten hours per week. The objects of observation are the requirements which are set in dual training, whether trainees feel such requirements to be a burden in subjective terms and the resources which are available to them in the form of autonomy and social support. With regard to requirements in respect of professional knowledge and quantity of work, the question is also posed as to whether trainees are able to cope with requirements or feel that they tend to be overstretched or understretched. Frequently occurring mental requirements and associated demands placed on trainees vary according to the occupational field in which training takes place (Table 25).

In order to be able to cope with the demands of work, it is important to have availability of sufficient resources in the form of social support or areas of scope for action. Around one third of trainees are frequently able to plan and divide up their own work for themselves (34.8%). Trainees in service sector occupations enjoy more leeway in this regard than their counterparts in manufacturing occupations (43.5% and 42.3% as opposed to 24.6%). It therefore follows that women are more likely than men to have freedom of planning (43.6% versus 29.4%).

Influence exerted on quantity of work allocated is also greater for trainees in service occupations (23% and 21.7%) than for trainees in manufacturing occupations (16.3%). It is therefore the case that women (21.1%) are more likely than men (18.7%) to be able to control work quantity. Autonomy and areas of scope for action are higher in overall terms in service sector occupations than in manufacturing occupations. Trainees generally receive a high degree of social support in their work. 82.7% frequently feel that they are part of a community in their workplace, and 87.2% of trainees believe that cooperation with colleagues is good. 87.6% also state that they frequently receive help and support from their colleagues at work when they require this. By way of contrast, the proportion receiving assistance from line managers is somewhat lower at 56.8%. Significant differences by gender or occupational field are not revealed with regard to these resources. The only exception is trainees in secondary service sector occupations, who are significantly more likely than trainees in manufacturing occupations to receive help and support from line managers (64.6% as opposed to 55.7%).

1.6. School-based vocational education and training, training in the public sector and dual courses of study at institutes of higher education and Universities of Cooperative Education

Vocational education and training at vocational schools (referred to in abbreviated form as “school-based VET”¹⁴) describes a highly heterogeneous field. It covers various forms of training, the common factor being that such training does not take place within the dual system pursuant to the BBiG/HwO. Most school-based VET lies within the area of cultural sovereignty of the federal states and is thus governed by federal state law. National framework agreements of the Conference of the Ministers of Education and Cultural Affairs are in place for many training courses regulated by federal state law. Alongside training courses governed by federal state law there are, however, examples of training which come under the ju-

risdiction of federal law (outside the BBiG/HwO). There are, for instance, 17 occupations in the healthcare and geriatric nursing sector which have their basis in national laws as well as a small number of recognised training occupations pursuant to the BBiG/HwO, in which training may take place at full-time vocational schools via regulatory exemptions.

1.6.1 School-based vocational education and training

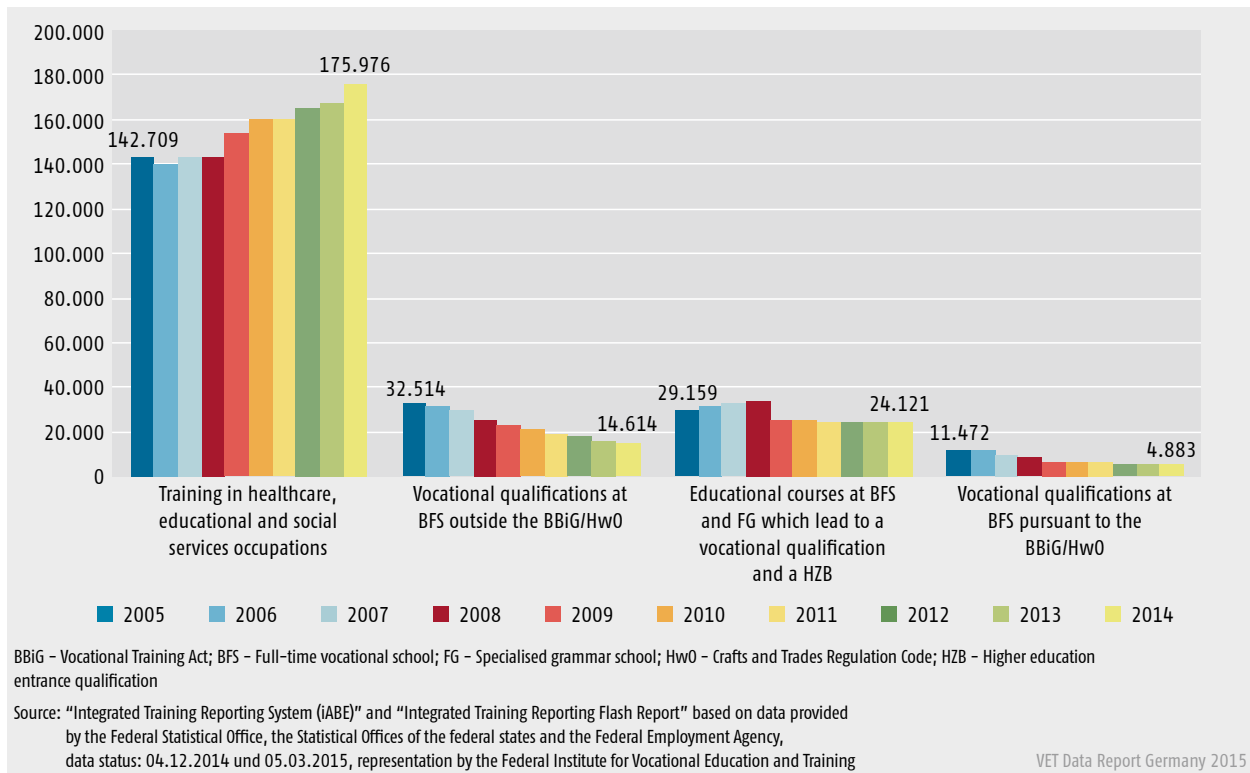
Since 2005, the total number of entrants to school-based VET courses has been virtually constant (-1.7%). By way of contrast, the individual learning accounts have developed extremely differently (Figure 14).

Training in the healthcare, education and social occupations generally takes place at healthcare sector schools or at full-time vocational schools and trade and technical schools. In approximately 50 occupations, around half of pupils are trained in accordance with federal state law regulations. If the Specialist Publication Series list of training courses governed by federal state law is adjusted for healthcare, education and social occupations at full-time vocational schools, around 90 occupations remain. VET is often designed in a way typical to the federal state (e.g. State-certified ceramics maker in Bavaria) and is only represented in that federal state. There are, however, also training courses which are offered in the same way in more than one federal state, such as state-certified technical biological assistant. The ten most popular occupations include “commercial assistant/business assistant – foreign languages”, which is the most significant amongst the training courses governed by federal state law with around 3,267 first-year pupils, a proportion of 8.1%. More than 2,000 pupils commence training courses in the occupations of “technical design assistant” and “commercial assistant/business assistant – information processing”.

Training in a recognised training occupation pursuant to the BBiG/HwO is normally conducted in dual form, i.e. at the company and at part-time vocational school. In addition, exceptions are included in both the BBiG and the HwO which permit full-time school-based training at vocational schools. Training contents according to the recognised general training plans are implemented at the vocational schools. Full-time school-based training pursu-

¹⁴ Two data sources can be used in order to provide a comprehensive statistical description of the field of school-based VET. These are the “Integrated Training Reporting System” (iABE) and Specialist Publications 11, Series 2 “Vocational Schools”. Although the iABE and the Specialist Publications Series contain similar accounts and table headings, these do not always cover the same sampling units.

Figure 14: Entrants in school-based VET accounts 2005 to 2014



ant to the BBiG/HwO is possible in accordance with two regulations (equivalence of examination certificates and admission to the final examination in accordance with the BBiG/HwO).

1.6.2 Training in the public sector

In the public sector, training takes place in special public sector occupations as well as in occupations which are registered with the chambers of commerce and industry and chambers of crafts and trades and in healthcare occupations.

According to this extended delineation, around 201,100 persons were in training in the public sector as of the cut-off date of 30 June 2013 (Federal Government, federal states, local government, local government associations, social insurance providers, the Federal Employment Agency and legally independent institutions under public law). 103,100 persons were completing civil service training. 20,400 had concluded a training contract within the scope of or subsequent to a course of higher education study without being taken on as a civil servant.

77,600 trainees were registered for the remaining training occupations. These primarily comprise training for healthcare occupations pursuant to the BBiG. As a ratio of the full-time equivalent of employees in the public sector subject to mandatory social insurance contributions, these 77,600 trainees represent a training rate of 3.3% as of the cut-off date of 30 June 2013. There was a relatively high number of training contracts in the Federal Government sector, where the training rate was 5.9%.

1.6.3 Dual course of study at institutes of higher education and Universities of Cooperative Education

Dual higher education study is a field which is continuing to differentiate and expand. The high degree of interest displayed in this special form of training by young people, institutes of higher education, Universities of Applied Sciences and Universities of Cooperative Education is unabated. This form of study has enjoyed constantly growing popularity since its introduction in the 1970's. Dual higher education study is defined as a course of study at an institute of higher education or University of Cooper-

ative Education which includes integrated vocational education and training or practical phases at a company. As of 1 October 2014, the “TrainingPlus” database included 1,505 dual courses of study for initial training. Interesting developments on the part of providers of dual courses of study are in evidence in various areas. 71 such courses are offered by universities. Nevertheless, dual courses of higher education study for initial training remain a domain of the Universities of Applied Sciences (1,014 dual courses available).

Provision of dual courses of higher education study for initial training in the “TrainingPlus” database in 2014 is primarily concentrated on engineering (39%), economics (32%) and information technology (12%). In 2014, the federal states with the most dual course of higher education study for initial training in the “TrainingPlus” database were Bavaria (303), North Rhine-Westphalia (287) and Baden-Württemberg (268).

1.7. Financing and costs of training

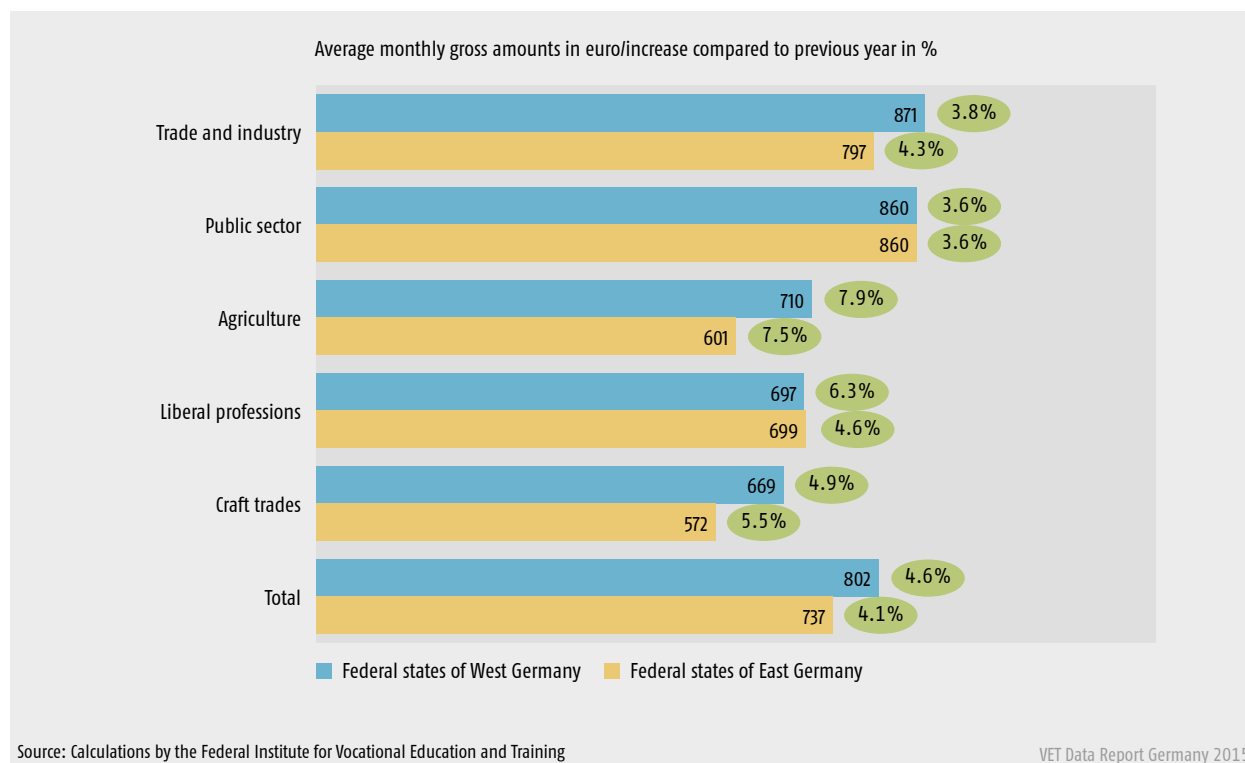
This chapter presents data on training allowances and on the results of the 2012/2013 cost-benefits survey carried out by BIBB. An overview of public expenditure is available in the English Data Report 2014 (pp. 41–44).

1.7.1 Training allowances

Any company in Germany providing training is required by law to pay its trainees an adequate compensation that increases with each year of training (§ 17 BBiG). Trainee human resources costs and training allowances including statutory benefits and social benefits paid on the basis of a collective wage agreement or voluntarily account for an average of 61% of gross training costs. Related to Germany as a whole, average training allowances based on collective wage agreements in 2014 were €795 per month. Please see the following figure for further details (Figure 15).

In the federal states of West Germany, training allowances based on collective wage agreements rose by a

Figure 15: Training allowances based on collective wage agreements in 2014 by training areas



total of 23.1% on average between 2005 and 2013. The corresponding overall increase in the federal states of East Germany was 33.8%. These figures relate to nominal increases in allowances. In the federal states of West Germany, the increase in training allowances based on collective wage agreements in real terms during this period was thus only 8.8%. The federal states of East Germany recorded a significantly higher percentage rise in real terms of 19.5%, albeit from a considerably lower base than in the West.

1.7.2 Costs and benefits of company-based vocational education and training in 2012/2013

Since 1980, BIBB has carried out several surveys to investigate the cost-benefits ratio of company-based training. The most recent of these surveys related to the 2012/2013 training year¹⁵. In the 2012/2013 training year, companies incurred gross costs in the amount of €17,933 per trainee.

Table 26: **Division of gross costs per trainee in the 2012/2013 training year by various characteristics (in € and % of gross costs)**

	Gross costs in €	HR costs of trainees		HR costs of training staff		Costs of equipment and materials		Other costs		Un- weighted sample size
		in €	in % of gross costs	in €	in % of gross costs	in €	in % of gross costs	in €	in % of gross costs	
Total	17,933	11,018	61	4,125	23	925	5	1,866	10	11,206
Region										
West Germany	18,309	11,296	62	4,242	23	953	5	1,818	10	9,171
East Germany	15,726	9,382	60	3,441	22	759	5	2,144	14	2,035
Training area										
Trade and industry	19,535	11,952	61	4,470	23	1,186	6	1,927	10	7,319
Craft trades	15,187	9,018	59	3,553	23	688	5	1,929	13	1,992
Public sector	19,801	13,495	68	3,667	19	400	2	2,239	11	1,052
Agriculture	14,043	9,753	69	2,198	16	419	3	1,673	12	238
Liberal professions	16,474	10,791	66	4,352	26	174	1	1,158	7	550
Housekeeping ¹	15,329	10,207	67	3,756	24	162	1	1,205	8	55
Company size class										
1–9 employees	15,911	9,017	57	4,829	30	438	3	1,626	10	1,008
10–49 employees	16,452	10,127	62	4,071	25	539	3	1,716	10	2,551
50–499 employees	18,111	11,513	64	3,575	20	1,000	6	2,023	11	4,468
500 or more employees	21,757	13,329	61	4,600	21	1,822	8	2,005	9	3,179

As a result of the rounding of figures, total does not always add up to 100%.

¹ limited significance because of the low sample size

HR = Human resources

Source: BIBB-CBS 2012/2013

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15 Within the scope of the 2012/2013 survey, personal interviews were conducted with HR and training managers in 3,032 companies providing training across all branches and company size categories. The basis for the empirical investigation was a gross sample of 45,481 companies drawn from the Federal Employment Agency company database as of the cut-off date of 31 March 2012. Alongside the companies providing training, 913 companies not providing training were surveyed, whereby the latter were not posed the questions relating to training costs. 24,000 addresses were deployed in order to obtain the desired number of interviews. Stratification took place in respect of company providing training, region and company size categories. A total of 11,206 from the 3,032 companies providing training were included in the survey.

Table 27: Division of returns by types of returns per trainee in the 2012/2013 training year by various characteristics (in € and % of gross costs)

	Returns in €	Returns from simple activities		Returns from skilled worker activities		Returns in the apprentice workshop		Financing from funding programmes		Un-weighted sample size
		in €	In % of returns	in €	In % of returns	in €	In % of returns	in €	In % of returns	
Total	12,535	6,210	50	5,875	47	209	2	241	2	11,206
Region										
West Germany	13,067	6,469	50	6,118	47	228	2	252	2	9,171
East Germany	9,412	4,689	50	4,445	47	98	1	180	2	2,035
Training area										
Trade and industry	13,389	6,243	47	6,715	50	220	2	211	2	7,319
Craft trades	10,798	6,199	57	4,015	37	269	2	314	3	1,992
Public sector	11,768	4,719	40	6,852	58	46	0	152	1	1,052
Agriculture	12,750	6,910	54	5,559	44	102	1	180	1	238
Liberal professions	12,769	6,330	50	6,206	49	0	0	233	2	550
Housekeeping ¹	8,945	5,286	59	3,001	34	95	1	563	6	55
Company size class										
1–9 employees	10,807	5,390	50	5,005	46	182	2	230	2	1,008
10–49 employees	12,199	6,226	51	5,647	46	117	1	208	2	2,551
50–499 employees	12,720	6,417	50	5,789	46	151	1	363	3	4,468
500 or more employees	14,403	6,603	46	7,259	50	487	3	54	0	3,179

As a result of the rounding of figures, total does not always add up to 100%.

¹ Limited significance because of the low sample size

Source: BIBB-CBS 2012/2013

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Trainees are also productively active during training. They create products and services, providing the company with a return which can be realised in monetary terms. In the 2012/2013 training year, income from productive performance of trainees amounted to a total of €12,535 per trainee.

Net costs are broadly spread across the companies surveyed. Just under 30% of trainees produce positive returns for their company whilst still in training, i.e. Returns from productive performance exceed gross costs in the case of these trainees. On the other hand, costs of more than €10,000 are incurred in respect of approximately 25% of trainees. In East Germany, net costs of training are around 20% higher than in West Germany. Although gross costs are lower in East Germany, returns are also significantly smaller. There are considerable differences in gross costs, returns and net costs between the individual years of training and between occupations with different durations of training. Training in an apprentice work-

shop, for example, increases training costs considerably because maintenance costs for equipment and premises are incurred and more training staff are also needed. At €12,492 per year and trainee, net costs for companies with an apprentice workshop are, therefore, almost four times higher than for companies without an apprentice workshop (€3,396). In 2007, the average amount invested by companies per year and per trainee was €4,647. In the 2012/2013 training year, this amount had risen to €5,241. In real terms, therefore, average investment has increased by €594. The main reason for this rise is an increase in gross costs of €500. Average returns have fallen slightly by €95. Reference thus far has only been made to costs and returns that occur during training. It has been revealed that the majority of companies invested in training in the 2012/2013 training year. Companies may, however, also benefit from such investments after completion of training. This additional benefit becomes effective if companies continue to employ those who have successfully completed training as skilled workers.

2. Continuing vocational education and training indicators

Continuing education is understood to be the continuation or resumption of organised learning following completion of an initial phase of education of varying scope. In addition to continuing vocational education and training (CVET), this includes continuing general and political education, which is subsumed under the heading of ‘adult education’. The field of CVET in Germany is characterised by a pluralism of providers, a largely market character, and a comparatively minimal degree of regulation. CVET is divided into three parts – regulated continuing education, company-based training and individual continuing training. Only a small part of provision leads to a formal vocational qualification.

Publicly promoted CVET is targeted at various groups, from unemployed people with no school leaving certificate or without vocational qualifications to executives. Only some of the courses are designed to lead to qualifications which are recognised by law or awarded by industry’s self-governing organisations (chambers). Courses leading to advanced vocational qualifications, i.e. master craftsman qualifications or other diplomas, e.g. from trade and technical schools and master’s schools, are classified as ISCED 5B or EQF level 6 respectively.

2.1 Key facts in brief

- ▶ According to the results of the 2014 Adult Education Survey (AES), the **rate of participation** in occupation-specific continuing vocational education and training in the 18–64 age group in Germany was 51%.
- ▶ According to the results of the **BIBB Training Panel**, one in ten companies has financed upgrading training for at least one employee. In overall terms, 70% of companies supported the continuing training of their staff.
- ▶ The **2014 Continuing Training Survey** (wbmonitor) shows that the **business climate** in continuing training has continued to improve. Having increased by +41, the index is almost back at the high point achieved in 2008. Evaluations on the topic of human resources indicate that continuing training providers frequently recruit freelancers.

- ▶ In the year 2013, continuing vocational training **provision at adult education centres** encompassed 62,750 courses. This represented a decrease compared to the previous year.
- ▶ A total of 177,342 persons were shown to be taking part in state registered **distance learning courses**. Compared to the previous year, this was a rise of 2.9%.
- ▶ In 2013, there were 318,436 entries to **measures for the promotion of continuing vocational training** pursuant to German Social Security Code III (SGB III) and German Social Security Code II (SGB II). This figure has once again risen following falls over the past years.
- ▶ 171,396 persons were supported within the scope of the **Upgrading Training Assistance Act** in the year 2013. Participant numbers have slightly increased year-on-year.
- ▶ Around 275,000 training grant vouchers and 28,000 savings vouchers have been issued via the **Continuing Education Grant Programme**. There are currently 221 **Federal Government regulations** in place relating to advanced vocational training and retraining.
- ▶ During the 2012/2013 school year, 59,346 persons successfully completed a final examination at **trade and technical schools**.

2.2 Participation structures

2.2.1 Vocationally related continuing training – results of the 2014 Adult Education Survey

The Adult Education Survey (AES) is an European instrument for the monitoring of lifelong learning in the working-age population. As in 2010, the 2014 survey was entirely concentrated on Germany. In accordance with the AES concept, the trend underlying total participation in continuing training can be represented since 2007 (Table 28, columns 2 to 5). Because of the break in the trend described above, participation in the three continuing training segments can be shown since 2012 (Table 28, columns 6 to 11). In overall terms, a person is

Table 28: **Participation rates in continuing training in overall terms and separated by continuing training segments for selected groups of persons**

Base: all persons aged from 18 to 64	Participation rates in %									
	Continuing training overall				Company-based continuing training		Individual vocationally related continuing training		Non- vocationally related continuing training	
	2007 ¹⁾	2010	2012	2014	2012	2014	2012	2014	2012	2014
	(n = 7,043)	(n = 7,035)	(n = 7,099)	(n = 3,100)	(n = 7,099)	(n = 3,100)	(n = 7,099)	(n = 3,100)	(n = 7,099)	(n = 3,100)
All persons aged from 18 to 64	44	42	49	51	35	37	9	9	13	12
Regions:										
West Germany	43	43	48	50	34	36	9	9	13	13
East Germany	47	41	53	54	39	42	10	9	12	10
Gender:										
Male	46	43	51	52	39	40	8	9	10	10
Female	42	42	47	50	31	34	10	10	15	15
Age:										
Aged 18 to 24	49	40	49	50	23	27	12	9	22	24
Aged 25 to 34	47	41	51	58	38	40	10	14	12	13
Aged 35 to 44	49	47	52	53	40	45	9	9	11	10
Aged 45 to 54	46	47	51	53	40	42	9	7	10	10
Aged 55 to 64	27	34	38	39	27	25	6	8	12	12
Educational level as per ISCED (1997)²⁾:										
No qualification up to level 2	- ³⁾	- ³⁾	31	33	18	23	7	6	9	9
Level 3 and 4	- ³⁾	- ³⁾	45	47	31	33	8	8	12	12
Level 5 and 6	- ³⁾	- ³⁾	67	67	52	52	13	13	16	15
Employment status⁴⁾										
Labour demand	52	49	56	58	46	49	8	9	10	10
Unemployed persons	26	28	29	32	6	11	17	17	8	7
Persons in school/vocational education	50	44	51	54	16	17	16	14	28	31
Other non-economically active	19	20	24	25	7	5	4	5	16	16
New base: Labour demand	(n = 4,696)	(n = 3,869)	(n = 4,636)	(n = 1,855)	(n = 4,636)	(n = 1,855)	(n = 4,636)	(n = 1,855)	(n = 4,636)	(n = 1,855)
Position in occupation										
Hourly paid worker ⁵⁾	33	29	38	44	32	39	3	4	6	5
Salaried employee/civil servant ⁶⁾	61	57	63	64	55	57	7	8	12	10
Self-employed	51	46	52	53	29	28	23	20	9	15
New base: Hourly paid workers/ salaried employees	(n = 3,702)	(n = 3,048)	(n = 3,668)	(n = 1,517)	(n = 3,668)	(n = 1,517)	(n = 3,668)	(n = 1,517)	(n = 3,668)	(n = 1,517)
Occupational position:										
Unskilled/semi-skilled	34	33	37	44	30	37	4	5	8	7
Skilled workers	55	54	62	64	54	58	7	7	11	10
Management level	72	70	77	75	70	69	8	13	13	8

¹⁾ The group of 18-year old's was not included in the 2007 AES. This meant that the target group of the 2007 AES comprised persons aged from 19 to 64.

²⁾ Although a new ISCED Level Classification is in place (UNESCO 2011), the 2014 AES continued to use the classification from 1997 (Institute for Statistics UNESCO 1997, 2006). The 1997 ISCED differentiates a total of six levels, whereby the highest figure denotes the highest level. All school and vocational qualifications are included. Various levels were aggregated in the representation.

³⁾ Classification was not indicated for the years 2007 and 2010.

⁴⁾ Employment status at the time of the interview is indicated, not status at the time of the continuing training participation. It may be the case that a person switches employment status over the course of twelve months. This particularly needs to be taken into account in interpreting participation rates in company-based continuing training and can best be shown at the level of continuing training activities. Company-based continuing training was almost entirely undertaken by persons who were in employment at the time of the continuing training activities (97%). Persons who were trainees during participation made up a significantly smaller proportion.

⁵⁾ No differentiation is any longer officially made between salaried employees and hourly paid workers. Nevertheless, separate questioning was retained in order to provide respondents with a familiar means of allocation during the survey. The structures reveal that this was a correct decision.

⁶⁾ The unweighted sample size of civil servants in employment is small. For this reason, the results for civil servants and salaried employees are stated jointly.

included in the continuing training participation rate if he or she has undertaken at least one continuing training activity in the past twelve months. The same approach is adopted for participation rates in the continuing training segments, i.e. a person must have undergone at least one activity within the respective area during the previous twelve months.

According to the 2014 AES, 51% of those aged between 18 and 64 took part in at least one continuing training activity. Participants in continuing training attended an average of 2.0 training activities, in which they invested an average of 70 hours (teaching sessions attended converted into time). In the AES, adult learning is recorded in differentiated form by formal, non-formal and informal learning. In determining participation rates in company-based continuing vocational training in European comparative terms, only non-formal learning activities are taken into account. According to the results of the 2011/2012 AES, an EU average of 38% of workers aged between 25 and 64 had taken part in company-based continuing training in the twelve months preceding the survey. Germany's participation rate of 48% is significantly above the EU average and puts the country in 8th position together with Estonia.

According to the European comparative data contained in the 2011/2012 AES, male workers in Germany exhibit a slightly higher participation rate in company-based continuing training than female workers (+3 percentage points). However, very little difference remains if a comparison is made between only men and women in Germany in full-time work. Women are even slightly ahead on this measure, by 51% to 50%. Against the background of demographic change and the raising of the regular retirement age, a stronger degree of participation in continuing training by older workers is on the educational policy agenda in many states. In the various European countries, no clear direction is discernible with regard to distribution of participation rates by age groups.

A consideration of participation in company-based continuing training in accordance with the educational level achieved at the time of the survey reveals that this is strongly influenced by educational background. In all European countries except Hungary, workers with a lower level qualification are less likely to participate in company-based continuing training than workers with an

intermediate level qualification. Nevertheless, integration of low-skilled workers is more successful in some countries than in others. Alongside Hungary, Bulgaria and Luxembourg, all of which boast a relative participation rate of more than 90% of low-skilled workers, Finland and Denmark are also successful and considerably ahead of other countries with relative participation rates of at least 70%. In 11 countries, not even one in five of workers with a low level qualification take part in company-based continuing training in absolute terms. Luxembourg heads the list based on this measure with a participation rate of 55%, whilst at least one in three workers with a low level of qualification are integrated into company-based continuing training in the Nordic countries, the Netherlands, Portugal and Hungary. Germany occupies a mid-table position with a participation rate of 25%.

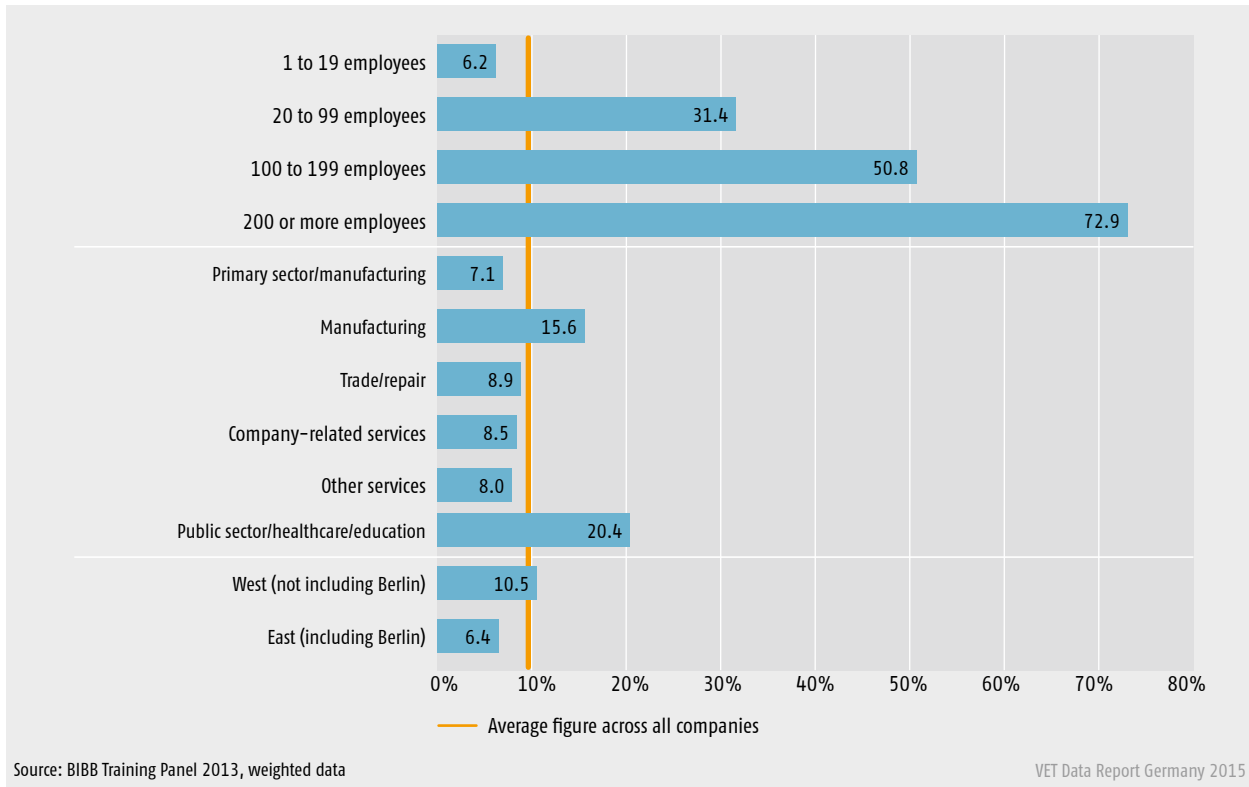
2.2.2 Company-based continuing training and other strategies to meet personnel requirements

Company funding of advanced and continuing training for employees plays an important role in covering the requirement for skilled workers. The following chapter uses data from the 2013 BIBB Training Panel¹⁶ to investigate the extent to which companies in Germany fund upgrading training for their employees and how this funding is differentiated by various company characteristics. It also addresses whether funding takes place in conjunction with other measures to cover human resources requirements. Complementary data from the 2013 BIBB Training Panel can be found in the 2014 English Data Report (pp. 50–51) and in the 2014 German BIBB Data Report, Chapter B1.2.3.

The 2013 survey wave investigated for the first time whether, in the 2012 reference year, companies supported the upgrading training of their employees by assuming costs or by releasing workers and how many employees a company had funded in this manner. According to the results of the BIBB Training Panel, one in ten companies in Germany (9.6%) financed at least one employee within the scope of upgrading training in the year 2012.

¹⁶ The definition of company-based continuing training used in the BIBB Training Panel requires companies to release their employees to take part in continuing training measures for all or some of the time or for companies to pay the costs of participation in continuing training measures in whole or in part.

Figure 16: **Proportion of companies funding upgrading training in 2012 by selected characteristics (in %)**



Compared to this, a consideration of general continuing training participation, including all continuing training measures (including upgrading training) shows a significantly higher figure of 70% of all companies. Around a third of all companies (30.0%) did not support any kind of continuing training measure for employees in 2012. Figure 16 presents the proportion of companies in which upgrading training was supported in 2012 by selected structural characteristics.

The differentiated evaluation of the economic sectors shows that the high participation rate on the part of companies from the manufacturing sector is primarily due to participation by companies in the engineering/automobile, chemical/pharmaceutical and metal working/electrical industries. The differentiated presentation also makes it clear that the noticeably high proportion of companies funding upgrading training within the economic sector of “public sector/healthcare/education” has its basis in strong participation by companies offering long-term care services. The presence of regional differences is revealed by the fact that 10.5% of companies in

West Germany fund upgrading training whilst only 6.4% of all companies in East Germany provide this form of continuing training support. In order to be able to make statements regarding the intensity of company support for upgrading training, a second indicator is determined in the shape of participation rate in company-funded upgrading training. A participation rate of 1.5% is identified in overall terms. This means that 1.5% of all employees whose highest qualification is at least a vocational qualification have completed upgrading training which has been supported by their company either financially or via release from work. In considering this somewhat low total figure, account needs to be taken of the fact that upgrading training courses usually extend over several years and represent a particular form of continuing training in which a formal final qualification is achieved. Company investment in initial and continuing training participation is frequently deployed as a complementary strategy to help secure a supply of skilled workers. In 2012, about one in five companies providing training (21.7%) funded upgrading training. By way of contrast, the corresponding figure for companies not providing

training was a mere 6.5%. This significant difference between companies providing training and companies not providing training can also be consistently observed in a differentiated consideration of company size categories. Advanced training leading to a qualification as master craftsman, technician or certified senior clerk ultimately represents an important career pathway for employees who have completed vocational education and training. Nevertheless, this result indicates that companies which are firmly established within the dual system have a high degree of interest in facilitating this form of occupational advancement and higher qualification for employees in possession of a VET qualification.

As the results show, seeking skilled workers on the external labour market should not be viewed as an alternative to supporting upgrading training. In 2012, almost one company in four (28.5%) intending to recruit highly qualified staff also financed upgrading training for existing employees. Of companies which offered vacancies but did not have any requirement for the recruitment of highly qualified workers, only one in seven (14.4%) invested in upgrading training for staff. For companies without job vacancies, the figure was as low as one in twenty (4.9%).

2.3 Providers of continuing education and training

The main focus of the 2014 **Continuing Training Survey** (**wbmonitor**) was on staff acquisition by continuing training providers. In addition, as every year, information on the economic climate in continuing training and on the structural data of the range of providers was collected. The results are based on weighted and extrapolated data from 2,040 institutions.

2.3.1 Economic climate in continuing training

In 2014, the Continuing Training Survey Climate Index for all providers rose by 41 points, just short of the previous high point achieved in 2008 (+42). This represents an increase of 13 points compared to the previous year. Since 2011, the continuing training branch has seen a more favourable economic development than the service sector as a whole. Given the fact that there has been a virtual stagnation in continuing training funding provided by the Federal Employment Agency (BA), the economic upturn

achieved by providers primarily funded by the employment agencies/Job Centres (financing share of 50% and more) comes as a surprise. The Climate Index for these institutions, which are mostly commercially run or privately operated on a non-profit basis, more than doubled from +14 to +32, although in May 2014 the total number of participants in measures to support company-based continuing training only increased by 164,000 (2%) compared to the corresponding month of the previous year. During the same period, there was even a 5% fall to 162,000 in participants in programmes aimed at facilitating the entry of people into the labour market and integration measures. The only area in which a clear increase was recorded (by 19% to 19,000) was in the “WeGebAU” programme (Continuing Training of Low Skilled Workers and Employed Older Persons in Companies), which is less significant in quantitative terms. A differentiation of this group reveals that providers with supplementary sources of financing of another kind were obviously able to benefit from their positive development or achieve success with participants financed in different ways together with those funded by the employment agencies/Job Centres (Table 29).

In the year 2013, just over one third of all institutions (34.2%) obtained at least half of all their revenues in the area of continuing training from the participants themselves. The second most common arrangement was for providers to be predominantly financed by companies (21.1%).

In 2013, the main financing focus of 18.4% of all institutions comprised funding from local government, the federal state, the Federal Government and/or the EU. 15.9% of providers were primarily funded by the employment agencies/Job Centres, whilst a total of 3.5% were mainly financed by non-public institutional providers or by other sources. About one tenth of all providers (9.8%) combined various customer segments in such a way so that none of the main financing sources stated made up at least half of revenues. Just under half of all institutions (46.8%) are private sector companies; 30.1% of these are commercially oriented, and 15.9% are non-profit organisations.

Whereas normal contracts of employment, i.e. permanent, full-time and subject to mandatory social insurance, remain the prevailing form of employment on Germany, only an average of 32.7% of all staff working for providers in the continuing training sector (salaried employees,

Table 29: Climate Index, business situation and expectations for selected categories of CVET providers 2014

		Climate Index	Evaluation of the situation	Expectation in one year	Number of providers (situation)
		Averaged by situation and expectation	Balance* positive/negative	Balance* better/worse	Extrapolation on the basis of n providers
All providers		41	44	38	1,581
Revenues/contributions from participants	Main focus of finance 50% to 100%	50	54	46	515
	No revenues	37	38	35	247
	1 to 49%	37	40	34	746
	50% to 69%	50	57	43	209
	70% to 89%	45	47	42	158
	90% to 100%	59	56	62	148
Revenues/contributions from companies	Main focus of finance 50% to 100%	55	53	56	316
	No revenues	30	33	27	
	1 to 49%	44	49	40	639
	50% to 69%	58	60	57	80
	70% to 89%	49	46	52	108
	90% to 100%	58	55	60	128
Revenues/contributions from employment agencies	Main focus of finance 50% to 100%	32	31	32	210
	No revenues	42	44	39	835
	1 to 49%	45	51	40	463
	50% to 69%	32	26	37	62
	70% to 89%	51	55	46	87
	90% to 100%	4	2	5	61
Revenues/contributions from local government authorities, federal states, Federal Government, EU	Main focus of finance 50% to 100%	31	39	24	301
	No revenues	51	51	52	626
	1 to 49%	39	43	35	581
	50% to 69%	19	30	8	137
	70% to 89%	34	39	29	69
	90% to 100%	53	57	50	95
Type of institution	Private sector commercial	54	52	57	468
	Private sector non-profit	40	41	38	241
	Company-based training institution	49	44	54	60
	Adult education centre	26	35	18	210
	Vocational school, institute of higher education/University of Applied Sciences, academy	53	57	48	175
	Business related (chamber, guild, professional association or similar)	49	58	40	120
	Church, political party or trade union institution, foundation set up by an association or society	30	31	28	279
Location	Federal states of West Germany	41	44	38	1,279
	Eastern federal states including Berlin	42	46	38	302
Total turnover 2013	1,000 to 10,000 euro	33	27	40	74
	10,000 to 100,000 euro	36	37	35	336
	100,000 to 1 million	35	37	33	624
	1 million to 10 million	49	55	44	338
	10 million euro and above	51	59	43	36
By way of comparison	ifo (Institute for Economic Research) Business Climate Index service sector	21	31	13	

* The balance is the difference between the positive and negative proportional values and has a theoretical range from +100 to -100.

Source: BIBB/DIE (German Institute for Adult Education) wbmmonitor survey 2014, extrapolated values on the basis of n = 1,581 valid responses.

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civil servants, freelancers, volunteers) are permanently employed or have civil servant status. Freelancers make up the largest group of continuing training staff at institutions (61.3%). A total of three quarters (75.7%) stated that they had recruited freelancers. Fewer than half of all institutions (45.9%) had salaried employees, and 22% had volunteers. In 2013, only 11.5% of providers had recruited staff in other forms of employment such as civil servant status. Differentiated by type of institution, freelancers were more likely to be recruited by adult education centres (93.7%), whereas new contracts of employment for salaried employees were in particular more likely to have been concluded by private sector not-for-profit providers (64.8%). The latter circumstance is probably due to the fact that providers of this type operate for employment agencies/Job Centres on a more frequent basis than other providers and for this reason are required to deploy contracted staff, including for teaching.

2.3.2 Continuing vocational training services given by adult education providers

Adult education providers of continuing vocational training include the adult education centres, institutions with trade union and employer links and collaborative ventures between continuing training organisations (hereinafter referred to as a consortium). Fundamental responsibility for continuing vocational training lies with the Federal Government, whilst the federal states have charge of general and political continuing training. Nevertheless, the continuing training laws of the federal states normally stipulate the funding of both general and political continuing training and continuing vocational training. Adult education centres are publicly financed continuing training institutions which exist in all federal states. They offer educational provision which exhibits a broad thematic range, many parts of which are open to the whole of the population without any limitations to access.

According to the statistics¹⁷, continuing vocational education provision offered by the adult education in 2013

¹⁷ The adult education centre statistics are national statistics for the German Association of Adult Education Centres and its member institutions that have been in existence since 1962. They record the human and financial resources available to the adult education centres, provision of various kinds of courses, number of hours taught and take-up figures. The statistical survey is conducted on an annual basis by the German Institute for Adult Education.

comprised just under 62,800 courses. Compared to the previous year, this represented a fall in the total number of courses as well as in all other indicators (Table 30).

Continuing vocational training in Germany is offered by a multitude of institutions. According to a provider survey conducted in 2008 by the Federal Institute for Vocational Education and Training (BIBB) and the German Institute for Adult Education (DIE), institutions with trade union and employer links together make up around 7% of continuing training organisations. The annual Continuing Training Survey (*wbmonitor*) carried out by BIBB and the DIE consistently states higher values for employer-related institutions. In 2013, 8.4% of continuing training providers fell within this category. All of the major trade unions maintain educational departments or training institutes with various main thematic focuses.

In 2013, the continuing training institutes operated by the Confederation of German Trade Unions staged 2,474 courses involving 42,917 participants. Compared to the previous year, the number of courses rose by 0.4% and the number of participants by 0.1%. Over the longer term period from 2003 to 2013, continuing training institutes revealed a significant decline both in terms of continuing training courses and with regard to the number of participants. The number of courses fell by 27% overall, whilst the number of participants fell by 24%.

Between 2004 and 2010, the number of courses staged by member institutions of the Wuppertal Association¹⁸ rose continuously to reach just under 140,000 (+75%). Since 2011, the number of courses has been decreasing and fell to 131,400 in 2013. Since the beginning of the survey (2006), the number of participants has tended to rise, the figure for 2013 being 1.3 million. The chambers of commerce and industry offer continuing vocational training at a local and regional level, frequently in cooperation with their own training centres. This usually comprises in-service seminars and courses, some of which provide direct preparation for chamber of commerce and industry examinations. In 2013, the chambers of commerce and industry staged 24,071 courses involving 2.06 million hours of teaching and 335,769 participants. Compared to

¹⁸ The "Wuppertaler Kreis e. V. – Federal Association for Company-based Continuing Training" sees itself as a consortium of major continuing training institutions from trade and industry. In 2013, the Wuppertal Association had 50 members.

Table 30: Courses offered in the programme area of work and occupations at adult education centres from 1991 to 2013¹

Year	Courses	of which in commissioned and contract measures ²	Hours of teaching	of which in commissioned and contract measures	Take-up	of which in commissioned and contract measures
1991	57,305		2,488,042		776,436	
1993	62,709		2,511,608		824,698	
1995	70,606		2,754,100		869,417	
1997	80,965		2,776,602		934,566	
1999	91,123	6,311	3,181,715	831,049	1,011,132	81,062
2001	102,402	7,823	3,281,324	868,904	1,076,983	90,395
2003	82,473	6,807	2,902,186	946,622	823,996	85,159
2005	73,736	6,436	2,307,864	690,382	709,790	79,013
2007	74,171	7,691	2,326,551	772,029	719,025	96,782
2009	72,480	9,286	2,277,573	743,589	693,740	115,600
2011	67,570	8,235	2,086,992	760,502	617,806	103,140
2013	62,750	8,907	1,704,533	554,695	552,379	103,673

¹ Up to and including 1997, the topics of courses offered at adult education centres were categorised according to so-called "subject areas". The figures presented up to this year were collated from the subject areas of administration and commercial practice (full figures), from courses in mathematics, science and technology (proportionate) from interdisciplinary and other courses and from courses relating to housekeeping.

² Up to and including 1997, commissioned and contract measures are included in the total figures for courses, hours of teaching and take-up.

Source: Adult Education Centres Statistics Database (German Institute for Adult Education, DIE)

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the previous year, the number of courses fell by 0.8 % and the number of participants by 0.4 %. Compared to 2012, high levels of growth were recorded in the thematic area of "preparation for a new occupational activity".

Continuing training statistics relating to collaborative ventures¹⁹ have been collected annually since the 2002 reporting year and publish data on the human resources, financing and course profiles of continuing training organisations operating collaboratively within a consortium of associations. Organisations acting collectively in this manner include the German Educational Institutes Working Group (AdB), the Federal Working Group Work and Life (BAK AL), the German Protestant Working Group for Adult Education (DEAE) and the Catholic Federal Working Group for Adult Education (KBE). The German Association of Adult Education Centres (DVV) is an associated partner of the consortium. In the year 2012, the provision mapped within the area of work and occupations offered by the AdB, BAK AL, DEAE and the KBE encompassed more than 25,000 courses involving 834,000 hours of teaching and with a take-up of 426,000.

In overall terms, continuing vocational training tends to occupy a somewhat subordinate role for the consortium.

2.3.3 Distance learning

The distance learning statistics²⁰ have been collected for 30 years and offer information regarding provision, providers and development of participants in distance learning courses and higher education distance learning. Providers of such courses are surveyed on an annual and voluntary basis for this purpose. The number of providers registered with the Central Office for Distance Learning (ZFU) has once again increased significantly compared to the previous year from 400 (as of the cut-off date of 1 August 2014) to 412 (as of the cut-off date of 1 September 2014). This represents growth of 3%. The market is dominated by a small number of major providers. Only about 1% of providers offer either between 51 and 100 or more than 100 distance learning courses, whereas 92% of

¹⁹ The statistical survey is conducted by the German Institute for Adult Education – Leibniz Centre for Lifelong Learning (DIE).

²⁰ The branch association "Forum Distance-Learning (FDL)" has been responsible for the survey since 2009. In addition, supplementary data material from the Central Office for Distance Learning (ZFU) and the Centre for Higher Education (CHE) can also be used to inform the present treatment.

the providers surveyed by the “Forum DistancE-Learning (FDL)” are relatively specialised and offer fewer than 11 courses. For the 2013 survey period, the FDL identified a total of 177,342 participations in state registered distance learning courses amongst the institutes responding. The continuous increase in providers also indicates an ongoing growth in state registered educational provision. As of the cut-off date of 1 September 2014, the Central Office for Distance Learning (ZFU) recorded 3,218 educational measures, of which it classified 276 as “hobby courses”. Compared to 2013 (when a total of 3,076 registered courses were recorded), this represents an increase in total provision of approximately 4.6%. Whereas the rise in general and vocational training topics was around 4.7% (in absolute terms 131 additional courses requiring compulsory registration compared to 2013), provision relating to leisure topics went up by about 0.5% 11 additional courses in absolute terms). With regard to preferred learning contents, the 2013 FDL survey was once again dominated by “business and commercial practice”, which accounted for 26.6% of all take-up’s. Compared to the previous year 27.5%, however, this represented a slight decline in participation numbers. Also in demand were distance courses enabling the acquisition of a school qualification (14.2%, 15.5% in 2012), upgrading training courses (leading to qualifications such as business economist and technician (13.9 %, 13.7% in 2012) and leisure courses in the areas of health, gymnastics, body care and housekeeping (10.0 %, 12.8 % in 2012). By way of contrast, IT courses were relatively unpopular with a take-up of 8.0% 8.2%) in 2012, as were language courses (5.3%, 5.8 % in 2012).

As in past years, the number of distance students continued to increase in 2013. Calculations conducted by the FDL based on data from the Federal Statistical Office indicate a total of 152,881 distance students, of which 120,195 were studying at a distance institute of higher education and 32,886 at a conventional institute of higher education.

2.4 Publicly funded continuing education and training

2.4.1 Continuing education and training supported by the Federal Employment Agency (SGB II and SGB III)

Qualification acquisition in the context of labour market policy instruments is supported by the Employment Agency under German Social Security Code III (SGB III). Support by the Job Centres for employable persons requiring assistance is provided under Social Security Code II (SGB II). The labour market policy instruments that make qualification possible for people within the jurisdiction of SGB II and SGB III include continuing vocational education and training, continuing vocational education and training for persons with disabilities and ESF-financed qualification programmes for those in short-time work. Promotion of measures for continuing vocational education and training pursuant to SGB III (employment promotion) and since 2005 also pursuant to SGB II (basic income support for job-seekers) is one of the essential elements of active employment promotion. The aim is to improve the individual opportunities of people in the

Table 31: Entries to funded continuing vocational training by selected characteristics

Entries to funded continuing vocational training by selected characteristics	2009	2010	2011	2012	2013
Proportion of women entering funded continuing vocational training	41.1%	42.3%	45.3%	46.3%	45.7%
Proportion of measures leading to a qualification in a recognised training occupation	7.3%	10.7%	11.4%	13.2%	15.7%
Proportion of persons who have not completed VET	30.5%	30.7%	33.2%	35.4%	34.0%
Proportion of persons aged under 25	12.0%	10.1%	10.6%	9.7%	8.7%
Proportion of foreigners	11.0%	10.8%	12.3%	13.7%	13.5%
Proportion of long-term unemployed	7.8%	11.4%	12.7%	12.6%	12.5%

Source: Federal Statistical Office, 2010, 2011, 2012, 2013, 2014, calculations of the Federal Institute for Vocational Education and Training

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labour market and at the same time the competitiveness of the enterprises.

Since 2011, the number of entries to continuing vocational training has largely stabilised. In 2013, the number of entries to funded training rose to 318,436. This represented a slight increase on the previous year of 6.3% (Table 31).

In 2013, total expenditure within the legal scope of SGB III on the funding of participation in continuing training measures was around €1.79 billion as opposed to €1.44 billion in the previous year. This spending comprised continuing training costs from job seeker funding (course costs, travel costs, childcare costs, costs of outside accommodation and subsistence) in the amount of €856.55 million and expenditure on the granting of unemployment benefits in the case of continuing training in the amount of €935.4 million. Expenditure on basic social security benefits for the funding of continuing vocational training also fell to €558.2 million in 2013 (€571.62 million in 2012).

A programme first launched in 2006 and extended for an indefinite period in 2012 focuses on providing initial funding for **the continuing training of the low skilled and of older employees**, particularly in small and medium-sized companies, in order to give them additional skills for the labour market and retain or enhance their employment chances and employability. Within the scope of the Law on Securing Employment and Stability in Germany (Federal Government Economic Stimulus Package II), possible funding was extended for a fixed term until 31 December 2010 to include the group of employees who had completed a vocational qualification with a training duration of at least two years no less than four years ago and who had not taken part in a publicly funded continuing training measure in the last four years. Following a decrease in entries of approximately 70% from 102,450 in the year 2010 to 29,029 in 2011 and a further decline to 18,404 instances of funding in 2012, a fall which was mainly caused by the removal of the funding basis for qualified employees, the number of entries into the programme for 2013 remained approximately at the level of the previous year.

2.4.2 Upgrading Training Assistance Act (AFBG)

The Upgrading Training Assistance Act (AFBG), funded jointly by the Federal Government and federal state governments since 1996, establishes an individual legal claim to support for upgrading vocational training, i.e. Masters courses or other training leading to the acquisition of an equivalent further training certificate.

According to the AFBG statistics published in August 2014, funding for 171,396 persons was approved in 2013. This represents an increase of 1.8% compared to the previous year. 159,611 persons availed themselves of the funding. A total of 72,242 (42.1%) completed a full-time measure whilst 99,154 (57.9%) finished a part-time measure. Compared to the previous year, the rate of change for persons funded in full-time and part-time measures was +4.9% and -0.25% respectively.

2.4.3 Continuing education and training scholarship programme

The continuing training scholarship programme run by the Federal Ministry of Education and Research (BMBWF) supports talented career entrants with further training following the successful completion of initial vocational education and training. The scholarship funds professional continuing training courses leading to qualifications such as technician, master craftsman in the craft trades or certified senior clerk and also covers cross-cutting continuing training in the form of IT training or intensive language courses as well as in-service courses of higher education study. Funding is available for the scheme, for travel and accommodation costs and for expenditure on necessary equipment.

Scholarship recipients may apply for grants up to a total of €6,000 for an unlimited number of continuing training courses eligible for funding within the three-year funding period. The scholarship holder makes a self-contribution in the amount of 10% of costs eligible for funding per “vocational education and training support for gifted students” measure, which has accepted 1,713 young workers who have completed dual training and are particularly highly performing. More than 114,570 young people have subsequently received a continuing training scholarship. Whereas 192 VET competent bodies took part at the

Table 32: Public expenditure on continuing vocational training

	2001	2010 ¹⁴	2011	2012	2013	2014	Training ¹⁵
	in € billion	in € billion	in € billion	in € billion	in € billion	in € billion	
BMBF¹							
International exchange and cooperation in vocational training	0.007	0.010	0.011	0.012	0.013	0.011	X
Innovations and structural development of vocational training	*	0.050	0.101	0.091	0.086	0.087	X
BIBB (operation and investments)	0.028	0.030	0.028	0.030	0.034	0.040	X
Support for gifted students in vocational education and training	0.014	0.035	0.039	0.042	0.044	0.046	X
Upgrading Training Assistance Act (AFBG) ²	0.045	0.149	0.170	0.167	0.174	0.187	
Continuing training and lifelong learning	*	0.048	0.060	0.077	0.060	0.044	
Upgrading training assistance for pupils at trade and technical schools who have completed VET ³	0.053	0.080	0.083	0.081	0.081	*	
BMWi⁴							
Vocational training for the SME sector – advanced training institutions ⁴	0.027	0.024	0.024	0.028	0.029	0.029	
BMAS⁵							
Funding of continuing vocational training within the legal scope of SGB II ⁵	*	0.827	0.645	0.572	0.558	0.558	X
Grants to supplement pay for the continuing training of unskilled workers and employees threatened by unemployment (AEZ-WB)	*	0.001	0.001	0.000	0.000	0.001	X
Federal states⁶							
Trade and technical schools ⁷	0.566	0.608	0.636	0.675	0.688	0.695	X
Upgrading training assistance for pupils at trade and technical schools who have completed VET ³	0.029	0.043	0.045	0.044	0.044	*	
Upgrading Training Assistance Act (AFBG) ²	0.013	0.051	0.048	0.047	0.049	0.053	
Adult education centres (funding code 152), "work and occupations" programme area ⁸	0.038	0.021	0.021	0.019	0.018	*	
Other continuing training (funding code 153) ⁹	0.432	0.271	0.286	0.256	0.256	0.286	X
Advanced and continuing training for teaching staff (funding code 155)	0.130	0.091	0.105	0.116	0.114	0.130	
Continuing training programmes of the federal states ⁹	*	Approximately 0.5	*	*	*	*	
Local government authorities and special purpose associations⁶							
Adult education centres (funding code 152), "work and occupations" programme area ⁸	0.050	0.029	0.028	0.026	0.024	*	
Other continuing training (funding code 153) ⁹	0.053	0.062	0.062	0.063	0.065	0.068	X
Federal Employment Agency⁵							
Continuing vocational training ¹⁰		0.958	0.824	0.674	0.857	1.023	
Grants to supplement pay for the continuing training of persons in employment ¹⁰	6.982	0.106	0.073	0.066	0.077		
Unemployment benefits whilst undertaking continuing vocational training ¹¹		0.962	0.877	0.771	0.935	1.034	
Funding for young people's residential homes ¹²	0.044	–	–	–	0.001	0.001	X
Supplementary training provision co-financed via funding from the ESF in the case of receipt of short-time allowance, seasonal short-time allowance or transfer short-time allowance ¹³	–	0.043	0.011	0.004	0.003	0.003	
* No information available							
¹ Actual values in accordance with Federal Government budgetary calculations. Budget appropriations for 2014.							
² The values presented do not provide any information on funding actually paid out to recipients in the respective period, cf. note in text.							
³ Funding for pupils at trade and technical schools requiring completed VET. Actual values for all calendar years stated in accordance with upgrading training assistance figures produced by the Federal Statistical Office. Does not take loan repayments into account. 65% was allocated to the Federal Government and 35% to the federal states. Not taken into account until the 2012 Data Report.							
⁴ Until 2011, this expenditure was included under the budgetary item of "funding of extra-company advanced training institutions". It records funding for extra-company vocational training centres which focus on advanced and continuing training activities.							
⁵ Actual spending for the respective budgetary year.							
⁶ Actual values for 2001, 2010 and 2011. Preliminary actual values for 2001, 2012 and 2013. Target values for 2014.							
⁷ Basis for the estimation of expenditure in the calendar years 2001 and 2010 to 2013 is the number of hours taught per type of school in the school years ending and beginning in the respective calendar year and expenditure on vocational schools. Basis of the estimation for the year 2014 is the number of hours taught per type of school in the 2013/14 school year and expenditure on vocational schools in the 2014 calendar year. Until the 2014 Data Report, estimation took place on the basis of pupil days. With immediate effect, however, only values estimated on the number of hours of teaching are presented, including with retrospective effect.							
⁸ Estimated with the assistance of public spending on adult education centres according to the Federal Statistical Office and the proportionate volume of teaching in the "work and occupations" programme area according to the adult education centre statistics (2006: 15.7%, 2007 15.5%, 2008 14.9%, 2009 14.9%, 2010 15.0%, 2011 13.9%, 2012 12.5%, 2013 11.3% in 2012).							
⁹ Function 153 collates the former functions 151 (funding of continuing training) and 153 (other continuing training institutions). Under certain circumstances, the amount listed under function 153 in the annual statistics exhibits an unknown amount of intersection with the BIBB estimation of volume of funding in continuing training programmes of the federal states, cf. notes in text. In addition, the items contain expenditure on general and political continuing training.							
¹⁰ This item collates BA expenditure on the funding of continuing vocational training (FbW) and grants to supplement pay for the continuing training of persons in employment (AEZ-WB) from 2014. Includes, inter alia, expenditure on the "Initiative to support structural change (IFaS)" and "Training for persons in employment (WeGebAU)". Because of changes to the aggregation of expenditure, FbW and AEZ-WB are no longer stated separately.							
¹¹ See notes in text.							
¹² Although institutional funding in the field of initial and continuing training was abolished in 2009, since April 2012 it has once again been possible to provide funding for the establishment, expansion, conversion and equipping of young people's residential homes.							
¹³ Funding is provided to low-skilled employees who are unable to demonstrate vocational education and training or who have been carrying out an activity other than the activity in which training has taken place or an unskilled activity for at least four years.							
¹⁴ For information on the years 2006 to 2009, see the 2012 and 2013 Data Reports.							
¹⁵ Items which also contain a significant scope of expenditure on initial vocational training are marked with a cross.							
Source: Federal Ministry of Finance, federal budgets; Federal Ministry of Finance, budget account of the Federal Statistical Office, Specialist Publications 11, Series 2 – Vocational Schools; Federal Statistical Office, Specialist Publications 14, Series 3.1 – Financial results whole budget; Federal Employment Agency, Quarterly Reports; Federal Employment Agency, Monthly Financial Results (SGB II and SGB III); German Institute for Adult Education, adult education centre; information provided by the Federal Statistical Office (December 2014) and the Federal Employment Agency (November 2014). VET Data Report Germany 2015							

outset, this figure has now grown to include almost 300 chambers and other competent bodies. Between 1991 and the present day, the Federal Government has made over €377 million available for the continuing training scholarship. In 2014, a total of 5,487 persons completing training in various occupations were accepted into the funding programme.

2.4.4 Upgrading scholarship programme

The German Federal Ministry of Education and Research's "upgrading scholarship programme" creates incentives for experienced professionals to study with or without a university entrance qualification from a school. This is the only funding programme for talented people which supports both students who are simultaneously working and studying and full-time students for the duration of their degree (standard period of study). The upgrading scholarship was initiated in 2008.

Since this time, 6,845 scholarship recipients have been admitted to the programme. 964 new entrants joined in 2014 alone. Just over a quarter of all applicants have been awarded a scholarship since the commencement of the programme. Average duration of employment activity prior to higher education study shows that an important educational goal of the funding programme is being achieved, i.e. also to facilitate the acquisition of a first degree for persons who have been in work for a considerable time. Almost three quarters of all persons receiving funding have more than three years of working experience. One in five male scholarship holders and one in six female scholarship recipients have worked for more than ten years.

2.4.5 Public spending on continuing training

Table 32 documents spending from public budgets on continuing vocational training from 2001 to 2014. Expenditure on general, political, cultural and scientific continuing training is not presented. The table shows the budget items which can be allocated to continuing training in a source-specific manner. Federal Government budgetary areas (and table items relating to the federal states, local government bodies and the Federal Employment Agency) which contain a significant extent of training expenditure are marked with a cross at the end

of the line. The federal states participate in the financing of continuing training in a similar way to the Federal Government via programmes conducted by the different ministries. The delineation problem described also applies here. In the light of the multitude of federal state budgets, however, it is practically impossible to identify which of these should actually be aligned to continuing training spending.

2.4.6 Regulation for the financing of continuing vocational training based on collective wage agreements

In 2015, new considerations on the funding of continuing helped to inform a catalogue of topics negotiated by the collective wage agreement partners in the metal and electrical industry in Baden-Württemberg. The collective wage agreement concluded on 24 February 2015 regulates issues such as continuing training in the same way as partial retirement agreements. In overall terms, the number of collective wage agreements with regulations relating to training increased significantly over the course of the 2000's. The financing of continuing training forms a further main object of regulation. Although employers fundamentally bear the costs of training measures which are necessary or useful to the company, a self-contribution by employees may also be agreed depending on the nature of the training measure.

The central approach of a branch fund based on a collective wage agreement for the financing of company-based continuing training is based on the decoupling of company-based continuing training decision making and company funding of such training. Under the system, all companies subject to such a collective wage agreement pay a certain percentage of the gross wages or salary of their employees or a fixed amount per employee into a fund which is mostly equally administered by both social partners. Companies can then use the fund to refinance the costs of investing in continuing training for their staff.

2.4.7 Continuing Education Grant Programme

The Continuing Education Grant Programme has been in place since 1 December 2008 and supports participation in individual continuing vocational training by workers in receipt of low and medium incomes. The education grant

Table 33: Continuing Education Grant Programme – core indicators over the course of time (relative proportions in %)

	1st funding phase (12/2008–11/2011)	2nd funding phase (12/2012–06/2014)	3rd funding phase (07/2014–12/2017) Status: 28/02/2015
Gender			
Male	26	25	24
Female	74	75	76
Age			
under 25	12	11	Not included
25 up to under 35	32	33	36
35 up to under 45	30	27	28
45 up to under 55	22	23	28
55 and older	4	5	8
Education and training			
ISCED 1 & 2	3	3	3
ISCED 3 & 4	66	64	65
ISCED 5 & 6	31	33	13
ISCED 7 & 8	Not included	Not included	19
Migrant background			
Not from a migrant background	85	82	82
From a migrant background	15	18	18
Employment status			
Full-time employee	40	34	28
Part-time employee	36	41	46
Self-employed	19	22	24
Not in employment and eligible for funding	4	3	3
Company size			
Employed at an SME (0–250 employees)	89	89	90
Not employed at an SME (over 250 employees)	11	11	10

Source: Administrative data from the Continuing Education Grant Programme, calculations by the Federal Institute for Vocational Education and Training

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is financed via funding provided by the Federal Ministry of Education and Research and the European Social Fund of the European Union.

A total of around 275,000 training vouchers and 28,000 savings vouchers have been issued thus far. Experiences from the two preceding funding periods have shown that just under 80% of training vouchers are actually redeemed. The motives and objectives for participation in continuing training via the Continuing Education Grant Programme are as follows. In the current funding phase of the education grant, acquisition of supplementary knowledge for use in an occupation is the most common stated aim of continuing training (76%), followed by adaptation to new tasks (46%) (Table 33).

2.5 Regulated further training qualifications

2.5.1 Regulations of the federal and state governments and competent bodies for further vocational training and retraining

“Advanced vocational training should make it possible to preserve and expand vocational knowledge and skills, to adapt to technological development or to advance in one’s career. Vocational retraining is meant to enable one to practice another vocational activity” (§ 1 paragraph 3, 4 BBiG).

There are currently 221 Federal Government regulations in place relating to advanced vocational training and retraining. These comprise the following.

- ▶ 94 legal ordinances on master craftsman qualifications in the craft trades
- ▶ 7 existing regulations relating to master craftsman examinations in the craft trades
- ▶ 48 legal ordinances on the requirements of master craftsman examinations
- ▶ 70 legal ordinances on advanced vocational training
- ▶ 1 legal ordinance regulating vocational retraining
- ▶ 1 legal ordinance on the aptitude of trainers

Seven Federal Government regulations relating to advanced vocational training were enacted in the year 2014. These were master shoemaker (3 March 2014), certified senior clerk for retail sales (13 May 2014), certified industrial foreman in plastics and rubber technology (13 May 2014), certified senior commercial clerk (13 May 2014), certified senior clerk for marketing (21 August 2014), certified senior clerk for procurement (21 August 2014) and master electro plater (12 September 2014).

The Board of the Federal Institute for Vocational Education and Training has adopted benchmarks for the structure and quality assurance of advanced vocational training pursuant to the Vocational Training Act (BBiG) and the Crafts and Trades Regulation Code (HwO). Above the level of three and three-and-a-half year vocational education and training, these define three levels of advanced vocational training governed by federal law within the meaning of qualification stages offering development opportunities that are equivalent to a course of higher education study.

- ▶ The first level of advanced training comprises courses which via which those who have completed recognised VET can train to take on special functions in the occupational field in which training has taken place such as advisor, support worker, developer, project head, tester or trainer. This advanced training leads to qualification titles including certified advisor or certified service technician. The first level of advanced training is aligned to level 5 of the German Qualifications Framework.
- ▶ The second level of advanced training encompasses courses which lead to recognised qualifications such as certified master craftsman, certified senior clerk,

certified process manager, certified vocational educator for initial and continuing training or certified operative professional. Amongst other things, these advanced training courses equip those who complete them to take on management functions. This level of advanced training is aligned to level 6 of the German Qualifications Framework and is thus equivalent to a Bachelor degree.

- ▶ The third level of advanced training covers courses which qualify candidates to become senior managers in organisations and to develop innovations. Advanced training qualification at this level include certified business economist, certified information technologist, certified IT business engineer and certified vocational educator. This level of advanced training is aligned to level 7 of the German Qualifications Framework and is thus equivalent to a Masters degree.

2.5.2 Continuing vocational education and training at trade and technical schools

In the area of regulated continuing vocational education, people who are interested in continuing vocational education have the opportunity to acquire qualifications which are based on a federal ordinance (Section 53 Vocational Training Act/Section 42 Crafts and Trades Regulation Code), on chamber regulations from the responsible bodies (Section 54 Vocational Training Act/ Section 42 a Crafts and Trades Regulation Code) and on state laws.

Continuing vocational training courses at trade and technical schools qualify candidates for the assumption of management tasks and foster a willingness to enter self-employment. Trade and technical schools offer training courses in the specialist areas of agriculture, design, technology, business and social studies which follow on from initial training and from occupational experience. In addition, trade and technical schools are able to provide supplementary and foundation courses as well as updating training measures.

In the school year 2013/2014, there were 1,454 trade and technical schools in Germany (+2.7% compared to the year before). A total of 190,965 pupils were attending courses at trade and technical schools, a rise of 3.1% over the previous year. The proportion of foreigners is

Table 34: **Persons successfully completing training at trade and technical schools by types of occupation, legal status of schools and gender 2013 (selection of the 10 most popular types of occupation)**

Types of occupation	Persons completing a qualification		of which from			
			public schools		private schools	
	Total	Female in %	Together	Female in %	Together	Female in %
Education, social and housekeeping occupations, theology	21,358	81.2%	10,041	85.1%	11,317	77.7%
Technical engineering and vehicle occupations	8,441	3.8%	6,873	4.0%	1,569	3.0%
Mechatronics, energy and electrical occupations	5,257	1.9%	4,554	1.8%	703	2.3%
Legal and administrative occupations (Note: in the social services and healthcare sector)	5,010	88.5%	3,067	90.0%	1,943	86.3%
Occupations in agriculture, animal husbandry and forestry	2,503	11.9%	2,503	11.9%	0	0.0%
Occupations in company management, organisation	1,479	57.3%	1,122	56.0%	357	61.3%
Non-medical healthcare, body care and health and beauty occupations, medical technology	1,472	73.6%	1,032	75.1%	440	70.0%
Procurement, sales and commercial occupations	1,313	51.6%	1,147	52.5%	166	45.8%
Tourism, hotel and restaurant trade	1,291	56.9%	909	58.9%	382	52.4%
Plastics manufacture and processing, wood production and processing	1,126	6.7%	1,069	6.5%	57	10.5%

Source: Federal Statistical Office, Specialist Publications 11, Series 2, calculations of the Federal Institute for Vocational Education and Training

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3.6%. Continuing training courses at trade and technical schools are conducted on a full-time or part-time basis and lead to a state post-secondary vocational qualification in accordance with federal state law (cf. Conference of the Ministers of Education and Cultural Affairs in the Federal Republic of Germany 2014, p. 2). The proportion of pupils completing their course on a full-time basis is 65.8% (125,744). In overall terms, 59,346 persons were recorded as having completed training at trade and technical schools in the 2013 school year (table 34).

2.5.3 Further training examinations in accordance with the Vocational Training Act/Crafts and Trades Regulation Code

Further vocational training is a component of vocational training in terms of the Vocational Training Act. According to Section 1 Paragraph 4 Vocational Training Act, the aim of further training is to obtain and expand

vocational knowledge and capabilities and adjust them to the technical developments (updating training) or enable professional advancement (advanced further training).

There are currently 219 Federal Government legal ordinances in place alongside and approximately 2,889 legal regulations issued by individual chambers in respect of the 767 advanced training occupations they govern. In quantitative terms, the most significant advanced training occupations regulated by the BBiG/HwO include master craftsman, business economist, certified senior clerk and specialist commercial clerk. Selected results from the Vocational Education and Training Statistics produced by the Federal Statistical Office are reported below. In the 2013 reporting year, a total of 115,872 participants in advanced training examinations were recorded, 2,625 candidates fewer than in 2012. The continuous rise that has been ongoing since 2009 has thus settled at a high level (Table 35).

Table 35: Candidates passing an advanced training examination pursuant to the BBiG/HwO by specialisms and gender

	Total		Proportion of women
	Absolute terms	in %	
Commercial advanced training examinations	53,070	52.8	47.0
Specialist commercial clerk	8,946	8.9	52.8
Certified senior clerk	28,842	28.7	43.6
Business economist	3,282	3.3	29.0
Other commercial advanced training examinations	11,997	11.9	54.5
Technical advanced training examinations	44,280	44.0	13.9
Certified industrial foreman	10,071	10.0	4.6
Specialist foreman	1,782	1.8	15.3
Master craftsman	22,749	22.6	18.3
Other master craftsman examinations	1,989	2.0	25.6
Other technical advanced training examinations	7,686	7.6	9.8
Other advanced training examinations	3,177	3.2	84.9
Specialist assistant in the healthcare sector	2,565	2.6	99.9
Other advanced training examinations	612	0.6	22.1
Total	100,524	100.0	33.6

Source: Federal Statistical Office, Specialist Publications 11, Series 3, collated by the Federal Institute for Vocational Education and Training

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A consideration of the ratio between advanced training examinations passed in commercial occupations and advanced training examinations passed in private sector technical occupations during this period reveals a clear growth in favour of the former in the year 2010. The number of advanced training examinations passed in commercial occupations as a proportion of all examinations passed between 1992 and 2010 rose from 40% to 54%.

2.5.4 Aims, benefits and expense of advanced vocational training

Advanced training qualifications (so-called upgrading training) increase a person's formal qualification level and thus also enhance opportunities for career advancement. With regard to regulated advanced training qualifications as a whole, no knowledge so far exists as to the goal behind commencing advanced training, the subjective and objective benefits of such training and the time and financial outlay involved. The database for the

following analyses is an additional survey of persons who have participated in upgrading training conducted by BIBB at the end of 2012 as an adjunct to the 2012 BIBB/BAuA Employee Survey, the so-called 2012 BIBB additional survey on upgrading training. The analysis is based on information provided by 650 persons aged from 15 to 64, including 178 women, whose highest qualification is an advanced training qualification. The proportion of persons in employment amongst those with upgrading training is 86.3%. The main aim of the advanced training also varies widely depending on type of advanced training (Table 36).

Individual consideration of the aims of advanced training reveals significant gender differences with regard to the target dimension of "occupational progress and career". 10 items were pre-stipulated on a scale from 1 "not important at all" to 7 "very important". Significant differences are particularly shown with regard to the aims of "assumption of a management position" (male 39.3%, female 22.1%), "professional career" (49.1%

Table 36: Main aim of participants in advanced training (in %)

	Occupational advancement	Assumption of a new activity	Other purpose
Men	68.2	14.7	17.1
Women	66.7	14.2	20.1
Total	67.7	14.6	17.7
Master craftsman qualification	65.9	13.4	20.7
Technician	76.0	10.9	13.2
Certified senior clerks, business economists	67.1	18.6	14.3
Specialist commercial clerks	63.2	17.1	19.7

Source: 2012 BIBB additional survey on upgrading training VET Data Report Germany 2015

Table 37: Activity in line with advanced training by gender and specialism (in %)

	No	Yes, prior to advanced training	Yes, after advanced training	First adequate activity after advanced training			
				Improvement in income		Management function	Budget responsibility
				Significant	Somewhat		
Men	16.3	16.6	67.1	44.1	43.8	77.2	46.5
Women	25.8	18.1	56.0	41.7	47.9	62.9	40.0
Total	19.0	17.0	64.0	43.5	44.8	73.6	44.8
Persons with a master craftsman qualification	19.1	14.8	66.1	38.3	46.8	86.2	52.5
Technicians	13.1	16.2	70.8	61.9	29.8	60.7	36.7
Certified senior clerks/ business economists	19.3	20.7	60.0	40.0	53.3	64.5	39.2
Specialist commercial clerks	29.7	21.6	48.6	33.3	50.0	58.3	38.7

Source: 2012 BIBB additional survey on upgrading training VET Data Report Germany 2015

as opposed to 40.3%) and “achievement of a higher occupational position” (54.1% and 45.9% respectively). By way of contrast, both genders equally aspired to a “significantly higher income” (49.8% and 47.8%). No significant gender differences were apparent in respect of the dimensions of “securing the professional situation” and “competence extension and personal development”. The objective benefits of advanced training were also investigated alongside the subjective benefits.

The average duration of a course of advanced training is 1,298 hours. Assuming 20 hours per week, this represents around 65 weeks. In line with expectations, the time outlay for a course of upgrading training varies widely depending on the type of advanced training. The longest

duration is around 2,061 hours for advanced training courses leading to a technician qualification, followed by master craftsman advanced training courses with an average duration of about 1,157 hours (master craftsman in the craft trades 1,273 hours). Certified senior clerks and business economists stated an average duration of 1,191 hours (certified senior clerks 1,050 hours, business economists 1,354 hours). Advanced training courses for specialist commercial clerks were some of the shortest at 811 hours. Average time input for self-directed learning (preparation, follow-up work and examination preparation) was 625 hours. In this area too, technicians and specialist commercial clerks cited the highest and lowest figures respectively.

The average cost associated with a course of upgrading training was €2,397, although costs also vary widely depending on the type of advanced training. The most expensive advanced training courses are those leading to a master craftsman qualification, where the average is €2,935 (master craftsman in the craft trades €3,924, followed by advanced training courses for technicians (€2,143) and advanced training courses leading to the qualifications of certified senior clerk and business economist, where associated costs are €2,046 (certified senior clerks €1,797, business economists €2,335).

Alongside the participants themselves, the companies and the public purse are also involved in the financing of advanced vocational training. Around one in two respondents (53.3%) received financial support for their advanced training course. One in five obtained funding from their employer, and 15.9% were in receipt of support pursuant to the Upgrading Training Assistance Act.

3. Current matching problems on the training and labour markets and future shortages of skilled workers

The main focus of the 2015 Data Report to accompany the Report on Vocational Education and Training is on current and future matching problems on the German training and labour market and on the reason behind these. Within the scope of various analyses, attempts were made to undertake a more precise investigation of the increasing disparity over recent years between provision of training places and jobs and the demand from young people and young adults for vocational training or employment and to look into the general prevailing conditions and specific causes. In the remarks below, matching problems are understood to mean a lack of correspondence or imbalance between demand for suitable vocational training and work opportunities and supply

of training places and jobs. Matching problems may be differentiated according to qualifications, occupational, regional, sectoral or information aspects. These matching problems have increased over recent years. An increasing requirement for qualified skilled workers contrasts with regressive development in the case of trainees. In light of the current situation, the assumption in public debate is that these problems on the German training places and labour market will exacerbate once more in only a few years' time.

The increase in the numbers of higher education students which educational policy and international organisations such as the OECD have been demanding for some con-

Figure 17: Development of the number of school leavers from general schools in Germany from 1990 to 2025

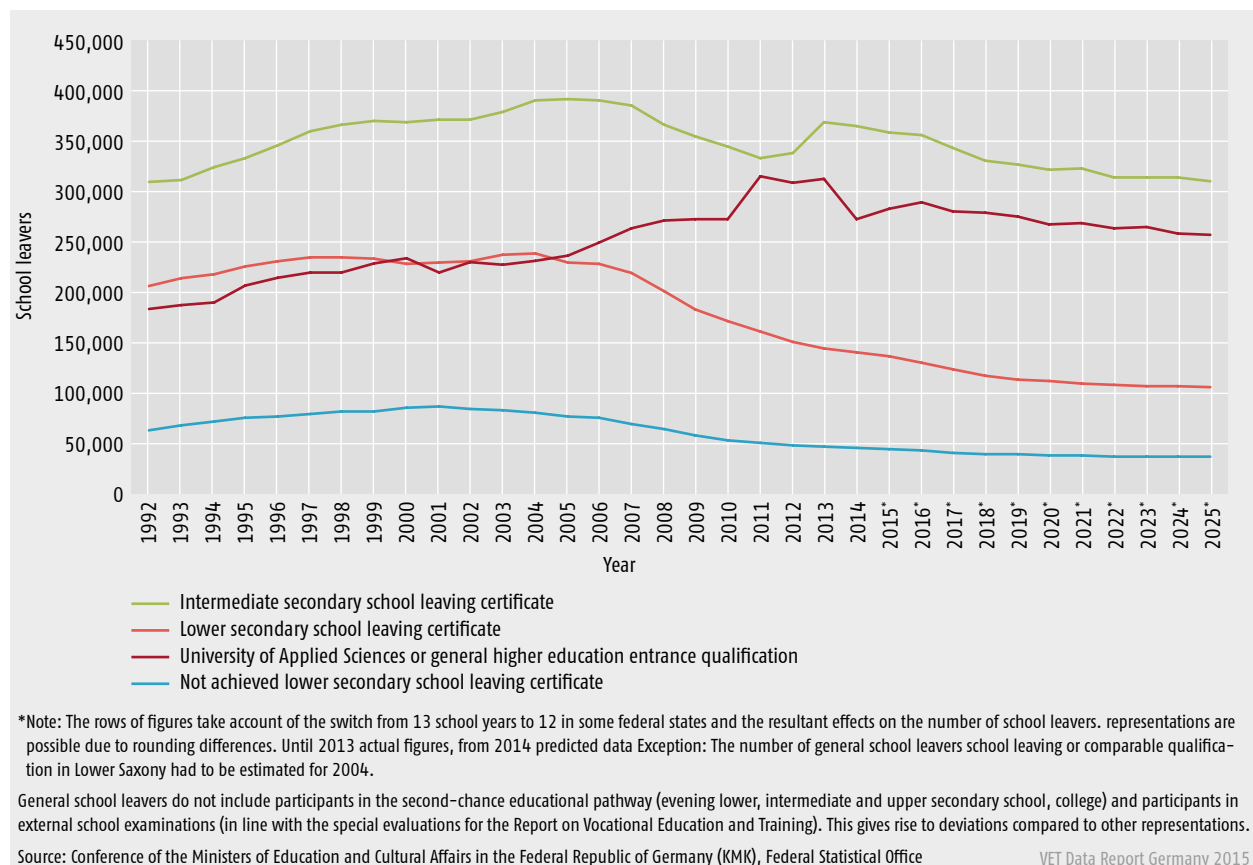
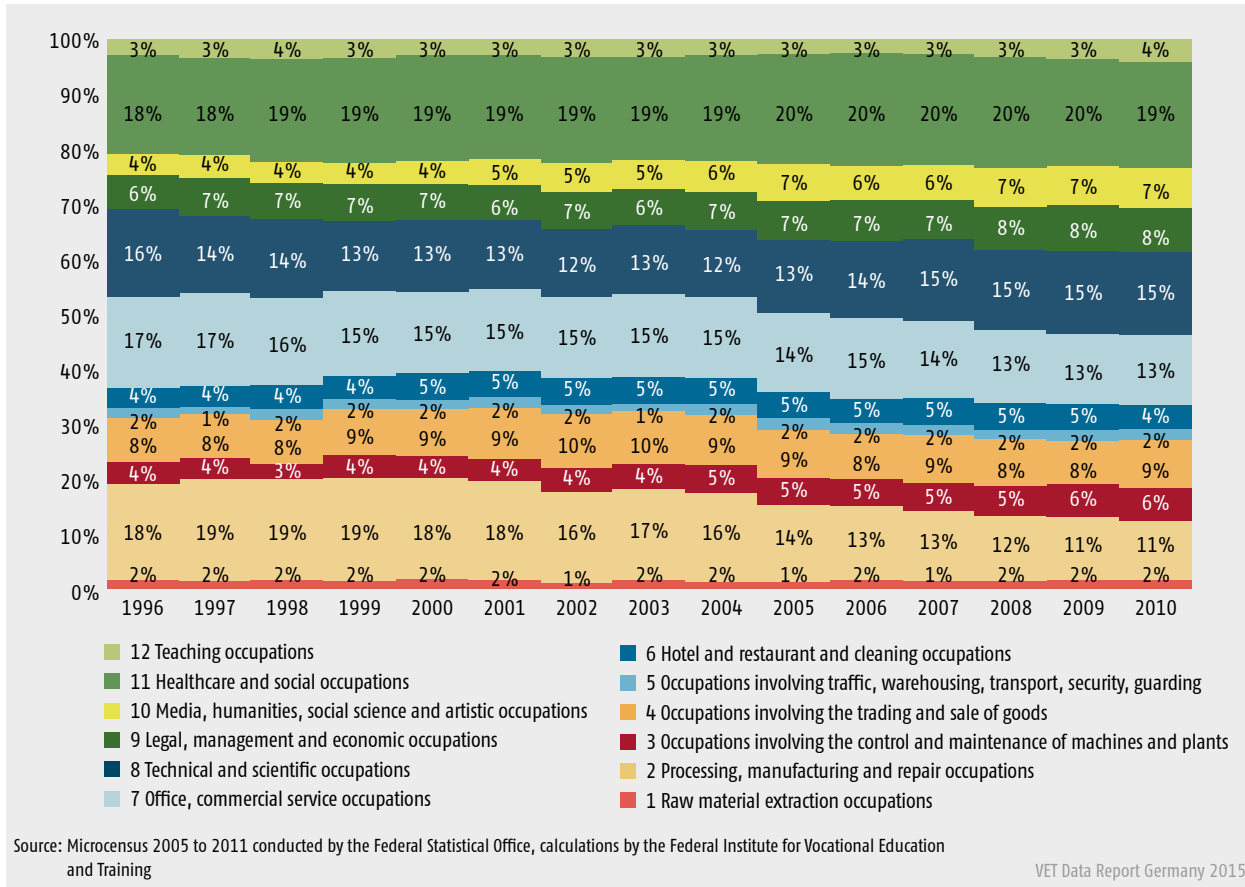


Figure 18: Proportions of the 12 BIBB main occupational fields in which training takes place from 1996 to 2010



siderable time has now also been achieved in Germany in the wake of an educational expansion with rising numbers of higher school qualifications. Whereas in 1992 only 30% of school leavers were in possession of a higher education entrance qualification at the end of general or vocational schooling, the proportion of persons in the population of the same age with a higher education entrance qualification in 2013 has increased to almost 60% (Figure 17).

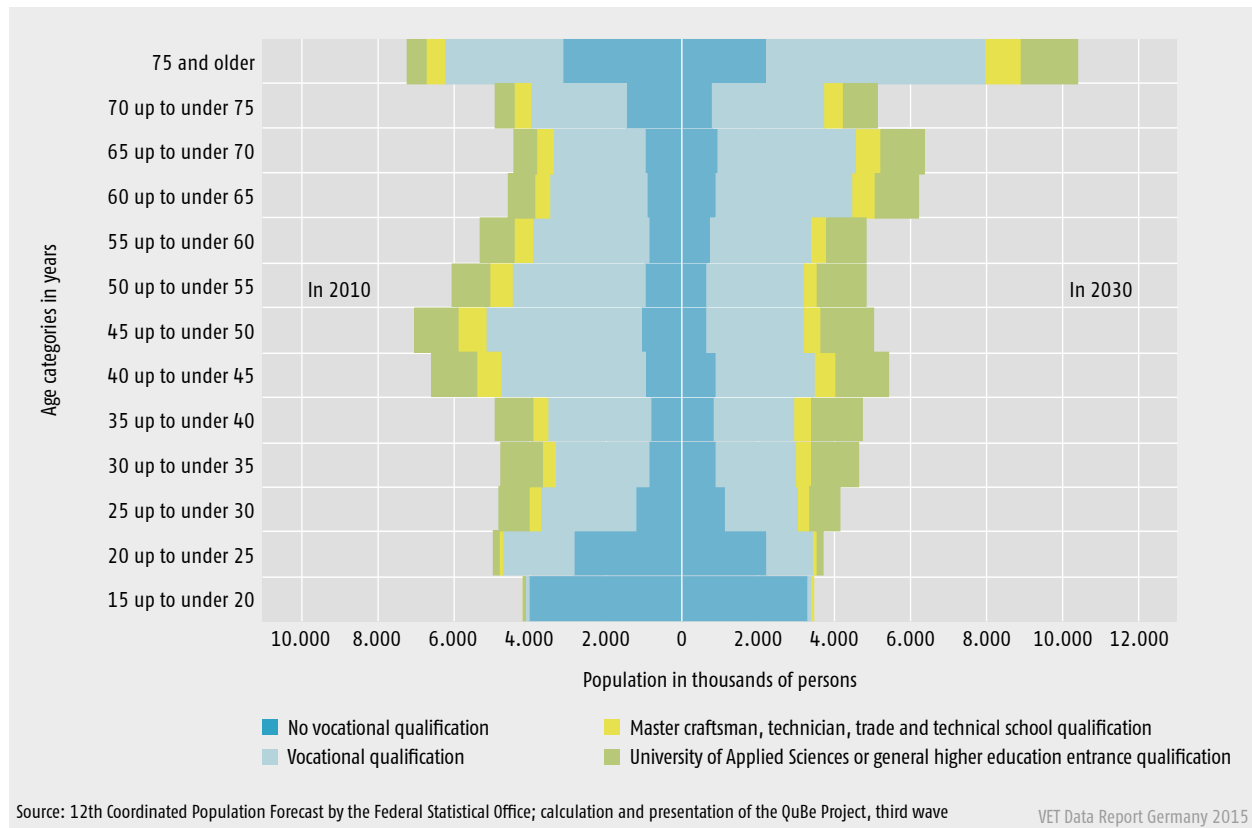
As a consequence of the educational expansion, the qualifications structure of the working age population will also change to the effect that the proportion of persons with an academic degree will rise whilst the working age population with a vocational qualification in the intermediate qualifications segment, particularly in private sector technical occupations, will fall. This is, however, an occupational area which is highly significant for the effectiveness and ability to innovate of the German

economy as a whole, especially as far as exports are concerned (Figure 18).

The changes in the occupational qualifications structure of the working age population will be exacerbated by the falls in the population in overall terms and by the increasing ageing of the German population. Both developments will continue to exert a negative effect on the working age population aged between 15 and 65.

Over the next decade, the baby-boomer cohorts will leave the labour market and will not be able to be replaced by young people either in terms of numbers or qualifications profile. Over a time horizon of up to 15 years, only higher net migration will be able to counter the decline in the population. Assuming a long-term net migration gain of 200,000 persons, the expectation must be that the population will decline by just under 1.9% by 2030.

Figure 19: Population by age and vocational qualification in 2010 compared to 2030



In terms of specific qualifications, however, areas of potential for the acquisition of additional skilled workers are still discernible. More than 87% of young people without a school leaving certificate also fail to acquire a vocational training qualification, and only 47% of such persons are in employment. This applies to an even greater extent in the case of persons from a migrant background, who are four times more likely not to obtain a school leaving certificate and only 43% of whom exercise employment.

On the company side, there has been a fundamental change in the way in which trade and industry participate in the company-based training of young people. The close link that previously existed between the recruitment of qualified skilled workers and training of the company's own young workers has significantly weakened. Despite the sharp rise in the number of employees which has taken place for economic reasons, the total number of trainees amongst employees has been continuously falling for a number of years.

An evaluation by sectoral differences in the development of training and employment reveals that economically driven trends on the training market and in some cases special effects in individual branches seem to be at play. The first factors that need to be mentioned are the sharp reduction in extra-company training places in the "education and teaching" sector and the fall in the number of training places in the public sector ("collective services"). Three different patterns of development of company participation in training can still be identified in the private sector economy.

- ▶ There are sectors which have above-average rises in the number of employees together with slightly smaller increases in the number of trainees. These include areas such as the media, company-related services as well as engineering and the automobile industry. Because of demographic developments in Germany, the nursing and medical services sector is also exhibiting a rising demand for qualified skilled workers from whom training has been able to benefit to some small extent.

Table 38: Destination of the labour supply aged between 20 and 34 (2011, in absolute terms and as a percentage proportion of the respective sub-group)

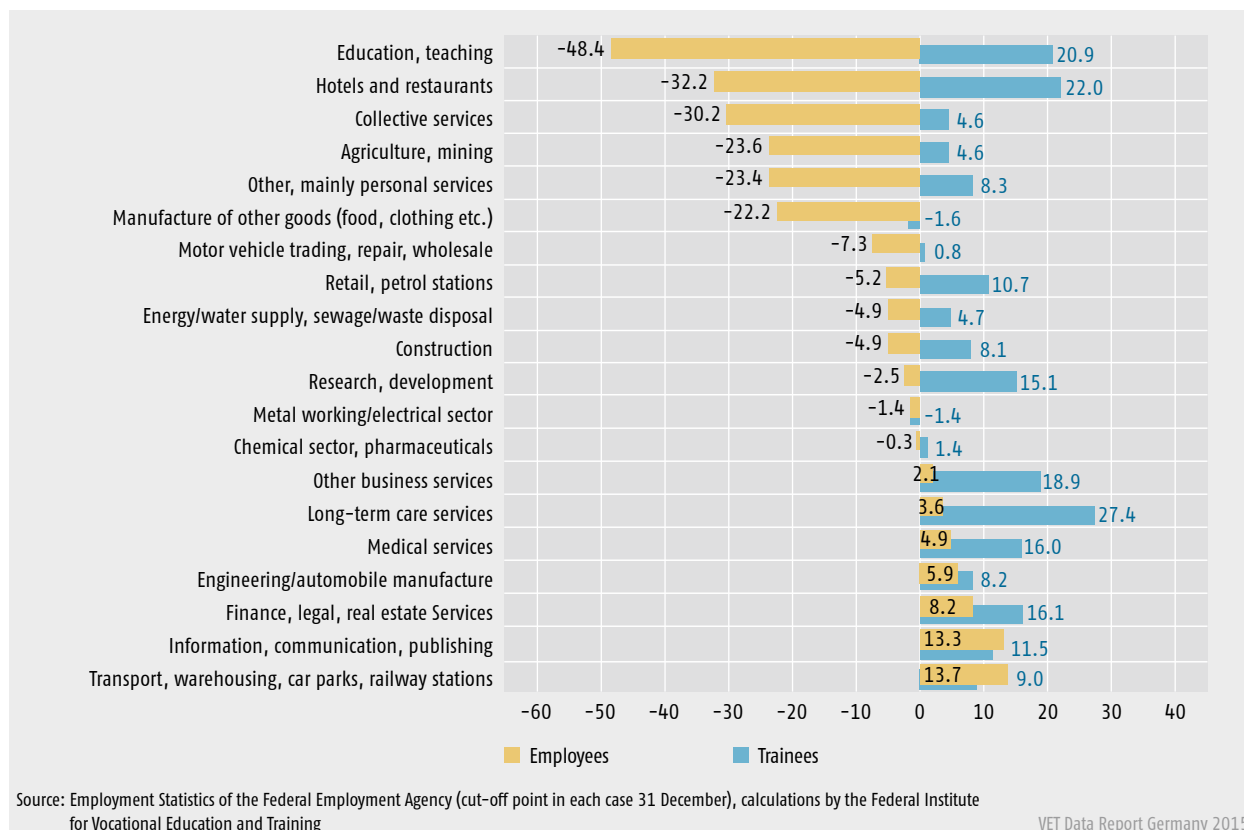
		All persons in Germany aged between 20 and 34 14,813,000											
		of which: still school pupils or no information available as to school leaving qualification 221,000											
		School leaving qualification											
		No school leaving qualifications 472,000				Lower secondary qualification 7,646,000				With higher education entrance qualification 6,447,000			
(1)		In training	Yes	No	In training	Yes	No	In training	Yes	No	In training	Yes	No
I.	All persons aged from 20 to 34	36,000	24,000	1,303,000	640,000	5,703,000	351,000	1,944,000	4,152,000	608,000	3,544,000	64.4	43.5
II.	Germans not from a migrant background	9.5	6.9	11.8	7.7	80.5	3.8	8.4	87.8	12.4	87.6	87.8	45.8
III.	Migrants	5.8	5.1	33.0	10.5	56.4	10.6	14.1	75.4	75.9	24.1	75.4	39.0
(2)		Vocational training qualification or in training											
		In training	Yes	No	In training	Yes	No	In training	Yes	No	In training	Yes	No
I.	All persons aged from 20 to 34	7.6	5.1	17.0	8.4	74.6	5.4	30.2	64.4	14.6	14.6	64.4	85.4
II.	Germans not from a migrant background	9.5	6.9	11.8	7.7	80.5	3.8	8.4	87.8	12.4	87.6	87.8	45.8
III.	Migrants	5.8	5.1	33.0	10.5	56.4	10.6	14.1	75.4	75.9	24.1	75.4	39.0
(3)		Working											
		In training	Yes	No	In training	Yes	No	In training	Yes	No	In training	Yes	No
I.	All persons aged from 20 to 34	191,000	17,000	576,000	727,000	4,871,000	134,000	217,000	3,544,000	608,000	3,544,000	85.4	85.4
II.	Germans not from a migrant background	46.4	70.8	44.2	55.8	85.4	38.2	61.8	85.4	14.6	14.6	85.4	85.4
III.	Migrants	49.8	26.6	53.0	47.0	86.4	64.9	35.1	86.4	64.9	35.1	87.6	87.6
III.	Migrants	56.5	34.1	58.9	41.1	81.1	57.8	42.2	81.1	57.8	42.2	24.1	24.1
(4)		Employees subject to mandatory social insurance contributions											
		In training	Yes	No	In training	Yes	No	In training	Yes	No	In training	Yes	No
I.	All persons aged from 20 to 34	138,000	14,000	535,000	4,314,000	144,000	3,033,000	144,000	3,033,000	144,000	3,033,000	3,033,000	3,033,000
II.	Germans not from a migrant background	34,000	2,000	129,000	228,000	43,000	214,000	43,000	214,000	43,000	214,000	214,000	214,000
III.	Migrants	10,000	0	50,000	230,000	26,000	238,000	26,000	238,000	26,000	238,000	238,000	238,000
III.	Migrants	4,000	0	14,000	12,000	2,000	1,000	2,000	1,000	2,000	1,000	1,000	1,000
III.	Migrants	160,000	3,000	328,000	456,000	99,000	460,000	99,000	460,000	99,000	460,000	460,000	460,000
III.	Migrants	61,000	4,000	249,000	375,000	34,000	148,000	34,000	148,000	34,000	148,000	148,000	148,000
III.	Migrants	61,000	4,000	249,000	375,000	34,000	148,000	34,000	148,000	34,000	148,000	148,000	148,000
III.	Migrants	61,000	4,000	249,000	375,000	34,000	148,000	34,000	148,000	34,000	148,000	148,000	148,000

NEA = not economically active

Source: Federal Government and federal states Research Data Centre. 2011 Microcensus, calculations by the Federal Institute for Vocational Education and Training

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Figure 20: **Development in trainees and employees (not including trainees) 2013 compared to 2007 by economic sectors (in %)**



- ▶ Secondly, there are sectors in which numbers of employees are rising sharply in some areas but where numbers of trainees are stagnating or falling slightly. These include the construction industry, retail, motor vehicle trading and wholesale. Not least because of a development in employment between 2007 and 2013 that was merely average in scope, the supposition here may be that these branches had a lower need for new trainees due to their dependency on the domestic economy and national demand.
- ▶ The third type of economic sector shows a disproportionate reduction in total numbers of trainees despite fairly good developments in employment. Examples here include the hotel and restaurant trade and the personally related services sector. The assumption in this case is that we are seeing the consequences of a change in the educational behaviour of young people as well as economic conditions which have become more difficult for these branches within the period of investigation.

In overall terms, there has been a significant rise in the supply of school leavers with higher school leaving qualifications, something which the companies and trade and industry as a whole have been demanding for years. There is, however, still a relatively unchanged number of young adults without formal qualifications and with or without a migrant background who, after completing suitable measures, may be appropriate candidates for company-based training or qualified employment. At the same time, however, it should be noted that, despite growing numbers of employees, the proportion of companies providing training and the number of trainees as a proportion of employees continue to decline. One important result of the analyses is that it is not correct to say that development of company participation in training solely seems to point to a general withdrawal from company-based VET by the firms.

A consideration differentiated by company size, for example, shows that particularly smaller companies facing

Table 39: Companies, companies providing training and proportion of companies providing training between 2007, 2012 and 2013 in Germany

Company size categories	Companies				Companies providing training				Proportion of companies providing training			
	2007	2012	2013	2012–2013	2007	2012	2013	2012–2013	2007	2012	2013	2012–2013
	Absolute	Absolute	Absolute	in %	Absolute	Absolute	Absolute	in %	in %	in %	in %	in % points
1–4 employees	1,287,579	1,309,528	1,305,604	-0.3	152,354	115,019	108,226	-5.9	11.8	8.8	8.3	-0.5
5–9 employees	346,210	360,917	362,997	0.6	122,903	110,052	107,119	-2.7	35.5	30.5	29.5	-1.0
Smallest category of company	1,633,789	1,670,445	1,668,601	-0.1	275,257	225,071	215,345	-4.3	16.8	13.5	12.9	-0.6
10–19 employees	189,054	205,033	207,654	1.3	84,599	84,294	84,051	-0.3	44.7	41.1	40.5	-0.6
20–49 employees	123,463	135,423	137,555	1.6	66,680	69,924	70,320	0.6	54.0	51.6	51.1	-0.5
Small companies	312,517	340,456	345,209	1.4	151,279	154,218	154,371	0.1	48.4	45.3	44.7	-0.6
50–99 employees	46,869	50,661	51,162	1.0	30,575	32,594	32,861	0.8	65.2	64.3	64.2	-0.1
100–249 employees	28,605	30,716	31,095	1.2	21,155	22,599	22,750	0.7	74.0	73.6	73.2	-0.4
Medium-sized companies	75,474	81,377	82,257	1.1	51,730	55,193	55,611	0.8	68.5	67.8	67.6	-0.2
Small/medium-sized companies overall	2,021,780	2,092,278	2,096,067	0.2	478,266	434,482	425,327	-2.1	23.7	20.8	20.3	-0.5
250–499 employees	8,661	9,174	9,370	2.1	7,146	7,503	7,554	0.7	82.5	81.8	80.6	-1.2
500 or more employees	5,070	5,486	5,529	0.8	4,478	4,812	4,840	0.6	88.3	87.7	87.5	-0.2
Large companies	13,731	14,660	14,899	1.6	11,624	12,315	12,394	0.6	84.7	84.0	83.2	-0.8
Total	2,035,511	2,106,938	2,110,966	0.2	489,890	446,797	437,721	-2.0	24.1	21.2	20.7	-0.5

Source: Employment Statistics of the Federal Employment Agency (revised August 2014), cut-off point in each case 31 December, calculations by the Federal Institute for Vocational Education and Training

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difficulties and matching problems in filling training places on offer do not currently intend to move out of the company-based training system. Although initial indications of matching problems are emerging for other company size categories, these are not as serious as those being experienced by the smallest category of company, at least in comparative terms between 2012 and 2013 (Table 39).

The training rate has been declining in all size categories since 2007. One of the reasons for this is the falling demand for training places, which is expressed in the form of a decrease in the number of trainees (-9.1%). Even if the training rate at the smallest category of company is still higher than that of the medium-sized and large companies, the rate of 6.0% recorded for the former in 2013 puts it below the training rate level of small companies (6.1%) for the first time since 2004. The training rate at the smallest category of companies ultimately declined by the greatest amount (-25.2%) during the period from 2008 to 2013.

Despite differing increases in matching problems, companies do not yet presently seem sufficiently prepared to

consider more sustainable possible solutions when recruiting new trainees. Especially with regard to informational mismatch problems, companies with recruitment difficulties tend to use traditional recruitment strategies and to fall back on existing information networks and placement institutions rather than employing procedures which could address persons potentially interested in training and special applicant groups in a more targeted manner and lead to a better assessment of the qualifications and competences of such persons (Table 40, Table 41).

Nevertheless, some companies seem to have recognised the signs of the times and are gradually realigning their strategies in order to resolve mismatch problems. Although not yet happening to the extent required, this includes opening up training to applicant groups which in the past were viewed as having relatively worse chances of obtaining a training place because of prior school learning.

Increased willingness of the part of companies to invest in training could at least alleviate regional and occupational matching problems. At the moment, some companies are

Table 40: Use of indirect acquisition instruments by company structural and training characteristics in overall terms and by companies (in %)

	Local employment agency	Newspaper, online job exchange	Company website, social networks	Chamber, guild, association
	Total	Total	Total	Total
Region				
East (including Berlin)	68	52	56	53
West (not including Berlin)	71	39	36	30
Company size				
Smallest category of company (1–19 employees)	68	35	27	32
Small companies (20–99 employees)	74	47	55	34
Medium-sized companies (100–199 employees)	80	56	74	42
Large companies (200 employees and more)	84	75	86	48
Branch				
Primary and manufacturing industry	73	36	30	39
Trade and repairs	72	48	42	30
Company-related services	59	33	50	28
Other services	78	42	40	36
Public sector, education, teaching	50	66	59	19
Craft trade company				
Yes	66	33	30	42
No	75	48	47	27
Training area				
Only private sector technical	64	20	29	35
Only commercial and administration	67	51	48	18
Both areas	75	49	52	45
Target group				
Predominantly lower secondary school leavers	66	23	21	26
Predominantly intermediate secondary school leavers	65	36	42	27
Predominantly persons with a higher education entrance qualification	68	52	55	37
Apprenticeship volume				
1–2 apprenticeships	68	37	34	32
3–5 apprenticeships	81	56	63	40
6 apprenticeships and more	86	68	81	56
All companies	71	41	40	34

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still not prepared to put stronger investments and financial incentives for young people in place in cases where initial regional conditions are difficult (i.e. excess supply or company-based training provision which does not appear to meet the occupational interests of local training place applicants). Problems in filling training places are not the only area in which companies are now adopting another approach. Premature dissolution of training contracts, which is a major matching problem for companies given the high dissolution rates, is also an area in which they are acting differently.

The average proportion of contract dissolutions amongst companies providing training over the past three years was around 22.1%. Seen in purely quantitative terms, contract dissolutions in the last three years tend to represent a more minor problem for the majority of companies providing training (65.3%). (88% of these companies experienced no dissolutions, and 12% had a dissolution rate of no more than 20%). By way of contrast, 12.2% of companies exhibit an average proportion of dissolutions (>20% to 40%), and a further 22.5% suffered a high dissolution rate of over 40%. Targeted measures were deployed by only about half (55.7% of all companies

Table 41: Use of direct acquisition instruments by company structural and training characteristics in overall terms and by companies (in %)

	Company internships	Staff information	School, trade fair events	Introductory training
	Total	Total	Total	Total
Region				
East (including Berlin)	68	68	44	21
West (not including Berlin)	71	50	26	20
Company size				
Smallest category of company (1–19 employees)	69	52	19	19
Small companies (20–99 employees)	73	52	42	23
Medium-sized companies (100–199 employees)	78	62	54	14
Large companies (200 employees and more)	82	70	81	19
Branch				
Primary and manufacturing industry	75	50	26	16
Trade and repairs	73	51	31	29
Company-related services	54	51	32	15
Other services	75	63	29	18
Public sector, education, teaching	67	45	37	23
Craft trade company				
Yes	69	53	26	19
No	72	54	32	20
Training area				
Only private sector technical	74	53	24	19
Only commercial and administration	71	46	28	21
Both areas	78	51	47	23
Target group				
Predominantly lower secondary school leavers	73	44	19	19
Predominantly intermediate secondary school leavers	74	55	32	24
Predominantly persons with a higher education entrance qualification	68	48	42	23
Apprenticeship volume				
1–2 apprenticeships	68	54	23	17
3–5 apprenticeships	79	49	50	26
6 apprenticeships and more	84	65	86	32
All companies	71	53	29	20

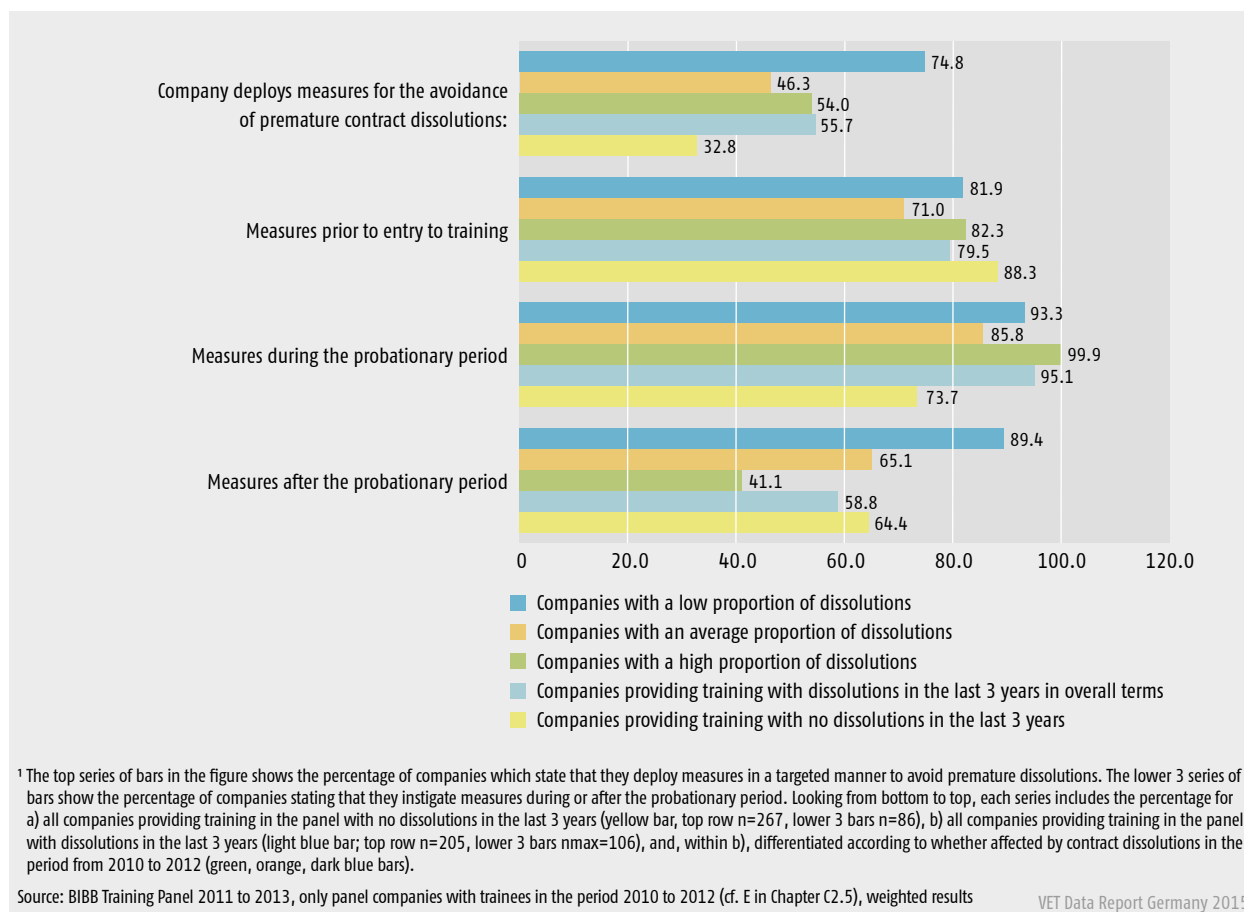
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providing training with dissolutions over the past three years but by almost three quarters (74.8%) of companies with a low rate of dissolution (Figure 21).

In the more recent past, there has been a distinct improvement in the situation at the second threshold – the transition from initial vocational training to working life. Evaluations of data from the Institute for Employment Research (IAB) Establishment Panel Survey make it clear that, apart from during the financial and economic crisis in 2008/2009, the rate of trainees who on completion of training progress to permanent employment with the company providing training has been rising constantly since 2004 (Table 42). In 2013, two thirds of persons

completing training subsequently continued to be employed. The rate of trainees progressing to employment strongly depends on the size of the company.

These current matching problems on the training market may also exert medium and long-term effects on the matching of skilled worker demand and supply. The supposition is that present difficulties in filling training places in certain occupations will result in skilled worker bottlenecks in precisely these occupations in the medium term. Figure 22 presents the development in expected labour supply and demand until 2030 by three qualification levels. It becomes clear in the tertiary sector in particular (master craftsman, technician, higher education/Uni-

Figure 21: **Deployment of company measures for the avoidance of premature contract dissolutions¹ (in %)**

iversity of Applied Sciences qualifications) that, although the increasing supply of workers will be absorbed by the demand side in the initial years, it is not conceivable in the long term that this labour supply will be employed in the upper qualifications segment in line with its professional qualifications. The fact is that the development in demand thus far does not reflect such a rise. The primary causes of the increase in supply are growing transitions by the young generation to institutes of higher education/Universities of Applied Sciences, whilst the long-term labour supply of person with a master craftsman, technician or trade and technical school qualification within the projection period is, like the demand for these qualifications, falling slightly.

In specific qualifications terms, there is already congruence between matching problems on the training market and recruitment difficulties for jobs which are subject to

mandatory social insurance contributions. This generally applies to the intermediate qualifications area, although it is not equally significant for all occupations. This development will exacerbate when the baby boomer cohorts leave the labour market and the lower significance of fully qualifying VET as a opposed to academic training continues amongst younger generations. Whereas the supply of academically qualified workers threatens to exceed demand in the long term, such a decrease will occur in virtually all occupations in the intermediate qualifications area. Labour supply without a formally qualifying vocational education and training qualification will tend to be under employed.

Two long-term scenarios are calculated below, both of which assume constancy of the current success rates at various VET training venues and at institutes of higher education/Universities of Applied Sciences and of the

Table 42: Rate of trainees progressing to employment on completion of training, federal states of West Germany and East Germany (in %)

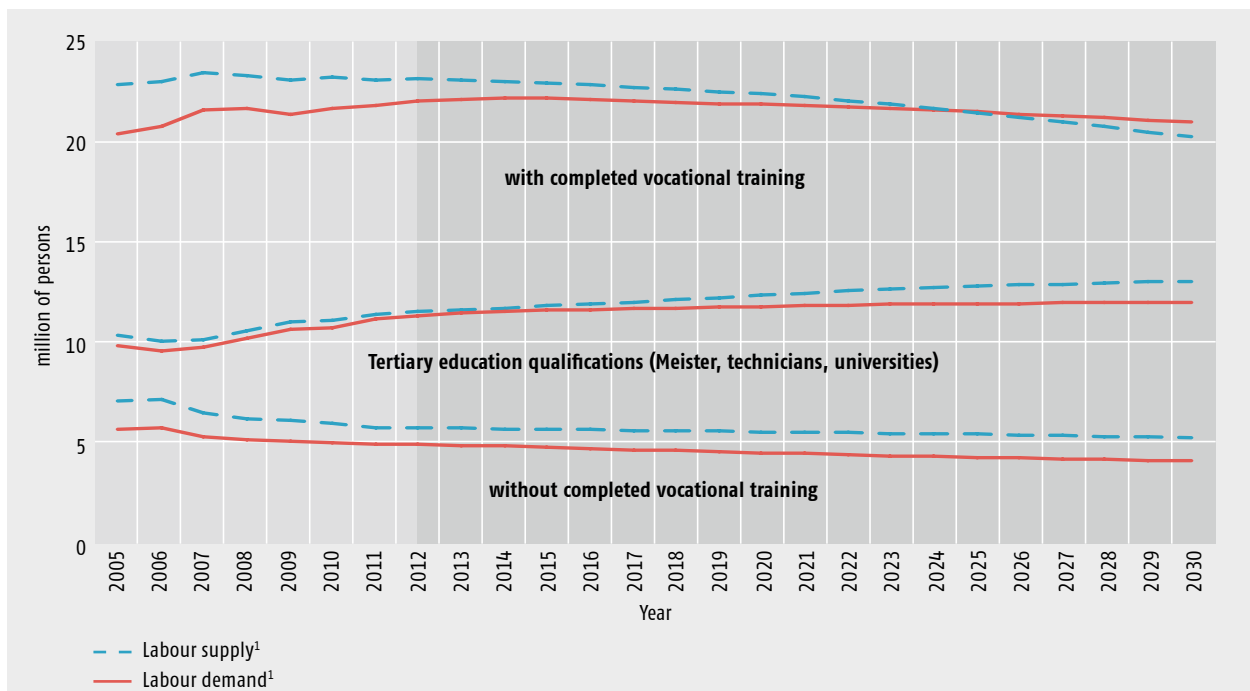
	2001	2003	2005	2007	2009	2011	2013
Federal States of West Germany							
1-9 employees	43	50	50	49	43	59	56
10-49 employees	50	54	51	57	57	60	64
50-499 employees	66	58	58	69	64	71	70
500+ employees	77	68	69	75	74	81	79
Total	59	57	57	63	60	68	68
Federal states of East Germany							
1-9 employees	41	31	34	45	45	61	48
10-49 employees	46	44	51	54	53	60	66
50-499 employees	44	39	36	44	47	57	61
500+ employees	36	37	34	46	58	73	79
Total	43	39	40	47	50	60	63
Germany							
1-9 employees	43	47	48	48	44	59	55
10-49 employees	50	52	51	56	56	60	65
50-499 employees	61	54	54	63	60	68	69
500+ employees	70	63	64	70	73	80	79
Total	55	53	54	60	58	66	67

Rate of trainees progressing to employment: proportion of trainees progressing to an employment contract at the company providing training as a proportion of all trainees completing training

Source: IAB Establishment Panel Survey 2000 to 2013, extrapolated information

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Figure 22: Labour demand and labour supply by qualification level (ISCED)



¹ Forecasts starting 2012

Source: Microsensus and National Economic Accounting Statistics for the Federal Government; calculations and figures of QuBe-Project, 3rd wave

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Table 43: Altered occupational structure – basic projection and alternative scenario for 2013 in the 15 most relevant occupational fields in the vocational area

Main occupational field	Occupational field of the occupation learned	New supply in the period 2012–2030			Leaving working life in the period 2012 to 2030 (in thousand persons)	Labour supply occupation learned 2030			Labour supply 2030 taking occupational exchange processes into account		Labour demand 2030	Difference labour supply-labour demand 2030	
		Basic projection (in 1000 persons)	Alternative scenario (in 1000 persons)	Potential deviation alternative scenario to basic projection		Basic projection (in 1000 persons)	Alternative scenario (in 1000 persons)	Potential deviation alternative scenario to basic projection	Basic projection (in 1000 persons)	Alternative scenario (in 1000 persons)		Basic projection (in 1000 persons)	Alternative scenario (in 1000 persons)
1	1: Agriculture, husbandry, forestry, horticulture	233	231	-0.8%	417	698	694	-0.6%	873	872	866	7	6
2	7: Metal construction, plant construction, sheet metal construction, installation, fitters	268	263	-1.7%	726	945	939	-0.6%	898	897	886	12	11
3	8: Industrial mechanics, tools mechanics	547	562	2.8%	415	1,130	1,158	2.5%	944	948	899	45	49
2	11: Electrical occupations	350	341	-2.6%	648	1,025	1,005	-2.0%	706	702	691	15	11
2	18: Construction, woodworking, plastics manufacture and processing occupations	571	556	-2.6%	1,082	1,774	1,751	-1.3%	1,442	1,439	1,451	-9	-12
8	23: Technicians	340	342	0.5%	621	855	862	0.8%	942	941	994	-52	-53
4	27: Sales assistant occupations (retail)	268	270	0.8%	534	854	861	0.8%	2,057	2,057	2,060	-3	-3
4	28: Management assistants for wholesale/retail services	652	663	1.6%	753	1,718	1,747	1.6%	1,192	1,197	1,153	39	44
7	29: Banking, insurance clerks	336	337	0.3%	400	786	791	0.7%	796	800	676	120	124
4	30: Other commercial occupations (not including wholesale, retail, banking)	211	212	0.7%	133	482	484	0.4%	962	963	872	90	91
7	36: Administrative occupations in the public sector	311	304	-2.2%	425	797	788	-1.1%	1,215	1,207	988	227	219
7	39: Commercial office occupations	1,073	1,064	-0.9%	1,328	2,884	2,862	-0.8%	3,366	3,358	2,959	407	399
11	48: Healthcare occupations not requiring a medical practice licence	1,192	1,194	0.2%	1,039	2,823	2,824	0.0%	2,972	2,973	3,127	-155	-154
11	52: Body care occupations	240	237	-1.2%	270	650	642	-1.2%	327	325	357	-30	-32
6	53: Hotel and restaurant occupations, housekeeping	330	332	0.5%	244	862	863	0.1%	1,336	1,335	1,341	-5	-6

Source: Microcensus of the Federal Statistical Office, calculations and table of the QuBe Project, 3rd wave

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Table 44: **Qualifications composition of the 15 most relevant occupational fields in the occupational area 2010 and 2030 (in %)**

Main occupational field	Occupational field of the occupation learned	Proportion of trained skilled workers in the occupational field in 2010	Proportion of trained skilled workers in the occupational field in 2030	Proportion of trained skilled workers from outside the occupational field in 2010	Proportion of trained skilled workers from outside the occupational field in 2030	Proportion of non-formally qualified persons in 2010	Proportion of non-formally qualified persons in 2030
1	1: Agriculture, husbandry, forestry, horticulture	53%	56%	30%	30%	17%	15%
2	7: Metal construction, plant construction, sheet metal construction, installation, fitters	34%	32%	50%	49%	16%	19%
3	8: Industrial mechanics, tools mechanics	34%	34%	52%	57%	14%	9%
2	11: Electrical occupations	35%	36%	60%	61%	4%	4%
2	18: Construction, woodworking, plastics manufacture and processing occupations	47%	43%	39%	39%	14%	18%
8	23: Technicians	28%	27%	67%	64%	5%	9%
4	27: Sales assistant occupations (retail)	50%	49%	31%	31%	19%	20%
4	28: Management assistants for wholesale/retail services	28%	26%	62%	66%	9%	7%
7	29: Banking, insurance clerks	59%	56%	37%	43%	4%	1%
4	30: Other commercial occupations (not including wholesale, retail, banking)	48%	43%	43%	53%	9%	3%
7	36: Administrative occupations in the public sector	66%	63%	29%	37%	5%	1%
7	39: Commercial office occupations	52%	49%	41%	48%	7%	2%
11	48: Healthcare occupations not requiring a medical practice licence	72%	70%	21%	20%	7%	10%
11	52: Body care occupations	50%	31%	43%	64%	6%	6%
6	53: Hotel and restaurant occupations, house-keeping	42%	38%	34%	37%	24%	25%

Source: Microcensus of the Federal Statistical Office, calculations of the of the QuBe Project, 3rd wave

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current transitions between general schools and said training venues. Both scenarios project development in supply and demand by qualification levels. They differ, however, in terms of career choice within the training venues of the vocational and academic area. Whereas the *basic projection* assumes *constant career choice* within the various training venues in line with the distributions in 2011, the *alternative scenario* takes the *occupationally specific trends in training behaviour* into account. The assumption is that the average annual change in occupational structure in the qualifications occurring between 2000 and 2011 continues at a slower rate. *This means that both scenarios assume further expansion of the academic areas and a diminishing significance of the vocational area in overall terms. However, in contrast to the basic scenario, the alternative scenario also takes account of the structural change in training behaviour within*

the vocational and academic training venues. Table 43 presents cumulative new supply of workers by occupational fields for the years 2012 to 2030 for both scenarios and compares this with labour supply leaving working life in the same period. The only occupational fields selected for representation are those in which at least two thirds of vocational qualifications are acquired in the non-academic area and which are amongst the largest 15 occupational fields within the vocational sector. Just under 80% of all persons who have undergone non-academic training have completed training in one of the 15 occupational fields listed below.

Table 44 provides a summary of the changes to the qualifications composition of the occupational field projections on the basis of ageing, wage adjustments and occupational flexibilities between 2010 and 2030. Both in 2010

and in 2030, the proportion of trained skilled workers in all selected occupational fields is relatively low. The only exceptions are “administrative occupations in the public sector” and “healthcare occupations not requiring a medical practice licence”, where the proportions of trained skilled workers are just under two thirds and over 70% respectively. This means that exchange between the occupational fields in the occupational area is relatively high.

Particular attention should be paid to the change in the proportion of non-formally qualified persons in the occupation. In all occupational fields in which a shortage both in terms of persons and at the level of hours, the proportion of persons without a formal vocational qualification rises. The only exception is “body care occupations”, in which migration of skilled workers from other occupational fields primarily takes place. A comparison of the change in non-formally qualified persons from 2010 to 2030 with the structural occupational shift within the occupational area also highlights the fact that the proportion of non-formally qualified persons tends to rise when a relative fall takes place within the occupational area.

4. VET innovations through programmes, pilot projects and competence centres

4.1 Regular programmes

The increasing matching problems on the training market are creating new challenges for stakeholders in areas of activity at the transition from school to work. The consensus is that provision within the regular system should be made available to young people wherever possible, rather than installing special pathways and measures which do not lead to the primary training market in a targeted manner. The removal of barriers to access and opening up opportunities for participation and career pathways are also in line with the principle of inclusion, which will bring modernisation processes and structural changes in the transitional area in its wake, especially against a background of securing a supply of skilled workers. This gives rise to the task of reducing the gulf which lies between the prior learning of young people and the requirements/expectations of the companies providing training. For this reason, many services at the transition from school to work include provision for both sides. Measures for young people making the transition from school to work encompass various areas of activity such as vocational orientation, assistance in making the transition, vocational (training) preparation, provision to support training and VET and second-chance training.

Alongside the educational, funding and training provision which are currently offered as regular support measures at the transition from school to the world of work, various federal ministries have special and pilot projects in place which are of relevance to this transition. Programme guidelines describe the concept and implementation of these fixed-term programmes (Table 45). Of the 255 support programmes recorded in the 2013/2014 data survey, 51 programmes, the largest number, lay within the area of responsibility of the Federal Government. One EU programme was in place, and the remaining 203 support programmes are distributed across the federal states as shown in the figure above.

4.2 Pilot projects

Pilot projects are innovation partnerships between academic research and practice which are used to develop and test improvements in VET and prepare these improvements for practice. From 2010 to 2014, three pilot programmes were implemented on the basis of § 90 Paragraph 3 No. 1d of the Vocational Training Act (BBiG). These involved a total of 35 pilot projects, which were financed by the BMBF within main funding focuses. This represented the first time that pilot projects had been organised in the form of a programme. Individual pilot projects were selected and collated as measures within the scope of a pilot programme on the basis of a funding guideline. Extensive evaluation research was also installed at the programme level.

Some pilot projects are briefly presented below.

- ▶ During the period 2010–2013, the Federal Institute for Vocational Education and Training (BIBB) funded six pilot projects within the main funding focus of “Vocational education and training for sustainable development”. The BMBF made a total of €3 million available for this purpose within the scope of the second half of the UN Decade “Education for Sustainable Development” (2005–2014).
- ▶ The findings and results relating to increasing willingness to provide training and the development of training competence at small and medium-sized enterprises (SME’s) which have emerged from the 17 pilot projects contained within the BIBB main funding focus of “New pathways/heterogeneity” are helping to counter these matching problems. The pilot projects have identified regional, branch specific and certain thematic areas relating to the support requirements of SME’s in vocational education and training and have developed innovative concepts, methods, approaches and instruments.
- ▶ The ten pilot projects relating to the topic of developing and securing quality in company-based vocational education and training were primarily domiciled at small and medium-sized companies in the craft trades, industrial and service sectors since limited

Table 45: Selection of relevant Federal Government support initiatives and special programmes for the area of the transition from school to work 2013/2014

Funding provider/title	Funding period	Aim	Target group ¹	Internet information
Federal Ministry of Education and Research (BMBF): JOBSTARTER CONNECT – use of training modules for training and occupational integration	2008–2015	Securing the supply of skilled workers and improving transition to the dual system	Unplaced applicants from previous years, training drop-out's, socially disadvantaged persons	www.jobstarter-connect.de
Federal Ministry of Education and Research (BMBF): JOBSTARTER – Training for the future	2008–2017	Securing a sustainable supply of skilled workers via company-based training, improving the transition from general school to company-based training, enhancing the attractiveness of dual training	Alleinerziehende, Altbewerber/-innen, Auszubildende brecher/-innen, Auszubildende allgemein, Lernbeeinträchtigte, Personen mit Migrationshintergrund, sozial Benachteiligte	www.foerderdatenbank.de/jump/?95306 www.jobstarter.de
Federal Ministry of Economics and Technology (BWMi): Precisely tailored placement of trainees with companies willing to provide training	2007–2014	Securing a precisely tailored guidance and placement service for SME's, particularly in the craft trade and service sectors, in order to help satisfy the future requirement for skilled workers	Trainees generally, companies, foreign skilled workers	www.foerderdatenbank.de/jump/?9547
Federal Ministry of Education and Research (BMBF): Vocational orientation in extra-company and comparable vocational training centres	Unlimited	Establishment of systematic individual vocational orientation in extra-company and comparable vocational training centres, improving the transition from school to vocational education and training	School pupils	www.foerderdatenbank.de/jump/?10068 www.berufsorientierungsprogramm.de/html/de/13.php
Federal Ministry of Education and Research (BMBF): JOBSTARTER Vera Initiative – prevent drop-out and strengthen young people in vocational education and training via Senior Expert Service (SES) training mentors	2008–2014	Prevent drop-out and strengthen young people in vocational education and training	Trainees generally	www.vera.ses-bonn.de
Federal Ministry of the Family, Senior Citizens, Women and Young People (BMFSFJ): Strengthening young people – active in the regions	2010–2013	Creation of a precisely tailored support system for disadvantaged young people at the transition from school to training and employment.	Training drop-out's, persons with learning difficulties, persons from a migrant background, socially disadvantaged persons	www.jugend-staerken.de/
Federal Ministry of the Family, Senior Citizens, Women and Young People (BMFSFJ): Strengthening young people – youth migration services	Unlimited	Improving the integration of young people from a migrant background	Parents/guardians, persons from a migrant background, socially disadvantaged persons	www.jugend-staerken.de
Federal Ministry of the Family, Senior Citizens, Women and Young People (BMFSFJ): Strengthening young people – competence agencies	2011–2014	Supporting particularly disadvantaged young people in occupational and societal integration	Training drop-out's, persons with learning difficulties, persons from a migrant background, socially disadvantaged persons	www.kompetenzagenturen.de/

Table 45: Selection of relevant Federal Government support initiatives and special programmes for the area of the transition from school to work 2013/2014 (continuation)

Funding provider/title	Funding period	Aim	Target group ¹	Internet information
Federal Ministry of Labour and Social Affairs (BMAS): Inclusion Initiative HF1 – vocational orientation for severely disabled school pupils	2011–2018	Improving vocational orientation for severely disabled school pupils	Persons with learning difficulties, persons with a disability, school pupils	www.foerderdatenbank.de/jump/711536 https://www.bmas.de/DE/Themen/Teilhabe-behinderter-Menschen/Meldungen/initiative-inklusion-richtlinie.html
Federal Ministry of Labour and Social Affairs (BMAS): Inclusion Initiative HF2 – creation of new company-based training places for severely disabled young people	2011–2018	Increasing the number of company-based training places for severely disabled young people	Persons with disabilities, companies	www.foerderdatenbank.de/jump/711536
Federal Ministry of Labour and Social Affairs (BMAS): Inclusion Initiative HF4 – fostering inclusion competence at the chambers	2011–2018	Additional provision of training places and jobs for severely disabled persons	Persons with learning difficulties, persons with a disability, guidance institutions	www.foerderdatenbank.de/jump/711536
Federal Ministry for the Environment (BMUB): Education, trade and industry and work in the district (BIWAQ)	2008–2015	Improving the qualification and social situation of inhabitants of disadvantaged districts and thus enhancing their prospects on the labour market	Single parents, unplaced applicants from previous years, training drop-out's, persons from a migrant background, socially disadvantaged persons	www.biwaq.de
Federal Ministry of Labour and Social Affairs (BMAS): Promotion of occupational mobility of young people from Europe who are interested in training (MobiPro-EU)	2013–2016	Helping to reduce youth unemployment within the EU, covering the requirement for skilled workers in Germany	Trainees, young people interested in training and unemployed skilled workers from EU member states	www.foerderdatenbank.de/jump/711828 www.thejobofmylife.de
Federal Ministry of Labour and Social Affairs (BMAS): XENOS – Integration and diversity	2008–2014	Supporting individual employability skills, strengthening awareness of democracy and tolerance, reduction of xenophobia and racism	Trainers, trainees generally, persons from a migrant background, socially disadvantaged persons	www.foerderdatenbank.de/jump/78029 http://www.esf.de/portal/DE/ueber-den-ESF/Geschichte-des-ESF/Foerderperiode-2007-2013/ESF-Programme/Programme/programm_xenos.html

¹ Information in accordance with details provided by responsible parties at the relevant ministries

Source: Data survey conducted by Wolters Kluwer Deutschland GmbH on behalf of the Federal Institute for Vocational Education and Training. The table presents a selection of the programme data surveyed from the relevant ministries. Preference is given to presenting programmes the term of which extends into 2015.

Table 46: **Distribution of expenditure within the scope of funding for inter-company vocational training centres – Federal Institute for Vocational Education and Training**

Budget year	Inter-company vocational training centres	Competence centres	Total funding expenditure
	In € million	In € million	In € million
2009	approx. 41.8	approx. 4.2	46
2010	approx. 42.0	approx. 1.0	43
2011	approx. 39.0	approx. 1.0	40
2012	approx. 39.0	approx. 1.0	40
2013	approx. 39.0	approx. 1.0	40
2014	approx. 38.85	approx. 1.15	40

Note: amounts include the necessary assessor costs distributed by percentage.

Source: Bundesinstitut für Berufsbildung – Federal Institute for Vocational Education and Training (BIBB)

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Table 47: **Distribution of expenditure within the scope of funding for inter-company vocational training centres – Federal Office for Economic Affairs and Export Control**

Budget year	Inter-company vocational training centres	Competence centres	Total funding expenditure
	In € million	In € million	In € million
2009	approx. 15.7	approx. 9.90	25.60
2010	approx. 22.2	approx. 1.81	24.01
2011	approx. 22.8	approx. 1.49	24.29
2012	approx. 22.5	approx. 5.56	28.06
2013	approx. 24.3	approx. 4.46	28.76
2014	approx. 27.74	approx. 1.92	29.66

Note: Amounts include the necessary assessor costs distributed by percentage.

Source: Federal Ministry for Economic Affairs and Energy

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resources mean that problems such as contract dissolutions, training drop-out's and lack of a systematic approach towards VET are more likely to occur at SME's, where training is closely integrated into work and business processes.

- ▶ The BMBF-funded initiative “ANKOM – promotion of measures for transition from vocational to higher education” was divided into 20 projects distributed across seven German federal states and took place during the period from August 2011 to December 2014. It developed and tested measures to facilitate the transition to higher education for persons with vocational qualifications and thus aimed to increase permeability between the educational systems. In contrast to the preceding programme phases, which were implemented under the title of “ANKOM – Credit transfer of occupational competences to higher

education courses of study” (ANKOM I 2005–2008 & ANKOM II 2008–2011) and had the objective of developing procedures for the credit transfer to higher education courses of study of competences acquired via vocational means, this programme phase pursued the goal of reducing hurdles for persons with vocational qualifications at the transition to higher education by developing specific support provision.

4.3 Support to inter-company training centres and competence centres

Inter-company vocational training centres have an important role to play as partners of both dual vocational education and training and of advanced and continuing training. They supplement company-based training by delivering more detailed practical training in particular.

This means that support provision to secure training can be made available to small and medium-sized enterprises (SME's). The Federal Ministry of Education and Research (BMBF) has been supporting inter-company vocational training centres since the 1970's by putting appropriate funding in place. The aim is to maintain vocational training at the same high level in accordance with the latest status of technology right across Germany.

The Federal Institute for Vocational Education and Training works on behalf of the BMBF to finance investment-related projects within the area of initial vocational education and training (Table 46). Alongside the projects managed by BIBB, advanced and continuing training projects, which also represent an important task area for inter-company vocational training centres, are funded on behalf of the Federal Ministry of Economics via joint guidelines issued by the Federal Office for Economic Affairs and Export Control (Table 47).

5. Mobility and recognition issues, international perspective

A total of €14.8 billion will be made available to support qualification and employment in the EU until the end of 2020 as part of the new Erasmus+ Programme for general and vocational training, young people and sport. Increasing cross-border mobility thus continues to be accorded a high degree of priority both at a European and a national level. At EU level, the intention is that by 2020 6.0% of persons aged between 18 and 34 and in possession of a vocational training qualification will be able to demonstrate that they have spent at least two

weeks abroad during their training. In January 2013, the Federal Parliament in Germany stipulated the objective that at least 10% of trainees should gain relevant experience abroad. The current percentage share for Germany in this regard is estimated to be over 4%. In 2014, more than 30,000 young people completed a stay abroad during the course of their initial training. By the same token, Germany is, alongside the United Kingdom, one of the most popular destinations for VET periods spent abroad within Europe.

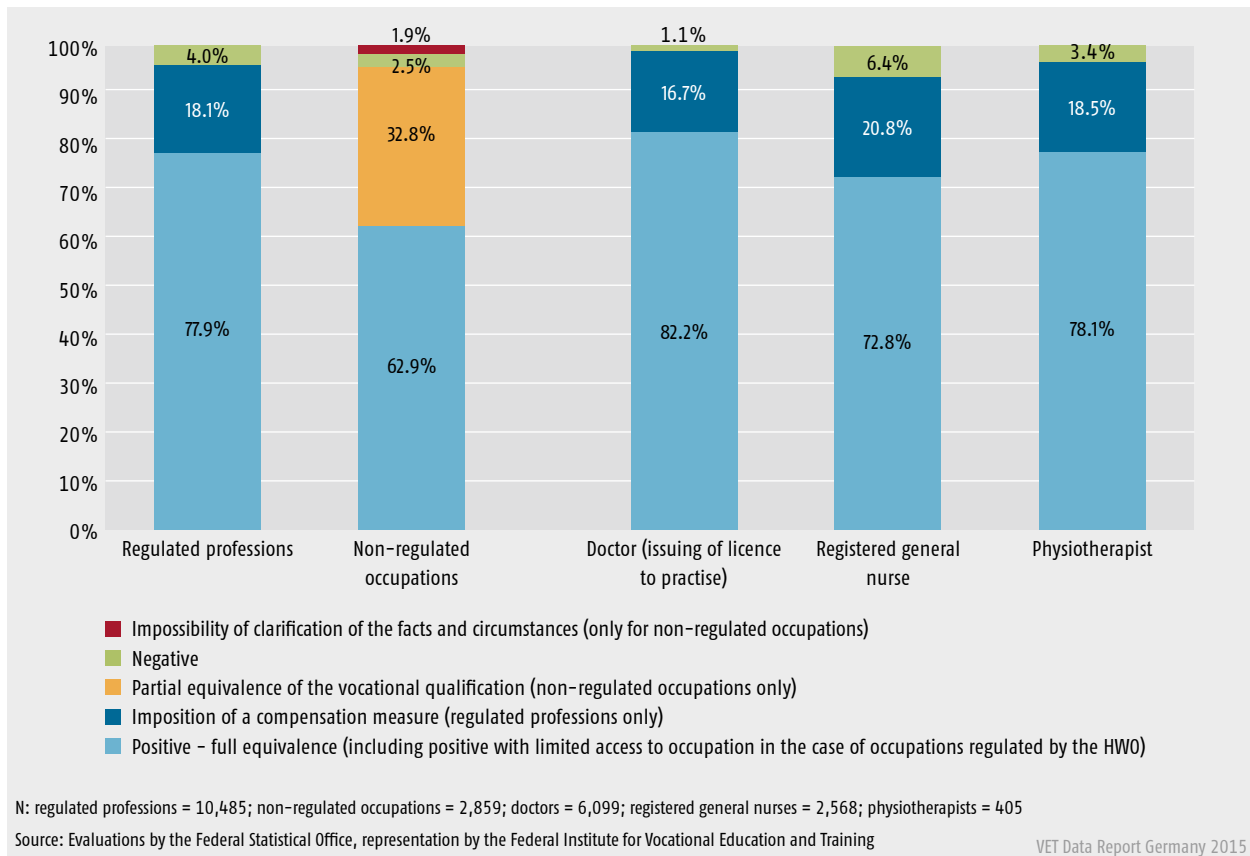
Table 48: **Erasmus+ mobility in vocational education and training 1995–2014**

Application year	Number of applicants	Applicants receiving funding 1995 to 2011, approved 2012 to 2014	of which co-financed via Leo Plus
1995	2,284	2,172	
1996	3,541	2,368	
1997	3,845	2,440	
1998	4,308	2,280	
1999	4,334	2,925	
2000	5,975	3,222	
2001	6,045	3,807	
2002	6,358	3,821	
2003	6,775	4,555	
2004	7,527	4,497	
2005	7,827	5,039	
2006	8,541	5,834	
2007	8,099	6,421	
2008	11,125	7,515	
2009	11,072	8,473	1,269
2010	12,212	9,320	4,038
2011	13,415	10,610	1,918
2012	14,866	14,358	0
2013	16,704	15,939	1,500
2014	19,069	17,743	0

Source: National Agency "Education for Europe" at the Federal Institute for Vocational Education and Training

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Figure 23: Results of procedures in 2013 for regulated professions and non-regulated occupations and for the 3 most common reference occupations



The European Credit System for Vocational Education and Training (ECVET) is being addressed by an increasing number of projects. In 2014, more than 5,000 grants were approved for 67 projects to be conducted in accordance with ECVET standards. This means that the number of ECVET projects has more than tripled. In 2013, a total of 15,608 learning stays in Germany were approved in the 33 other states participating in the programme as part of the European Education Programme. In individual terms, this involved 10,193 persons in initial VET, 2,869 persons in continuing vocational training and 2,546 vocational education and training experts.

Since January 2013, the Federal Government “Special Programme for the promotion of occupational mobility of young people from Europe who are interested in training” (MobiPro-EU) has been supporting young EU citizens to commence company-based VET or qualified employment

in a shortage occupation in Germany. By November 2014, a total of 7,619 persons had been funded since the launch of the programme. 5,644 of these were in the training segment and 1,975 in the skilled worker segment. A total of 4,402 of the persons supported concluded a regular training contract or contract of employment during the period stated, 3,170 in the training segment and 1,232 in the skilled worker segment. The most important countries of origin in the training segment were Spain, Hungary, Bulgaria and Italy. In the light of the high degree of interest in the special programme, the Federal Ministry of Labour and Social Affairs reformulated the funding principles in July 2014. Within this context, the funding available for the period from 2013 to 2018 was augmented from an initial €139 million to €550.1 million. At the same time, the project was concentrated on the segment of training with regard to new participants and switched to project funding.

By the end of 2013, just under 26,500 applications had been submitted for recognition of professional or vocational qualifications acquired abroad pursuant to the Federal Act. Of new applications made in 2013, 77.9% related to recognition of a regulated profession in Germany.

The largest number of procedures involved German nationals, followed by persons from Poland, Romania and Spain. A majority of all procedures related to the group of medical healthcare professions. Whereas in 2013 77.9% of procedures in the regulated professions concluded with the determination of full equivalence, 62.9% of applications in the non-regulated occupations also ended with a positive outcome and 32.8% resulted in identification of partial equivalence of the vocational qualification. The need for information and guidance on professional recognition has continued to rise. Nearly two million visitors have sought information from the “Recognition in Germany” portal since the site launched, including an increasing number of interested parties from abroad. This growing demand is being met via the provision of information in multiple languages (figure 23). Complementary data on the implementation of the 2012 German Act Improving the Identification and Recognition of Professional Qualifications Acquired Abroad are available in the 2014 VET Data Report Germany.

Annex: List of abbreviations

Abbreviation	German	English
AES	Erwachsenenbildungsstudie	Adult Education Survey
AFBG	Aufstiegsfortbildungsförderungsgesetz	Upgrading Training Assistance Act
BA	Bundesagentur für Arbeit	Federal Employment Agency
BAföG	Bundesausbildungsförderungsgesetz	Federal Training Assistance Act
BAuA	Bundesanstalt für Arbeitsschutz und Arbeitsmedizin	Federal Institute for Occupational Safety and Health
BBiG	Berufsbildungsgesetz	Vocational Training Act
BIBB	Bundesinstitut für Berufsbildung	Federal Institute for Vocational Education and Training
BMBF	Bundesministerium für Bildung und Forschung	Federal Ministry of Education and Research
CIS	Gemeinschaft Unabhängiger Staaten	Commonwealth of Independent States
CVET	Continuing Training	Continuing vocational education and training
CVTS4	Erhebung zur beruflichen Weiterbildung	Continuing Vocational Training Survey
DIE	Deutsches Institut für Erwachsenenbildung – Leibniz-Zentrum für Lebenslanges Lernen e. V.	German Institute for Adult Education – Leibniz Centre for Lifelong Learning
DQR	Deutscher Qualifikationsrahmen	German Qualifications Framework
EQF	Europäischer Qualifikationsrahmen	European Qualifications Framework
EQI	Einmündungsquote Ausbildungsinteressierte	Progression rate of persons interested in training
HwO	Handwerksordnung	Crafts and Trades Regulation Code
IAB	Institut für Arbeitsmarkt- und Berufsforschung	Institute for Employment Research
iABE	integrierte Ausbildungsberichterstattung	Integrated training reporting
ISCED		International Standard Classification of Education
NAA	Neu abgeschlossene Ausbildungsverträge	Newly concluded training contracts
SGB II (Wissenschaftsdatenbank)	Grundsicherung für Arbeitssuchende	Basic income support for job-seekers
SGB III (Wissenschaftsdatenbank)	Arbeitsförderung	Employment promotion
UN-BRK	UN-Behindertenrechtskonvention	UN Convention on the Rights of Persons with Disabilities
VET	vocational education and training	Vocational Education and Training
WeGebAU	Weiterbildung Geringqualifizierter und beschäftigter älterer Arbeitnehmer in Unternehmen	Continuing Training of Low Skilled Workers and Employed Older Persons in Companies

Abstract

The development of the German vocational education and training system and more specifically of the dual system relies on regular data collection. Statistical analysis and surveys are continuously informing policy decisions and supporting practices.

Traditional aspects of apprenticeship in terms of indicators on apprentices, companies or occupations are provided. Each year BIBB colleagues select a key topic by relevance to VET stakeholders in Germany: The 2015 report delivers in-depth data on matching relationship between training system and labour market needs and oversights on future shortages of skilled workers in Germany.

The Data Report of the Federal Institute for Vocational Education and Training (BIBB) is a selection of most relevant and actual data on the German Vocational Education and Training system. Full data is provided in German language on BIBB website (www.bibb.de/datenreport).

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