

VET Data Report Germany 2014

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

Federal Institute for
Vocational Education
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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 the BIBB in preparing the Report on Vocational Education and Training are tasks regulated by law in the Vocational Training Act (§§ 86, 90).

This English version of the 2014 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. Chapter 3 sets the German VET system in an international perspective dealing with apprenticeship, recognition and mobility. The full text of the report in German as well as additional information is available on the Internet portal www.bibb.de/datenreport.

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 2014 Data Report in English provides valuable insights into the German VET system as contribution to the debate on the role of VET in society and economy. It is meant to support the 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 receiving 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). It 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 the 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 for the purview of the churches.

The dual system provides broad vocational training and competences for 329 recognised training occupations (in 2013). The programmes in the dual system usually take 3 years, 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 age cohort). The programmes of these pathways take between 1 and 3 years, depending on the particular vocational orientation and objective.

Key facts in brief

The number of **newly-concluded apprenticeship contracts** declined again in 2013. The number of contracts decreased by 20,600 (-3.7 %) in comparison with 2012. The decline was greater in Eastern Germany (-5.9 %) than in Western Germany (-3.4 %). The number of external contracts decreased significantly (-16.3 %), while a smaller downward trend of -2.9 % was observed for new company contracts.

The **apprenticeship placements offered** declined by -3.5 % in comparison with the previous year to 564,200. The German Federal Employment Agency registered approximately 83,500 **unsuccessful apprenticeship**

placement seekers as of 30 September 2013. This was approximately 7,500 more than in the previous year. At the same time, many companies had trouble filling their apprenticeship placements. Therefore, the number of still **unfilled placements** as of 30 September 2013 was as similarly high as in the previous year (approximately 33,000). The **problems of matching** on the vocational education and training market have generally increased.

The **number of recognised training occupations** decreased in 2013 as 11 “old professions” were superseded via the ordinance on a single qualified metal engineering profession. There are now 329 training occupations.

The **proportion of apprenticeship beginners**, therefore the calculated share of the resident population beginning an apprenticeship in the dual system, was 55.7 % in 2012.

Participation of **enterprises in training** declined in 2012 as it did in the previous two years. At the end of the year under review, 447,700 companies were taking part in apprenticeships; the percentage of companies providing vocational training decreased to 21.3 %. This is the lowest point since 1999.

According to the results of the German Institute for Employment Research company panel, the **percentage of successful apprenticeship graduates being offered permanent contracts by their training companies** in 2012 was 66 %, as in the previous year. The percentage of successful apprenticeship graduates being offered permanent contracts by their companies in the former East Germany was lower than in the former West Germany.

The number of beginners in **fully qualifying school-based vocational training courses** was 212,241 in 2013 and therefore as similarly high as in 2012.

According to the results of the integrated VET reporting, 257,626 beginners were registered for the year 2013 in the **transitional area** (previous year: 259,727).

Based on evaluations of the micro census, the Federal Institute for Vocational Education and Training (BIBB) concludes that the **unskilled rate** has declined slightly in previ-

ous years. The proportion of formally not qualified persons in the age group 20 to 29 was 13.5 % in the year 2011.

According to the vocational training statistic results, 1,429,977 young people were in the **dual system of vocational education** in the year 2012. Western Germany accounted for 1,222,032 of them and Eastern Germany 207,945. The stock has fallen by -2.1 % in comparison with the previous year. Of the apprentices with newly-concluded apprenticeship contracts on the deadline date of 31 December 2012, 42.3 % had a general secondary education **leaving certificate** and 30.8 % a secondary education **leaving certificate**. The proportion holding a **university entrance qualification** was 24.0 %.

The VET market

In 2013, both the apprenticeship placements offered and the apprenticeship placement demand decreased and the number of newly-concluded apprenticeship contracts fell to an historic low; the lowest value since reunification. At the same time, there was an increase in problems of matching.

In 2013, 564,200 apprentice placement offers were registered across Germany (-20,300, or -3.5 % in comparison with the previous year), including 542,568 company offers (-16,100, or -2.9 %) and 21,700 external offers (-4,200, or -16.3 %; table 1). There was a particularly large decline in apprentice placements in the sphere of competence of industry and commerce (-14,200, or -4.0 %). Skilled trade training courses decreased by 4,700, or 3.0 %, across Germany. The demand for apprenticeship placements decreased across Germany by 13,000, or 2.1 %, to 614,300. This is the lowest figure since 2007, when the more detailed calculation of demand for apprenticeship placements was possible for the first time. The details of these developments can be found in table 1.

A significantly higher number of young people interested in apprenticeships were unsuccessful in 2013 (83,600) – despite the lower number of applicants for apprenticeship placements and the lower demand for apprenticeship placements registered with the advisory and placement services. The proportion of applicants still looking for a placement on the deadline date of 30 September was 13.6 % in terms of the official overall figure of 614,300 apprenticeship placement seekers.

It was thus the second year in a row that both the number of unfilled apprenticeship placements and the number of young people unsuccessfully looking for an apprenticeship placement increased, while the apprenticeship placements offered and the demand for apprenticeship placements declined at the same time.

The developments on the vocational education and training market have been strongly influenced by negative demographic developments for a number of years. Since 2004, the number of graduates from schools of general education without a university entrance qualification has decreased by over 150,000 across Germany already, therefore by more than one fifth. The decline will continue for 2014 and the coming years; by 2025 it is expected that there will be a further loss of over 100,000 people. The year 2013 constituted an exception, however, to the continuously negative trend.

As the number of graduates from vocational schools only declined by a total of 8,500, and only a minor fall was expected even in people interested in vocational training who left school in previous years, there was some hope that the potential demand for the dual system of vocational education would once again increase in 2013, contrary to the general trend. However, this hope was not realised. The number of people recorded as being interested in vocational training in the reporting years 2012/2013 actually decreased again by 9,500, or 1.1 %. This decline was noticeably less significant, however, than in the previous five years.

In 2013, 564,200 apprenticeship placements within the dual system of vocational education were offered in Germany; this was 20,300 fewer, or 3.5 % less than in the previous year (Figure 1).

In 2013, the number of company offers decreased compared with the previous year by approximately 16,100 places, or 2.9 %, to 542,600. The number of predominantly publicly-funded (“external”) places decreased by 4,200 to 21,700. The relative decrease in the east of Germany (a total of -5.4 %) was stronger here than in the west (-3.1 %). The following picture arose for 2013, distinguished according to spheres of competence: In the area of industry and commerce, the apprenticeship placements offered across Germany decreased by 14,200, or 4.0 %, from 351,100 (2012) to 336,900, and in the skilled trades by 3.0 %, from 157,700 to 153,000.

Table 1: Development of VET market between 2009 and 2013

	2009	2010	2011	2012	2013	2013 development compared with 2012	
						Absolute	in %
Germany							
Apprenticeship positions offered							
▶ Overall	581,562	579,564	599,070	584,532	564,249	-20,283	-3.5 %
▶ Occupied	564,306	559,959	569,379	551,259	530,715	-20,544	-3.7 %
▶ Unoccupied as of 30/09	17,255	19,605	29,689	33,274	33,534	+261	+0.8 %
▶ Company ¹	535,761	538,521	568,608	558,627	542,568	-16,059	-2.9 %
▶ External ²	45,801	41,043	30,459	25,905	21,678	-4,224	-16.3 %
Demand for apprenticeship position³							
▶ Overall	652,848	640,332	641,700	627,243	614,277	-12,963	-2.1 %
▶ Successful	564,306	559,959	569,379	551,259	530,715	-20,544	-3.7 %
▶ Still seeking as of 30/09	88,540	80,371	72,319	75,984	83,564	+7,581	+10.0 %
Supply/demand ratio³							
▶ Overall	89.1	90.5	93.4	93.2	91.9	-1.3	-
▶ Company	82.1	84.1	88.6	89.1	88.3	-0.7	-
New apprenticeship contracts	564,306	559,959	569,379	551,259	530,715	-20,544	-3.7 %
West (old federal states)							
Apprenticeship positions offered							
▶ Overall	479,790	484,125	509,265	499,344	483,738	-15,603	-3.1 %
▶ Occupied	465,309	468,297	484,884	472,353	456,471	-15,885	-3.4 %
▶ Unoccupied as of 30/09	14,481	15,828	24,381	26,989	27,269	+279	+1.0 %
▶ Company ¹	456,921	461,649	490,572	481,773	468,900	-12,876	-2.7 %
▶ External ²	22,869	22,476	18,693	17,568	14,841	-2,730	-15.5 %
Demand for apprenticeship position³							
▶ Overall	543,177	539,277	548,808	537,807	530,106	-7,698	-1.4 %
▶ Successful	465,309	468,297	484,884	472,353	456,471	-15,885	-3.4 %
▶ Still seeking as of 30/09	77,868	70,979	63,922	65,452	73,637	+8,184	+12.5 %
Supply/demand ratio³							
▶ Overall	88.3	89.8	92.8	92.8	91.3	-1.6	-
▶ Company	84.1	85.6	89.4	89.6	88.5	-1.1	-
New apprenticeship contracts	465,309	468,297	484,884	472,353	456,471	-15,885	-3.4 %
East (new federal states and Berlin)							
Apprenticeship positions offered							
▶ Overall	101,643	95,325	89,670	85,068	80,436	-4,629	-5.4 %
▶ Occupied	98,997	91,662	84,495	78,903	74,244	-4,659	-5.9 %
▶ Unoccupied as of 30/09	2,644	3,662	5,175	6,163	6,193	+30	+0.5 %
▶ Company ¹	78,711	76,758	77,904	76,731	73,599	-3,135	-4.1 %
▶ External ²	22,932	18,567	11,766	8,334	6,840	-1,497	-17.9 %
Demand for apprenticeship position³							
▶ Overall	109,653	101,037	92,874	89,415	83,877	-5,538	-6.2 %
▶ Successful	98,997	91,662	84,495	78,903	74,244	-4,659	-5.9 %
▶ Still seeking as of 30/09	10,656	9,374	8,380	10,510	9,633	-876	-8.3 %
Supply/demand ratio³							
▶ Overall	92.7	94.3	96.5	95.1	95.9	+0.8	-
▶ Company	71.8	76.0	83.9	85.8	87.7	+1.9	-
New apprenticeship contracts	98,997	91,662	84,495	78,903	74,244	-4,659	-5.9 %

¹ Company = not (predominantly) publicly-financed

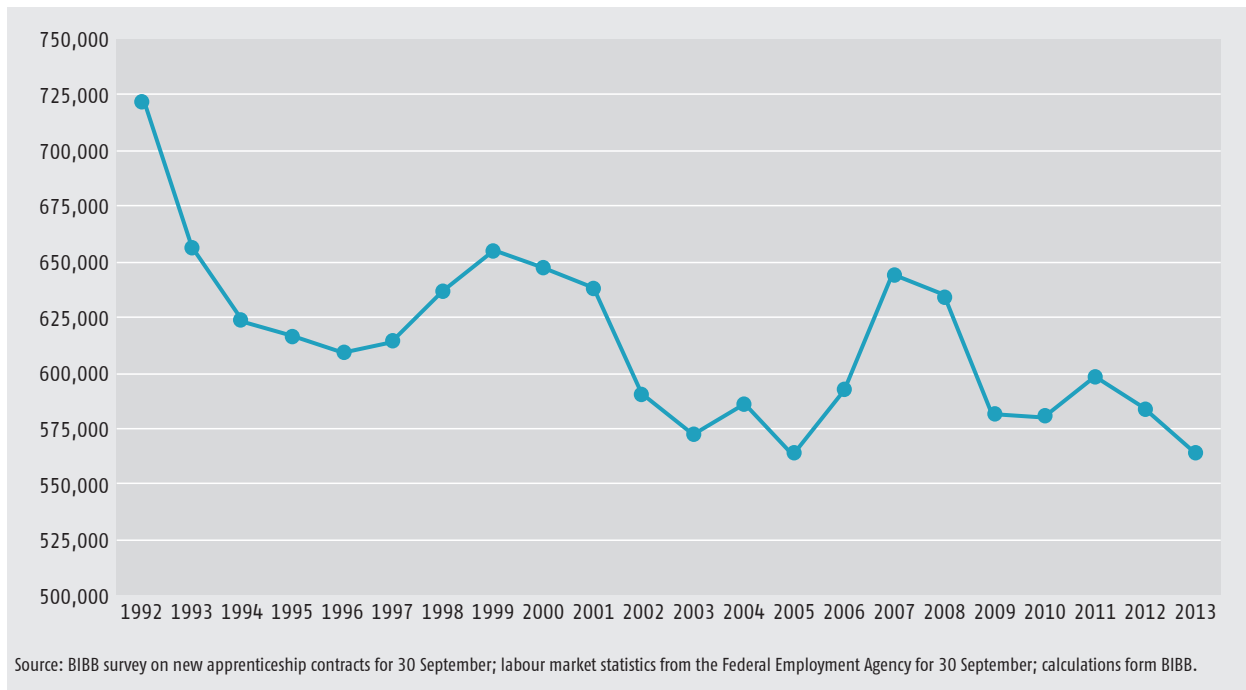
² External = (predominantly) publicly-financed Value for West 2009 not yet gathered

³ According to the new, extended definition in terms of the Vocational Training Act. The vocational education and training report should indicate, according to Section 86, "the number of persons registered with the Federal Employment Agency seeking an apprenticeship position (on 30 September)".

Notes: Subsequent corrections from previous years were taken into consideration in the calculations. For reasons of data protection, values connected to the BIBB survey on new apprenticeship contracts as of 30 September have been rounded off to a multiple of three.

Source: Federal Employment Agency statistics, chronology applicants and apprenticeship positions 2009–2013, Nuremberg, November 2013; BIBB, survey of new apprenticeship contracts as of 30 September; calculations from the BIBB

Figure 1: Offer of apprenticeship placements for Germany (1992–2013)



In 2013, the demand for apprenticeship placements decreased across Germany by 13,000, or 2.1 %, to 614,300. Compared with 2007, when 756,800 were counted seeking an apprenticeship placement, the decline amounts to 142,500, or 18.8 %. Essential factors here were, above all, the unfavourable demographic developments and the chronic decrease in the number of young people associated with this.

As it was not only the apprenticeship placements offered but also the demand for them which decreased across Germany, the negative effects on the mathematical ratio between supply and demand were not as strong as would have been the case with similarly high demand as that of the previous year. In 2013, 91.9 offers were allotted to 100 people seeking apprenticeship placements across Germany. In the previous year, the number was 93.2 offers. Therefore, the vocational education and training market deteriorated for people seeking apprenticeship placements, even though the market situation in 2013 was still significantly better than in the previous years of the past decade.

The *company* supply and demand ratio does not only differ between western and eastern Germany; it also differs

when considering it for the different training occupations. Table 2 shows an example of how the professions most commonly filled feature the highest and lowest supply and demand ratios in 2013 and also illustrates, along with the total number of company offers, the proportion of unfilled *company* apprentice placement offers and people unsuccessful in their search for an apprenticeship placement. Columns 1–8 were highlighted in colours according to the traffic light system from the point of view of the young people and illustrate how difficult or easy it is to find sufficient apprenticeship placement offers in the professions they each aspire to. Highlighting in red shows a particularly low supply and demand ratio, this usually goes hand in hand with a high proportion of unsuccessful seekers.

The number of apprenticeship placement applicants who were still looking for a vocational training placement on 30 September 2013 and are therefore considered unsuccessful apprenticeship seekers was 83,600 across Germany; this number was therefore 7,600, or 10.0 %, more than the previous year. In the vocational training market statistics of the German Federal Employment Agency, which provides information on the whereabouts of all applicants registered with the labour administration, the group of applicants still seeking an

Table 2: Vocational occupations with mismatches in 2012 and 2013 (Germany)

	Training occupation ¹	Company offers		Supply and demand ratio _b		Proportions of unsuccessful market participants (in %)			
		2012	2013	2012	2013	Offers		Seekers	
		Sp.1	Sp.2	Sp.3	Sp.4	2012	2013 ²	2012	2013 ²
	Restaurant specialist	5,511	5,115	127.9	129.3	29.8	30.2	8.5	8.3
	Plumber	507	525	121.6	124.6	22.9	24.7	4.6	4.3
	Specialised food industry shop assistant	11,709	11,448	117.4	123.3	22.1	25.6	5.4	6.3
	Butcher	2,253	2,169	118.8	120.0	24.9	25.3	7.4	7.5
	Systems catering specialist	2,784	2,550	122.4	118.2	22.0	19.5	4.1	4.5
	Baker	4,125	3,801	112.9	115.3	21.4	22.8	7.5	8.2
	Hearing aid audiologist	993	1,026	109.4	111.1	13.2	14.3	4.5	4.7
	Industrial cleaner	1,491	1,482	108.2	110.2	15.4	16.4	6.3	6.4
	Glazer	558	609	104.7	106.6	9.2	12.5	3.9	5.1
	Fully-trained hotel clerk	11,943	11,886	108.2	105.7	13.0	11.9	5.3	6.3
	Chef	13,053	12,102	104.6	105.0	17.8	17.7	9.8	9.8
	Mechatronics engineer for refrigeration	1,257	1,248	102.6	103.6	6.3	5.7	2.6	2.2
	Specialists in furniture, kitchen and removal services	522	579	95.6	103.4	8.3	12.6	7.0	8.4
	Chimney sweep	792	972	100.9	103.3	4.0	5.5	2.9	2.0
	Interior decorator	816	741	75.3	75.7	6.5	7.0	22.9	23.4
	Florist	1,356	1,221	73.0	74.6	5.4	6.1	25.1	25.3
	Office administrator	19,575	18,666	76.0	73.8	2.7	2.7	22.0	24.6
	Automotive painter	2,430	2,163	76.5	73.3	3.0	3.4	19.3	23.1
	Biological laboratory technician	516	513	79.2	72.5	0.0	0.6	20.8	27.9
	Sports and fitness administrator	1,914	1,971	73.4	71.7	6.2	7.0	30.3	32.7
	Event management assistant	2,046	1,968	75.7	71.5	1.6	1.9	24.2	29.5
	Media designer digital and print	3,597	3,363	72.0	68.5	1.3	1.8	27.6	31.2
	Photographer	792	696	72.0	65.8	4.3	4.7	30.2	36.8
	Warehouse specialist	4,674	4,584	65.0	64.1	2.8	2.9	18.6	21.3
	Audiovisual media designer	606	636	59.5	59.1	0.7	2.4	40.4	42.1
	Visual marketing designer	756	747	58.7	55.6	2.8	2.4	42.5	44.7
	Zookeeper	630	609	50.9	50.7	2.5	1.3	48.6	48.3

¹ Only training occupations in the dual system (according to the Vocational Training Act/Crafts and Trades Regulation Code) for which at least 500 apprenticeship placements were offered in 2013 are listed.

² Values highlighted in red indicate an increase in the share of unsuccessful market participants from 2012 to 2013.

All absolute values have been rounded off to a multiple of 3.

Colour legend:

	Supply/demand ratio greater or equal to 120
	Supply/demand ratio between 110 and 120
	Supply/demand ratio between 100 and 110
	Supply/demand ratio between 90 and 100
	Supply/demand ratio between 80 and 90
	Supply/demand ratio between 70 and 80
	Supply/demand ratio less than or equal to 70

Source: BIBB survey on new apprenticeship contracts for 30 September; labour market statistics from the Federal Employment Agency for 30 September; calculations from the BIBB.

apprenticeship placement can be divided into the following: the group of unplaced applicants (this consisted of a total of 21,034 people in 2013) and the group of applicants with an alternative on 30 September (they numbered 62,530 in 2013). In 2013, the alternatives, which are only partially assigned the role of being a real substitute for starting fully qualifying vocational training, mostly consisted in renewed schooling (30.7%), remaining in publicly-financed measures (23.3%), employment (15.7%), internships (6.3%), federal/voluntary service for young people (5.8%) or starting a year of basic vocational training or vocational preparation (4.4%). 11.4% of the applicants with an alternative for 30 September continued vocational training from which they once again applied for a vocational training placement and 2.2% started studying or continued their studies.

VET apprenticeship contracts

In the survey of newly-concluded apprenticeship contracts effective 30 September 2013 the bodies responsible for vocational training reported to BIBB 530,715 newly-concluded apprenticeship contracts across Germany in the period from 1 October 2012 until 30 September 2013. Compared with the survey from the previous year, this signifies a decline of 20,544 contracts (-3.7%). This means that, across Germany, the lowest value since reunification has been reached. At 3.4% (-15,885 contracts), the decline in the west of Germany was less than in the east, where a minus figure of 5.9% was determined (-4,659 contracts). This development is both a result of a falling number of in-house apprenticeship contracts (by 16,320, or -3.1%, to 509,034) and of the reduction of predominantly publicly-financed (external) apprenticeships (by 4,224, or -16.3%, to 21,678). Consequently, in 2013, the number of newly-concluded apprenticeship contracts halved in eastern Germany in comparison with 1999. In western Germany, the number decreased by only 5.3% in the same period.

In the development of newly-concluded apprenticeship contracts, nearly all spheres of competence registered a decline in comparison with 2012. Only the public service professions showed a slight overall plus (+0.9%, or +105 contracts). Table 3 and table 4 show the distribution of newly-concluded apprenticeship contracts within Germany.

More new apprenticeship contracts were concluded with men than with women, while only a slight change to the male/female share can be observed in comparison to the previous year. The apprenticeship contracts concluded predominantly by men are to be found in the spheres of competence of skilled trades (75.6%), agriculture (76.7%) and maritime shipping (94.3%). More new contracts were concluded with men than with women in the area of industry and commerce (60%) also. In contrast, women make up the larger proportion in public services (65.1%). Women dominate even more noticeably in the spheres of competence of independent professions (93.5%) and home economics (91.2%).

The proportion of apprenticeship contracts with a fixed, shortened duration of training at the time the contract was concluded remains almost constant at 16% (2012: 15.9%) as indicated in tables 3 and 4. In the year 2013, 46,344 apprenticeship contracts for training occupations with a training duration of 18 or 24 months were newly concluded. In the survey period 2012/2013, the competent bodies registered 9,453 new apprenticeship contracts within the scope of the vocational education of people with disabilities according to Section 66 BBiG (Vocational Training Act) or Section 42 m HwO (Crafts and Trades Regulation Code). According to the results of the BIBB survey, 21,678, or 4.1%, of newly-concluded apprenticeship contracts will be predominantly publicly funded effective from 30 September 2013.

Table 3: Newly-concluded apprenticeship contracts in 2013 according to structural features (part 1)

	Baden-Württemberg	Bavaria	Berlin	Brandenburg	Bremen	Hamburg	Hesse	Mecklenburg-Vorpommern	Lower Saxony	North Rhine-Westphalia	Rhineland-Palatinate	Saarland	Saxony	Saxony-Anhalt	Schleswig-Holstein	Thuringia	Old federal states	Eastern Germany and Berlin	Germany
All areas	New apprenticeship contracts	74,391	92,028	16,785	10,551	5,955	13,530	39,660	7,968	56,382	120,084	27,102	17,889	10,830	19,932	10,221	456,471	74,244	530,715
	with female apprentices	30,354	38,124	7,698	3,900	2,628	6,036	16,011	3,153	22,464	48,036	10,647	6,855	3,966	8,160	3,747	185,481	29,319	214,800
	with shortened duration	16,869	15,876	3,024	1,146	621	1,596	5,097	888	10,185	17,841	4,410	1,569	1,065	2,520	945	76,581	8,529	85,107
	in two-year occupations according to Section 66 Vocational Training Act/ Section 42 m Crafts and Trades Regulation Code	5,400	6,762	1,242	1,080	450	1,275	3,240	1,026	4,611	11,385	2,562	588	1,881	1,926	1,434	38,202	8,142	46,344
Industry and commerce	predominantly publicly funded	1,401	987	273	591	171	54	513	387	852	1,611	360	141	765	510	405	6,600	2,856	9,453
	New apprenticeship contracts	45,198	54,129	9,990	6,480	3,960	9,495	24,654	5,010	30,855	74,208	15,297	4,395	6,786	10,416	6,654	272,610	45,930	318,540
	with female apprentices	17,841	22,536	4,197	2,391	1,632	4,101	9,933	2,013	12,558	28,974	5,916	1,839	4,062	4,446	2,427	109,779	17,694	127,470
	with shortened duration	6,510	7,179	2,088	732	384	921	2,649	600	4,185	12,183	2,436	981	822	639	1,041	552	38,472	5,436
Skilled trades	in two-year occupations according to Section 66 Vocational Training Act	5,181	6,291	1,146	930	405	1,233	2,970	936	4,167	10,542	2,349	555	1,707	1,704	1,287	35,400	7,326	42,726
	predominantly publicly funded	450	351	132	321	90	6	336	207	222	894	93	66	390	42	285	2,793	1,302	4,092
	New apprenticeship contracts	1,194	906	825	636	165	345	957	606	900	1,218	546	240	1,170	327	540	6,795	4,311	11,106
	with female apprentices	19,938	26,442	3,948	2,571	1,266	2,460	10,170	1,800	17,070	30,012	8,115	2,196	4,548	2,787	6,450	2,361	124,122	18,015
Public service	with female apprentices	5,151	6,561	1,260	564	408	675	2,322	444	3,996	6,792	1,950	549	627	1,599	540	30,003	4,692	34,695
	with shortened duration	8,958	6,567	612	339	183	459	1,977	186	4,671	4,554	1,635	486	351	1,134	291	30,624	2,277	32,901
	in two-year occupations according to Section 42 m Crafts and Trades Regulation Code	219	471	96	150	42	42	270	90	444	843	213	33	171	222	147	2,802	819	3,618
	predominantly publicly funded	579	249	36	84	42	21	102	108	279	378	102	6	156	84	63	1,842	672	2,514
Public service	New apprenticeship contracts	708	1,119	486	183	126	252	744	153	684	1,794	492	180	471	276	138	6,315	1,608	7,926
	with female apprentices	1,887	1,401	732	390	117	198	1,032	237	1,287	2,622	549	84	315	441	264	9,615	2,499	12,114
	with shortened duration	1,386	948	489	249	84	138	696	141	738	1,638	333	51	363	273	171	6,288	1,602	7,890
	in two-year occupations according to Section 66 Vocational Training Act	441	81	6	9	12	21	81	0	21	51	3	3	6	3	27	714	48	765
Public service	predominantly publicly funded	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
	New apprenticeship contracts	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	0	0	0
	with female apprentices	0	0	0	0	0	0	3	0	18	3	3	0	0	0	0	24	0	24
	with shortened duration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0

Table 3: Newly-concluded apprenticeship contracts in 2013 according to structural features (part 1 – continuation)

Agriculture	New apprenticeship contracts	1,512	2,076	240	492	84	123	741	348	2,022	2,259	717	159	726	438	840	381	10,530	2,628	13,158	
	with female apprentices	375	486	48	153	21	27	177	57	453	408	159	48	222	105	222	105	2,376	690	3,066	
	with shortened duration	504	1,074	24	33	18	24	171	75	876	363	201	33	120	54	216	51	3,480	354	3,834	
	in two-year occupations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
	according to Section 66 Vocational Training Act	156	174	36	108	1	1	51	9	159	183	66	42	129	69	78	36	912	390	1,302	
Independent professions	predominantly publicly funded	39	96	60	108	6	15	81	0	150	120	72	51	120	90	45	39	678	414	1,092	
	New apprenticeship contracts	5,445	7,653	1,806	537	462	1,140	3,024	468	4,725	10,593	2,214	507	939	405	1,707	426	37,467	4,581	42,051	
	with female apprentices	5,208	7,290	1,650	477	432	1,053	2,844	420	4,377	9,864	2,094	474	846	357	1,563	387	35,202	4,137	39,336	
	with shortened duration	426	876	291	33	24	162	216	12	336	672	117	57	9	12	123	12	3,009	369	3,378	
	in two-year occupations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Home economics	according to Section 66 Vocational Training Act	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
	predominantly publicly funded	12	18	0	0	0	3	33	6	39	6	3	3	3	0	0	0	117	6	123	
	New apprenticeship contracts	408	330	69	78	54	45	36	93	372	390	210	66	105	102	63	132	1,977	582	2,559	
	with female apprentices	393	306	57	66	48	39	36	81	336	360	195	60	99	84	54	117	1,830	504	2,331	
	with shortened duration	30	96	3	3	0	6	3	15	96	18	18	9	6	6	3	9	279	42	321	
Maritime shipping	in two-year occupations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
	according to Section 66 Vocational Training Act	216	213	69	78	36	27	27	66	189	156	99	30	87	99	63	96	1,053	492	1,545	
	predominantly publicly funded	225	129	63	78	36	33	15	39	183	114	129	45	96	99	0	126	909	501	1,410	
	New apprenticeship contracts	-	-	-	-	12	69	-	6	51	-	-	-	-	-	15	-	150	6	156	
	with female apprentices	-	-	-	-	0	3	-	0	3	-	-	-	-	-	0	-	9	0	9	
with shortened duration	-	-	-	-	0	0	-	0	0	-	-	-	-	-	0	-	0	0	0	0	
in two-year occupations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	
according to Section 66 Vocational Training Act	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	
predominantly publicly funded	-	-	-	-	0	0	0	0	0	0	-	-	-	-	-	-	-	0	0	0	

Source: German Federal Institute for Vocational Education and Training, survey for 30 September 2013 – Absolute values rounded off to a multiple of 3 for reasons of data protection; as a result, the total value may differ from the individual totals.

Table 4: New concluded training contracts in 2013 according to structural features in % (part 1)

	Baden-Württemberg	Bavaria	Berlin	Brandenburg	Bremen	Hamburg	Hesse	Mecklenburg-Vorpommern	Lower Saxony	North Rhine-Westphalia	Rhineland-Palatinate	Saarland	Saxony	Saxony-Anhalt	Schleswig-Holstein	Thuringia	Old federal states	Eastern Germany and Berlin	Germany	
All areas	New apprenticeship contracts	74,391	92,028	16,785	10,551	5,955	13,530	39,660	7,968	56,382	120,084	27,102	7,407	17,889	10,830	19,932	10,221	456,471	74,244	530,715
	with female apprentices	40.8%	41.4%	45.9%	37.0%	44.1%	44.6%	40.4%	39.6%	39.8%	40.0%	39.3%	40.8%	38.3%	36.6%	40.9%	36.7%	40.6%	39.5%	40.5%
	with shortened duration	22.7%	17.3%	18.0%	10.9%	10.4%	11.8%	12.8%	11.1%	18.1%	14.9%	16.3%	21.2%	8.2%	9.8%	12.6%	9.2%	16.8%	11.5%	16.0%
	in two-year occupations according to Section 66 Vocational Training Act/ Section 42 m Crafts and Trades Regulation code	7.3%	7.3%	7.4%	10.2%	7.5%	9.4%	8.2%	12.9%	8.2%	9.5%	9.5%	8.0%	10.5%	13.7%	9.7%	14.0%	8.4%	11.0%	8.7%
predominantly publicly funded	1.9%	1.1%	1.6%	5.6%	2.9%	0.4%	1.3%	4.9%	1.5%	1.3%	1.3%	1.9%	4.3%	4.0%	2.6%	4.0%	1.4%	3.8%	1.8%	
	2.9%	2.5%	8.5%	9.5%	5.6%	4.8%	4.6%	10.1%	3.5%	2.7%	4.6%	6.2%	8.8%	11.0%	3.3%	8.2%	3.3%	9.2%	4.1%	
Industry and commerce	New apprenticeship contracts	45,198	54,129	9,990	6,480	3,960	9,495	24,654	5,010	30,855	74,208	15,297	4,395	11,013	6,786	10,416	6,654	272,610	45,930	318,540
	with female apprentices	39.5%	41.6%	42.0%	36.9%	41.2%	43.2%	40.3%	40.2%	40.7%	39.0%	38.7%	41.9%	36.9%	38.4%	42.7%	36.5%	40.3%	38.5%	40.0%
	with shortened duration	14.4%	13.3%	20.9%	11.3%	9.7%	9.7%	10.7%	12.0%	13.6%	16.4%	15.9%	22.3%	7.5%	9.4%	10.0%	8.3%	14.1%	11.8%	13.8%
	in two-year occupations according to Section 66 Vocational Training Act	11.5%	11.6%	11.5%	14.4%	10.2%	13.0%	12.1%	18.7%	13.5%	14.2%	15.3%	12.7%	15.5%	19.4%	16.4%	19.3%	13.0%	15.9%	13.4%
predominantly publicly funded	1.0%	0.6%	1.3%	5.0%	2.3%	0.1%	1.4%	4.1%	0.7%	1.2%	0.6%	1.5%	3.5%	0.6%	2.7%	3.2%	1.0%	2.8%	1.3%	
	2.6%	1.7%	8.3%	9.8%	4.2%	3.6%	3.9%	12.1%	2.9%	1.6%	3.6%	5.5%	10.6%	7.9%	3.1%	8.1%	2.5%	9.4%	3.5%	
Skilled trades	New apprenticeship contracts	19,938	26,442	3,948	2,571	1,266	2,460	10,170	1,800	17,070	30,012	8,115	2,196	4,548	2,787	6,450	2,361	124,122	18,015	142,137
	with female apprentices	25.8%	24.8%	31.9%	21.9%	32.2%	27.4%	22.8%	24.7%	23.4%	22.6%	24.0%	25.0%	27.7%	22.5%	24.8%	22.9%	24.2%	26.0%	24.4%
	with shortened duration	44.9%	24.8%	15.5%	13.2%	14.5%	18.7%	19.4%	10.4%	27.4%	15.2%	20.2%	22.1%	10.9%	12.6%	17.6%	12.4%	24.7%	12.6%	23.1%
	in two-year occupations according to Section 42 m Crafts and Trades Regulation code	1.1%	1.8%	2.4%	5.8%	3.4%	1.7%	2.7%	5.0%	2.6%	2.8%	2.6%	1.5%	3.8%	5.9%	3.4%	6.3%	2.3%	4.5%	2.5%
predominantly publicly funded	2.9%	0.9%	0.9%	3.2%	3.4%	0.9%	1.0%	6.0%	1.6%	1.3%	1.2%	0.2%	3.5%	8.1%	1.3%	2.6%	1.5%	3.7%	1.8%	
	3.6%	4.2%	12.3%	7.1%	10.0%	10.2%	7.3%	8.4%	4.0%	6.0%	6.1%	5.4%	4.0%	16.9%	4.3%	5.8%	5.1%	8.9%	5.6%	
Public service	New apprenticeship contracts	1,887	1,401	732	390	117	198	1,032	237	1,287	2,622	549	84	561	315	441	264	9,615	2,499	12,114
	with female apprentices	73.5%	67.9%	66.9%	63.4%	71.6%	70.1%	67.3%	59.2%	57.4%	62.5%	60.8%	62.7%	65.0%	60.3%	61.9%	64.5%	65.4%	64.1%	65.1%
	with shortened duration	23.4%	5.9%	0.8%	2.6%	9.5%	11.2%	7.8%	0.0%	1.6%	1.9%	0.7%	2.4%	0.4%	1.6%	0.5%	9.8%	7.4%	2.0%	6.3%
	in two-year occupations according to Section 66 Vocational Training Act	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%	0.0%	0.0%
predominantly publicly funded	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	1.4%	0.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.2%	

Table 4: New concluded training contracts in 2013 according to structural features in % (part 1 – continuation)

	Baden-Württemberg	Bavaria	Berlin	Brandenburg	Bremen	Hamburg	Hesse	Mecklenburg-Vorpommern	Lower Saxony	North Rhine-Westphalia	Rhineland-Palatinate	Saarland	Saxony	Saxony-Anhalt	Schleswig-Holstein	Thuringia	Old federal states	Eastern Germany and Berlin	Germany
Agriculture	New apprenticeship contracts	1,512	2,076	240	492	84	123	741	348	2,022	717	159	726	438	840	381	10,530	2,628	13,158
	with female apprentices	24.8%	23.4%	20.0%	31.2%	26.5%	22.0%	23.9%	16.3%	22.5%	22.2%	29.4%	30.4%	24.0%	26.4%	27.7%	22.6%	26.3%	23.3%
	with shortened duration	33.3%	51.8%	9.6%	6.5%	20.5%	20.3%	23.2%	21.2%	43.3%	27.9%	20.6%	16.7%	12.1%	25.8%	13.6%	33.0%	13.5%	29.1%
	in two-year occupations according to Section 66 Vocational Training Act	-	8.4%	15.0%	22.1%	-	-	6.7%	2.6%	7.9%	9.4%	25.6%	17.9%	15.8%	9.4%	9.7%	8.7%	14.8%	9.9%
predominantly publicly funded	2.6%	4.6%	24.6%	21.7%	7.2%	12.2%	10.8%	0.3%	7.5%	5.3%	10.2%	16.5%	20.3%	5.5%	9.9%	6.4%	15.8%	8.3%	
Independent professions	New apprenticeship contracts	5,445	7,653	1,806	537	462	1,140	3,024	468	4,725	2,214	507	939	405	1,707	426	37,467	4,581	42,051
	with female apprentices	95.7%	95.3%	91.3%	88.8%	93.7%	92.3%	94.1%	89.3%	92.7%	94.6%	93.5%	90.3%	88.1%	91.7%	90.9%	93.9%	90.3%	93.5%
	with shortened duration	7.8%	11.4%	16.1%	6.0%	5.0%	14.2%	7.2%	2.6%	7.1%	5.3%	11.0%	1.1%	3.0%	7.2%	2.8%	8.0%	8.1%	8.0%
	in two-year occupations according to Section 66 Vocational Training Act	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%	0.0%	0.0%
predominantly publicly funded	0.2%	0.2%	0.0%	0.0%	0.0%	0.4%	1.1%	1.1%	0.8%	0.0%	0.2%	0.4%	0.0%	0.0%	0.0%	0.3%	0.1%	0.3%	
Home economics	New apprenticeship contracts	408	330	69	78	54	45	36	93	372	210	66	105	102	63	132	1,977	582	2,559
	with female apprentices	95.8%	92.7%	85.3%	82.3%	89.1%	88.9%	97.3%	85.1%	90.3%	92.3%	92.3%	94.3%	83.3%	85.9%	87.2%	92.5%	86.6%	91.2%
	with shortened duration	7.3%	29.5%	5.9%	2.5%	1.8%	13.3%	5.4%	16.0%	25.5%	4.6%	13.8%	5.7%	4.9%	6.3%	6.8%	14.2%	7.1%	12.5%
	in two-year occupations according to Section 66 Vocational Training Act	-	64.4%	100.0%	100.0%	-	-	73.0%	69.1%	-	39.7%	46.9%	82.9%	96.1%	100.0%	71.4%	53.3%	84.7%	60.4%
predominantly publicly funded	55.0%	38.9%	92.6%	100.0%	67.3%	71.1%	37.8%	40.4%	49.2%	29.2%	61.6%	92.4%	97.1%	1.6%	94.0%	46.0%	86.2%	55.2%	
Maritime shipping	New apprenticeship contracts	-	-	-	-	12	69	-	6	51	-	-	-	-	15	-	150	6	156
	with female apprentices	-	-	-	-	0.0%	4.3%	-	14.3%	7.7%	-	-	-	-	6.7%	-	5.3%	14.3%	5.7%
	with shortened duration	-	-	-	-	0.0%	0.0%	-	0.0%	1.9%	-	-	-	-	0.0%	-	0.7%	0.0%	0.6%
	in two-year occupations according to Section 66 Vocational Training Act	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%	0.0%	0.0%
predominantly publicly funded	-	-	-	-	0.0%	0.0%	-	0.0%	0.0%	-	-	-	-	0.0%	-	0.0%	0.0%	0.0%	

Source: German Federal Institute for Vocational Education and Training, survey for 30 September 2013 – Absolute values rounded off to a multiple of 3 for reasons of data protection; as a result, the total value may differ from the individual totals. Source: German Federal Institute for Vocational Education and Training, survey for 30 September 2013 – Absolute values rounded off to a multiple of 3 for reasons of data protection; as a result, the total value may differ from the individual totals.

Regional distribution of VET

The vocational education and training prospects of young people and the opportunities to fill apprenticeship placements offered by companies may vary considerably according to region. Table 5 shows these regional differences with the help of selected indicators regarding the situation on the vocational training market in the employment agency districts. Unlike in previous editions of the BIBB data report, this year's regional analysis must be limited to a description of the situation on the vocational training market in the current year under review and forego the usual comparison with the previous year. The reason for this is the German Federal Employment Agency's new regional structure, which came into force on 1 January 2013 and means that the current regional data can no longer be compared fully with that of previous

years under review. In the reporting year 2013, an average of 88.3 company-apprenticeship offers were allotted to 100 people seeking placements across Germany, according to the extended definition.

In total, the number of apprenticeship placements offered in Germany was 3.5 % lower than in the previous year, at approximately 564,200 apprenticeship placements. The apprenticeship placements offered by companies decreased by 2.9 % and represented 96.2 % of the overall apprentice placement offers in the year under review. The number of predominantly publicly-funded apprenticeship placements decreased by 16.3 % to 21,678, which corresponds to a proportion of 3.8 % of training courses on offer. Despite the fall in apprenticeship placements on offer, the number of unfilled apprenticeship placements increased across Germany by 0.8 %, to 33,534. Of all

Table 5: Selected indicators for regional VET market (2013)

Indicators on the regional situation and their development		Vocational training market situation 2013			
		Above average	Average	Below average	Overall
Vocational training market					
New apprenticeship contracts		79,929	394,080	56,706	530,715
	Change in relation to 2012 (in %)	-	-	-	-3.7
Company supply/demand ratio according to extended definition ¹		101.3	87.7	77.3	88.3
	Change in relation to 2012	-	-	-	-0.7
Supply/demand ratio according to old definition		110.3	101.6	96.2	102.3
	Change in relation to 2012	-	-	-	-0.8
Training provision					
Overall provision		89,295	415,701	59,181	564,249
	Change in relation to 2012 (in %)	-	-	-	-3.5
Apprenticeship positions offered by companies		86,958	399,213	56,328	542,568
	Change in relation to 2012 (in %)	-	-	-	-2.9
	Share of overall provision (in %)	97.4	96.0	95.2	96.2
Apprenticeship positions funded predominantly by public means		2,337	16,488	2,853	21,678
	Change in relation to 2012 (in %)	-	-	-	-16.3
	Share of overall provision (in %)	2.6	4.0	4.8	3.8
Unoccupied apprenticeship positions		9,366	21,621	2,475	33,534
	Change in relation to 2012 (in %)	-	-	-	0.8
Unoccupied apprenticeship positions per 100 apprenticeship positions offered by companies		10.8	5.4	4.4	6.2
	Change in relation to 2012				0.2
Unoccupied apprenticeship positions per 100 applicants without a position according to extended definition		157.4	35.4	15.3	40.1
	Change in relation to 2012	-	-	-	-53.4
Apprenticeship demand					
Overall demand according to extended definition		85,881	455,196	72,906	614,277
	Change in relation to 2012 (in %)	-	-	-	-2.1
Overall demand according to old definition		80,967	409,068	61,500	551,748
	Change in relation to 2012 (in %)	-	-	-	-2.7
Applicants without a position according to extended definition		5,952	61,116	16,200	83,565
	Change in relation to 2012 (in %)	-	-	-	34.5
Applicants without a position according to extended definition per 100 seekers according to extended definition		6.9	13.4	22.2	13.6

¹ Overall number of in-company apprenticeship contracts plus unoccupied apprenticeship positions per 100 seekers according to extended definition

Source: BIBB; Federal Employment Agency

apprenticeship placements offered by companies, 6.2% ultimately remained unfilled, while there were considerable differences on a regional level.

Training occupations

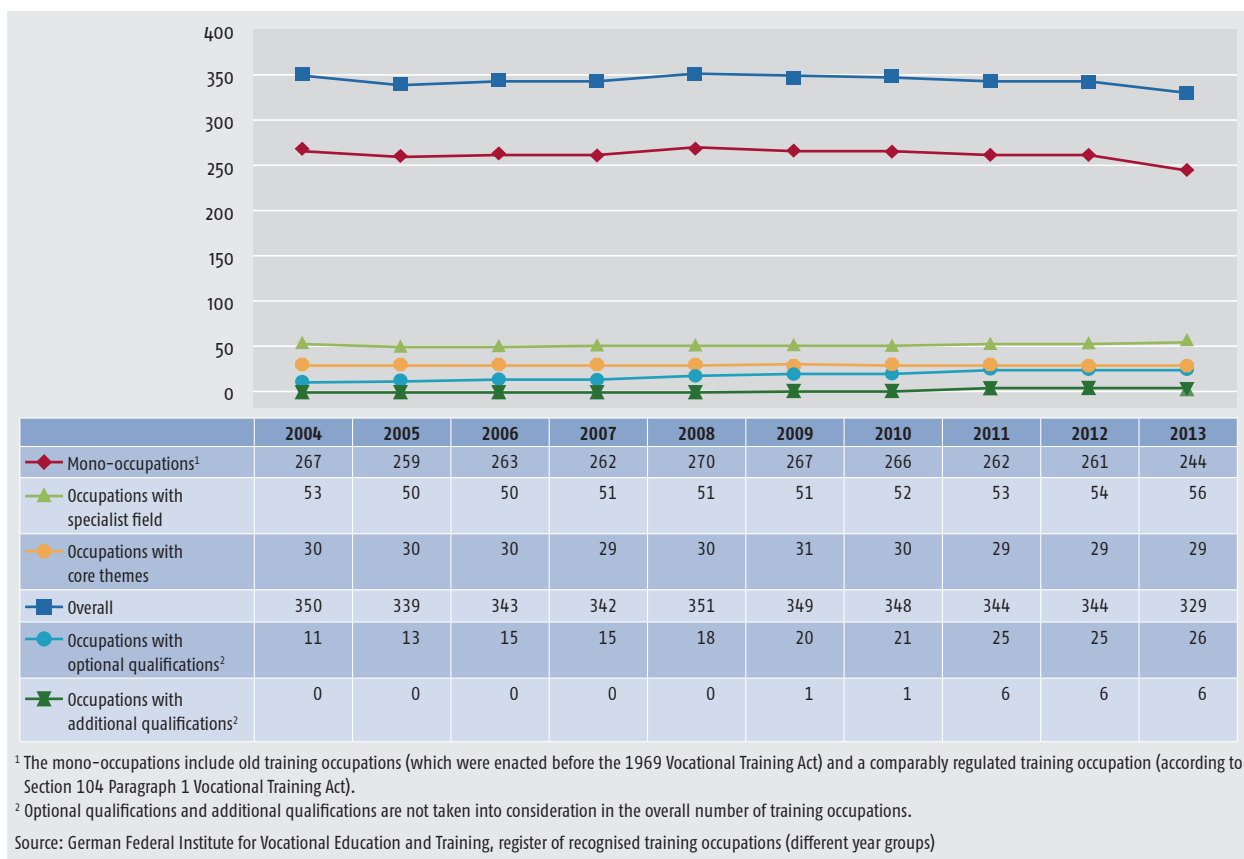
Structure and number of training occupations pursuant to BBiG/HwO

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-recognised¹.

The number of recognised training occupations according to BBiG and HwO reduced in 2013 (see Figure 2). In principle, this can be attributed to the ordinance on vocational training regarding “qualified metal engineering”, with which 11 “old professions”, therefore professions which were valid before the Vocational Training Act came into force, were superseded.

The number of training occupations which may be counted against other vocational education and training courses increased considerably from 2004 to 2013. During the same period, the number of training occupations which could be counted against other training occupations increased from 31 (2004) to 65 (2013).

Figure 2: Structure of recognised training occupations (2004 to 2013)



¹ 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 in 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.

As a general rule, the duration of training should be no more than 3 and no less than 2 years (§ 5, paragraph 1, sentence 2 BBiG). Deviations from this rule are possible; there are also regulations for training occupations with a training duration of 3.5 years, for example.

From 2004 to 2013, the number of training occupations with a training duration of 42 months fell from 58 to 52. The number of training occupations with a training duration of 36 months (254 in 2004 and 249 in 2013) remained relatively constant. With 39 the number of training occupations with a training duration of 24 months decreased from 36 in 2004 to 28 in 2012. Furthermore, the two training occupations with an 18-month training duration which had previously remained in force are no longer to be applied due to a new training regulation being issued.

New and modernised recognised training occupations

The reorganisation of training occupations means that the modernisation of the dual system of vocational education has intensified since 1996. In 1999, the social partners agreed to continue with this modernisation offensive. 82 training occupations have been created since 1996. In 2012, 65,451 apprenticeship contracts were newly concluded in these professions. In the past 10 years, the goal of creating two-year (“reduced-theory”) training occupations especially for young people with poor starting opportunities has been increasingly pursued.

From 2004 to 2013, a total of 179 training occupations were reorganised. These included 149 modernised and 29 new training occupations. In 2013, 12 modernised and two new training occupations were implemented (Table 6). A reorganisation procedure (for the modernisation of an existing training occupation or for a new training occupation) currently takes an average of 10 months.

Developments in vocational structure in the dual system of vocational education

As in the employment market, the significance of the service occupations is increasing in the dual system of vocational education. The proportion of service occupations is slightly lower in the dual system of vocational education, however. This is because the intermediate qualification level vocational training in the area of service occupations frequently does not take place in accordance with the Vocational Training Act/Crafts and Trades Regulation Code, but within “full-time, school-based” programmes at vocational schools, above all at healthcare schools. In the reporting year 2012, approximately 325,878 new contracts in the dual system were concluded for service occupations. The decline compared with the previous year (-2.7 %) therefore corresponded to the overall development in the dual system (-3.0 %). The number of new apprenticeship contracts in the production occupations has declined over the long term (table 7).

In the reporting year 2012, 144,861 newly-concluded contracts were reported in the technical occupations, meaning that the figure declined by 0.6 % in comparison with the previous year. The share of technical professions as a percentage of new contracts has moved between 24 % and 26 % since the late 1990s. A peak of 26.4 % was reached in 2012. The male/female ratio remained unchanged in the technical training occupations. The proportion of women in technical occupations has fluctuated between 10 % and 12 % since 1993.

Table 6: New and modernised training occupations (2013)

New or modernised	Designation	Duration of training	Training area	Structural features				Crediting		Mode of examination*
				Mono-occupation	with core themes	with specialist fields	with optional qualifications	Training occupation may be credited	Training occupation to which credit is transferred	
New	Trained assistant for metal technology	24	Industry and commerce	No	No	Yes	No	Yes	No	Traditional
New	Stamping and forming mechanic	36	Industry and commerce	Yes	No	No	No	No	Yes	Extended final examination and extended journeyman's examination
Modernised	Production mechanic	36	Industry and commerce	Yes	No	No	No	No	Yes	Extended final examination and extended journeyman's examination
Modernised	Aircraft electronics technician	42	Industry and commerce	Yes	No	No	No	No	No	Extended final examination and extended journeyman's examination
Modernised	Aircraft mechanic	42	Industry and commerce	No	No	Yes	No	No	No	Extended final examination and extended journeyman's examination
Modernised	Plumber	42	Skilled trade	Yes	No	No	No	No	No	Extended final examination and extended journeyman's examination
Modernised	Automotive mechatronics fitter	42	Skilled trade, industry and commerce	No	Yes	No	No	No	No	Extended final examination and extended journeyman's examination
Modernised	Media designer digital and print	36	Skilled trade, industry and commerce	No	No	Yes	Yes	No	No	Traditional
Modernised	Dairy laboratory assistant	36	Agriculture	Yes	No	No	No	No	No	Traditional
Modernised	Orthopaedic technology mechanic	36	Skilled trade	No	Yes	No	No	No	No	Extended final examination and extended journeyman's examination
Modernised	Plant technologist	36	Agriculture	Yes	No	No	No	No	No	Traditional
Modernised	Ship mechanic	36	Maritime traffic	Yes	No	No	No	No	No	Extended final examination and extended journeyman's examination
Modernised	Wine technologist	36	Skilled trade, industry and commerce	Yes	No	No	No	No	No	Traditional
Modernised	Materials tester	42	Industry and commerce	No	No	Yes	No	No	No	Extended final examination and extended journeyman's examination

* Mode of examination: Traditional = Mid-term examination and final or journeyman's examination

** Comparable in-company training outside of the Vocational Training Act's field of application (Section 3 Paragraph 2 No. 3).

Source: Ordinance on vocational training to become a trained assistant for metal technology of 02/04/2013 (Federal Law Gazette I dated 08/04/2013, p. 628)

Ordinance on vocational training to become a stamping and forming mechanic of 02/04/2013 (Federal Law Gazette I dated 08/04/2013, p. 641)**

Ordinance on vocational training to become a production mechanic of 02/04/2013 (Federal Law Gazette I dated 08/04/2013, p. 648)

Ordinance on vocational training to become an aircraft electronics technician and on electronics occupations in industry of 28/06/2013 (Federal Law Gazette I dated 12/07/2013, p. 2201)

Ordinance on vocational training to become an aircraft mechanic of 26/06/2013 (Federal Law Gazette I dated 03/07/2013, p. 1890)

Ordinance on vocational training to become a plumber (KlempnerAusbV) [Ordinance on plumbing vocational training] of 21/06/2013 (Federal Law Gazette I dated 26/06/2013, p. 1614)

Ordinance on vocational training to become an automotive mechatronics fitter of 14/06/2013 (Federal Law Gazette I dated 20/06/2013, p. 1578)

Ordinance on vocational training to become a media designer digital and print of 26/04/2013 (Federal Law Gazette I dated 14/05/2013, p. 1173)

Ordinance on vocational training to become a dairy laboratory assistant (MilchAusbV) [Ordinance on orthopaedic technology mechanic vocational training] of 29/05/2013 (Federal Law Gazette I dated 06/06/2013, p. 1405)

Ordinance on vocational training to become an orthopaedic technology mechanic (OrthAusbV) [Ordinance on orthopaedic technology mechanic vocational training] of 15/05/2013 (Federal Law Gazette I dated 27/05/2013, p. 1358)

Ordinance on vocational training in maritime shipping (See-BAV) [Ordinance on maritime shipping vocational training] of 12/03/2013 (Federal Law Gazette I dated 18/03/2013, p. 482)

Ordinance on vocational training to become a wine technologist of 15/05/2013 (Federal Law Gazette I dated 27/05/2013, p. 1369)

Ordinance on vocational training to become a materials tester of 25/06/2013 (Federal Law Gazette I dated 28/06/2013, p. 1693)

Table 7: Newly-concluded apprenticeship contracts in the production and service occupations¹, Germany 1980² and 1993 to 2012³

Occupation group	Year																					
	1980	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
	Total, absolute																					
Production occupations	342,030	272,907	277,188	288,927	287,607	290,205	292,353	295,530	282,129	270,909	251,874	250,224	250,185	241,575	251,088	267,864	257,412	232,140	226,938	230,856	223,125	
Service occupations	328,827	298,299	290,247	289,656	291,768	307,905	319,464	340,029	340,839	338,667	316,209	314,271	321,792	317,487	330,093	356,313	350,154	329,028	332,094	334,965	325,878	
of which:																						
Primary Service occupations	240,369	197,214	191,586	193,443	199,194	213,795	221,529	237,516	232,065	228,699	215,274	218,604	229,176	228,258	239,124	257,487	249,198	234,780	236,847	235,293	225,267	
Secondary Service occupations	88,458	101,085	98,661	96,213	92,574	94,110	97,935	102,513	108,774	109,968	100,935	95,667	92,616	89,229	90,966	98,826	100,956	94,248	95,244	99,672	100,611	
Overall	670,857	571,206	567,438	578,583	579,375	598,110	611,820	635,559	622,968	609,576	568,083	564,492	571,977	559,062	581,181	624,177	607,566	561,171	559,032	565,824	549,003	
	Men, absolute																					
Production occupations	-	241,230	246,528	256,734	254,049	256,287	258,708	260,253	247,800	238,008	222,300	221,457	221,541	214,209	222,372	236,220	225,834	202,584	198,726	203,061	195,777	
Service occupations	-	84,402	82,977	82,458	83,631	91,281	96,831	102,693	106,338	108,663	101,796	106,521	112,968	112,719	120,039	130,122	127,269	119,652	126,756	133,272	130,473	
of which:																						
Primary Service occupations	-	56,109	54,885	56,022	57,891	63,417	65,958	69,438	69,372	70,221	68,433	73,866	79,860	80,583	86,742	93,486	89,478	85,230	90,966	94,134	91,101	
Secondary Service occupations	-	28,293	28,092	26,439	25,740	27,864	30,873	33,255	36,966	38,442	33,366	32,655	33,105	32,136	33,297	36,633	37,791	34,419	35,787	39,138	39,372	
Overall	-	325,629	329,508	339,192	337,680	347,568	355,539	362,946	354,135	346,671	324,099	327,978	334,506	326,928	342,411	366,342	353,103	322,236	325,482	336,333	326,253	
	Women, absolute																					
Production occupations	-	31,677	30,660	32,193	33,555	33,918	33,645	35,277	34,329	32,901	29,571	28,767	28,644	27,363	28,716	31,644	31,578	29,556	28,212	27,795	27,348	
Service occupations	-	213,897	207,270	207,198	208,137	216,624	222,636	237,336	234,501	230,004	214,413	207,750	208,827	204,768	210,034	226,191	222,885	209,379	205,338	201,693	195,405	
of which:																						
Primary Service occupations	-	141,105	136,701	137,424	141,303	150,378	155,571	168,075	162,693	158,478	146,841	144,738	149,316	147,675	152,385	164,001	159,720	149,550	145,881	141,159	134,166	
Secondary Service occupations	-	72,792	70,569	69,774	66,834	66,246	67,065	69,258	71,808	71,526	67,569	63,012	59,511	57,093	57,669	62,190	63,165	59,829	59,457	60,534	61,239	
Overall	-	245,577	237,930	239,388	241,695	250,542	256,281	272,613	268,830	262,905	243,984	236,514	237,471	232,134	238,770	257,835	254,463	238,935	233,550	229,488	222,753	

¹ Occupation groups distinguished by the BIBB according to main scope of activity; based on Kupka/Bienack (MB), modified according to Hall 2007; see http://www.bibb.de/dokumente/pdf/a21_ausweistat_berufeliste-p-dl_2009.pdf.

² 1980 West Germany and West Berlin; new apprenticeship contracts in 1980 not reported separately according to sex.

³ For a complete chronology from 1993 cf. 2010 BIBB data report, chapter A5.4.

Source: BIBB "Apprentice Database" on the basis of vocational training statistics from the German Federal Statistical Office and the state statistical offices (survey for 31 December). Absolute values each rounded off to a multiple of 3 for reasons of data protection; the total, rounded off figure may differ from the individual totals due to each cell being rounded off.

The apprentices

The vocational training statistics from the German Federal Statistical Office and the state statistical offices (survey for 31 December) gathers apprentice, contract and examination data in the dual system. The German Federal Employment Agency/Federal Institute for Vocational Education and Training applicant survey (BA/BIBB applicant survey) is jointly conducted by the German Federal Employment Agency and the Federal Institute for Vocational Education and Training at 2-year intervals, currently.

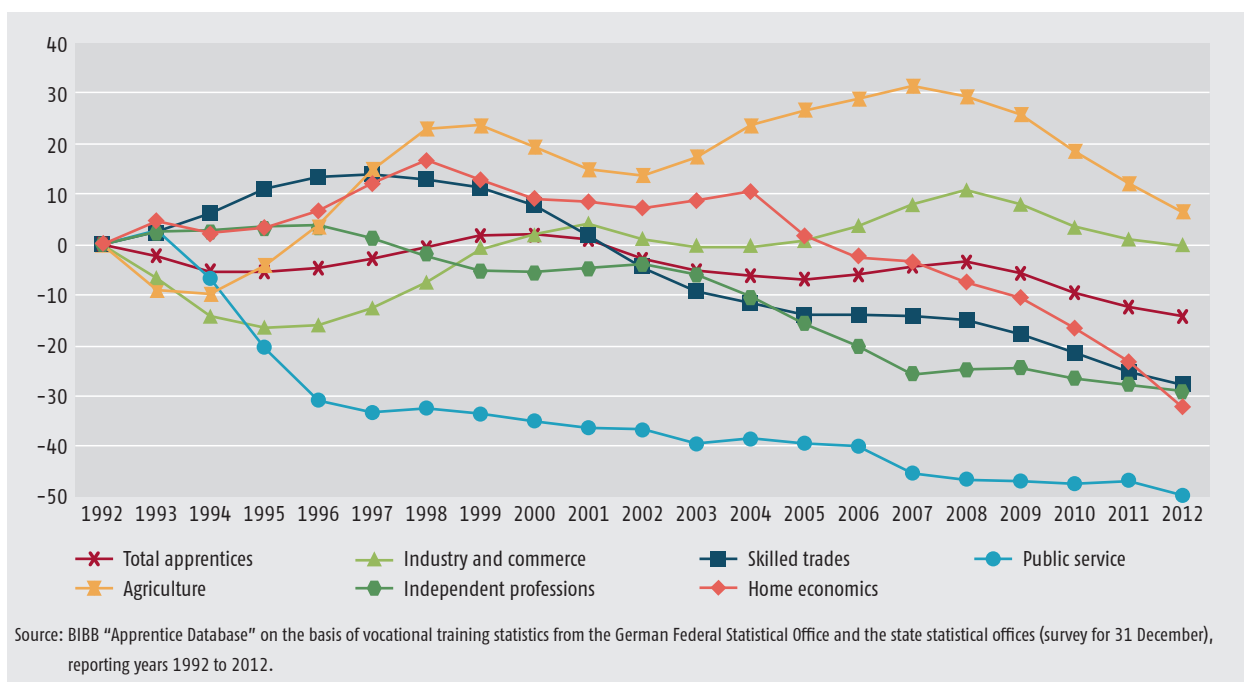
Stock and flow of apprentices

On 31 December 2012, 1,429,977 people across Germany were registered as apprentices in the dual VET system according to the Vocational Training Act or Crafts and Trades Regulation Code. The stock figures vary over time (Figure 3). Overall, they show a downward trend after peak values in 2000 (1,702,017). In 2012, the number of apprentices decreased by 30,681 (-2.1 %) in comparison with 2011. 85.5 % of the apprentices originated from the western states (1,222,032) and 14.5 % (207,945) from the eastern states.

Since the 1990s, the number of apprentices has been increasingly supply-induced; as a result, upturns and crises in the economic system and employment market determined the development in the dual system. In the past few years, the demographic change has become increasingly dynamic, meaning that the decline in the apprentice stock can be attributed to the strong demographic slump in the resident youth population as well as the economic and financial crisis. This applies to eastern Germany in particular.

Downward trends can be observed in all spheres of competence in the past few years. The apprentice stocks in the individual spheres of competence have shown varying developments over time. The largest sphere of competence of industry and commerce registered 841,062 apprentices across Germany on 31 December 2012. The figure declined by a total of 9,627 people (-1.1 %) in comparison with the previous year, while the stock in west Germany increased by 1,500 people (+0.2 %) and fell in the east by 11,124 (-8.1 %). There has been an overall positive stock development in the past 20 years. After an all-time low of 702,867 apprentices in the reporting year 1995 as a result of developments in the metal working

Figure 3: Development of the number of apprentices on 31 December from 1992 to 2012 according to spheres of competence (Basis = 1992) (in %)



and electronic industries, above all in western Germany, the number of apprentices increased again. It has been at the same level as 1992 or higher since the turn of the millennium. A peak of 934,221 apprentices was reached in 2008. In 2012, the apprentice stock in the skilled trades decreased by 14,076 people (-3.4%) to 400,131 people. After a short-term increase until the mid-1990s while economic structures were being set up for skilled trades in eastern Germany, the number of apprentices has fallen since 1998. The downward trend can be observed in the eastern and western states. In comparison with the previous year, there was a -9.1% (-5,238) decline in eastern Germany in 2012; it was less marked in western Germany at -2.5% (-8,835). On 31 December 2012, there were 35,967 apprenticeship contracts in the dual vocational training professions in the public service sphere of competence. Overall, the apprentice stock in the public service training occupations has decreased almost continuously since the beginning of the 1990s. In 1992, the area still comprised 71,355 apprentices; in 2012 the figure was only approximately half of this. The downward trend after 1994 can be traced back to privatisations in the postal and rail sectors and the transfer of the corresponding training occupations into the sphere of competence of industry and commerce.

On 31 December 2012, there were 109,854 people in the dual system of vocational education in the independent professions. 34,764 apprentices were registered in the agricultural occupations in the reporting year 2012. This was 5.1% less (1,860 contracts) than in 2011. Home economics is a small sphere of competence to which comparatively few training occupations are assigned. Accordingly, the number of apprentices is relatively low at 8,196 (2012). After an increase in the mid-1990s, the stock has fallen here since the end of the 1990s.

Gender distribution

On 31 December 2012, there were 557,121 women among the apprentices in the dual system; this corresponds to a share of 39.0% of all apprentices (Table 8). Overall, there is a clear segregation of the sexes in the dual system training occupations.

The structural differences between men and women regarding occupation are almost unchanged since the mid-1980s. Most of the training occupations are either

dominated by women or men; accordingly, the percentages of women vary significantly.

Apprentices with migration background

In vocational training statistics, the nationality of the apprentices is recorded; however, it is not possible to account for any possible migration background. After the percentage of apprentices without German nationality had continuously declined from the mid-1990s (1992: 7.2%, 2006: 4.2%), the number of foreigners in the dual system increased again in 2007. In 2012, 78,726 people without German nationality were counted; the percentage of foreigners among the apprentices in the dual system was therefore 5.5% (previous year: 5.3%). The increase may be observed in all spheres of competence. With a figure of 10%, foreigners were most frequently represented in the independent professions (for example pharmaceutical-commercial employees, qualified dental assistants). The higher percentage of foreigners, identifiable since 2007, also continued in 2012 in the larger spheres of competence of skilled trades and industry and commerce. In the skilled trades, 6.3% of the apprentices did not have German nationality (2011: 6.1%); in industry and commerce, these young people made up 4.9% of the apprentices (2011: 4.7%).

According to the 2012 BA/BIBB applicant survey², a quarter (25%) of the apprenticeship applicants in the 2012 placement year had a migration background. Over a third (36%) of them originated from eastern European and CIS states. It may be assumed that they, or their families, largely came to Germany as ethnic German resettlers, particularly with the opening of the Eastern Bloc from the end of the 1980s. A third (33%) of the applicants with a migrant background originated from Turkey or the Arab states. In total, 62% of the apprenticeship applicants who came from families with a migrant background were born in Germany. There was not only a strong difference between the general certificates of secondary education achieved by applicants with and without a migration background; there were also differences among the individual migrant groups. Overall, in comparison with young people without a migrant background, migrants were far more likely to hold a secondary school or special

² German Federal Employment Agency/Federal Institute for Vocational Education and Training applicant survey

Table 8: Percentage of females in total apprentice number according to spheres of competence; Germany 1992 to 2012 (in %)

Year	Total apprentices	Industry and commerce	Skilled trades	Public service	Agriculture	Independent professions	Home economics	Maritime shipping ²
1992	40.8	41.8	22.1	50.7	35.7	95.0	97.0	1.9
1993	40.4	41.8	20.8	52.0	34.3	95.1	96.7	2.5
1994	40.0	42.7	19.6	54.1	33.1	94.8	96.3	3.7
1995	39.8	43.2	19.2	56.7	32.7	94.9	95.7	3.9
1996	39.8	43.5	19.3	59.2	31.7	95.0	95.4	5.5
1997	39.9	43.5	19.8	62.3	30.7	95.3	95.0	7.0
1998	40.0	43.1	20.6	62.9	29.7	95.3	94.9	6.2
1999	40.5	43.4	21.3	63.0	28.5	95.5	94.6	4.1
2000	40.9	43.2	21.9	64.4	28.5	95.6	94.6	5.4
2001	41.0	42.4	22.4	64.6	27.2	95.6	94.1	6.5
2002	41.0	41.4	22.6	65.3	26.4	95.6	93.8	5.4
2003	40.6	40.5	22.7	64.9	25.2	95.5	93.0	4.5
2004	40.1	39.8	22.7	64.2	24.1	95.3	92.8	4.3
2005	39.7	39.5	22.9	63.4	23.2	95.1	92.5	4.2
2006	39.5	39.5	23.1	63.5	22.4	95.2	92.5	3.8
2007 ³	39.3	39.6	23.3	64.1	22.4	95.0	92.1	4.4
2008	39.6	39.8	23.7	64.3	23.0	95.0	92.2	-
2009	39.9	39.9	24.0	64.8	22.9	94.9	92.5	-
2010	39.8	39.6	23.8	65.3	22.7	94.7	92.5	-
2011	39.3	39.0	23.2	65.1	22.2	94.4	92.4	-
2012	39.0	38.6	22.7	65.2	21.9	94.0	91.8	-

¹ It is usually the body responsible for the training occupation which is charged with placing the apprentices into the spheres of competence and not the business providing the vocational education (cf. [1.3](#) in chapter A1.2). Apprentices who are trained in public service organisations or for trade and industry occupations in the independent professions, for example, are assigned to the industry and commerce or skilled trade spheres of competence.

² The maritime shipping sphere of competence stopped participating in vocational training statistics in 2008.

³ Since 2007, it has not been possible to compare data with previous years without restrictions due to far-reaching reporting changes.

Source: BIBB "Apprentice Database" on the basis of vocational training statistics from the German Federal Statistical Office and the state statistical offices (survey for 31 December), reporting years 1992 to 2012.

school leaving certificate or no leaving certificate (39 % vs. 30 %) and far less frequently held a general certificate of secondary education (45 % vs. 51 %) or university entrance qualification (13 % vs. 17 %).

Of the applicants registered in the 2012 placement year, a total of 40 % had successfully³ entered in-company vocational education and training in professions according to the Vocational Training Act or Crafts and Trades Reg-

ulation Code by the end of 2012 or beginning of 2013. It must be noted, however, that entry into vocational training contracts which have since been dissolved is not incorporated here as this was not recorded in the 2012 BA/BIBB applicant survey. The proportion of migrants who successfully began in-company vocational education and training was, at 29 %, considerably lower than for applicants with no migrant background, at 44 %. At the end of 2012 or beginning of 2013, 49 % of the applicants with no migration background had successfully begun company or external apprenticeships in the Vocational Training Act/Crafts and Trades Regulation Code professions; of those with a migration background, this was figure was only 35 % (table 9).

³ A successful transition into in-house commercial training was only counted if the applicants took up a corresponding apprenticeship in the placement year concerned or in the follow-up placement period and remained there until the survey was carried out.

Table 9: Position of applicants at the end of 2012 by migration background (in %)

Type of destination	no migration background	with migration background	of which: originating from:				Overall
			Eastern European states, CIS states	Southern European states	Turkey, Arab states	other states	
In-company apprenticeship (currently entered)	44	29	31	31	25	28	40
External apprenticeship (currently entered)	5	6	7	6	7	2	5
In original in-company/external apprenticeship	4	3	4	4	2	2	4
Training in an education occupation	6	6	8	5	4	8	6
Studying at a university (of applied sciences), university of cooperative education	2	2	3	1	2	3	2
School of general education	5	9	6	16	7	10	6
Partially qualifying vocational school/ Specialised vocationally-oriented upper secondary school	7	10	10	5	13	7	8
Year of vocational preparation or similar, year of basic vocational training	3	3	3	2	5	0	3
Vocational preparation measure provided by employment agency or job centre	3	6	8	1	7	8	4
Entry qualification	1	2	2	2	1	1	1
Internship	2	2	2	2	2	1	2
Federal voluntary service, voluntary social or ecological year	3	1	2	1	1	0	3
Gainful employment	2	4	3	5	3	6	2
Jobbing	4	5	4	6	5	5	4
Unemployment	7	11	7	10	13	15	8
Other, e.g. at home for personal reasons, residence abroad	2	2	2	1	2	5	2
Overall	100	100	100	100	100	100	100

Source: German Federal Employment Agency/Federal Institute for Vocational Education and Training applicant questionnaire, weighted results

The transition from schools of general education to vocational education continues to be especially difficult and protracted for young people with a migration background. The 2012 BA/BIBB survey shows that slightly more than a third of the applicants with a migration background registered with the German Federal Employment Agency entered the dual system of vocational education (35 %) – 29 % in in-company vocational education and training and 6 % in external apprenticeships. At the end of 2004, 27 % of the applicants with a migration background were in in-company vocational education and training; in 2012, the figure was 30 % (+3 percentage points). In contrast, the number of applicants

without a migration background who were in in-company vocational education and training at the end of the year increased by 8 percentage points, from 38 % (2004) to 46 % (2012). According to this, applicants with a migration background were significantly less capable of profiting from the improving situation on the vocational education and training market.

Thus, the percentage of foreign apprenticeship beginners in 2012 (29.4 %) was only half that of young Germans (58.9 %). The proportion therefore increased slightly compared with 2009, both for young foreigners (2009: 27.5 %) and for young Germans (2009: 56.4 %), while

the gap between the two groups barely changed. Further differences are seen in differentiation according to sex. In 2012, the percentage of female apprenticeship beginners with foreign nationality was 27.0 %; for young males with foreign nationality it was 31.7 %. The percentage of German female apprenticeship beginners was 48.6 % in 2012, so approximately 22 percentage points higher than that of foreign females. The percentage of German male apprenticeship beginners, at 68.7 %, was even 37 percentage points above that of young males with foreign nationality, approximately.

Age structure of apprentices and youth participation in dual VET system

In the vocational training statistics from the German Federal Statistical Office and the state statistical offices, the year of birth of the apprentices in the dual system is recorded. The average age of apprentices with new contracts has increased continuously in the past 20 years. Longer schooling periods in secondary education, increasingly high levels of school leaving certificates for the apprentices and extended transition processes in vocational education in previous years have all contributed to this. In the reporting year 2012, the average age was 20 and the lower age groups (16–17-year-olds) comprised only 11.1 % and 16.2 %. Nevertheless, the average age has

stagnated in the past 3 years. In the reporting year 2012, there were 478,845 apprenticeship beginners among the apprentices with a new contract. Their average age was, as in previous years, 19.8 years. The 17, 18 and 19-year-olds made up the largest age groups (together: 49.2 %). Only 12.6 % were younger than 17; 38.2 % were already 20 or older. The women, with an average age of 20.0 years, were slightly older than the men when beginning their apprenticeships (19.7 years). They more frequently enter the dual system with higher school leaving certificates, above all with a university entrance qualification, while the percentage of male beginners with a secondary school leaving certificate is comparatively high. The average age of foreign apprenticeship beginners continued to rise in the reporting year 2012. It was 20.5 years (2011 and 2010: 20.3 years).

Beginners and participation rates

For the reporting year 2012, a calculated share emerges of 55.7 % of the resident population who begin dual vocational education and training at some point during their lives. After the recent upward trends, the share of apprenticeship beginners has therefore fallen again for the first time by 2.1 % (2011: 56.9 %). A weakened economic cycle and the reduction of external placements caused vocational education and training provision to decrease in the reporting year 2012.

Table 10: Percentage of apprenticeship graduates¹ according to personal criteria and region², 2009 to 2012 (in %)

Year	Percentage of apprenticeship graduates								
	Overall	Germans of which:			Foreigners of which:			West	East
		Overall	Men	Women	Overall	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	46.5	50.4	57.4	43.0	17.9	18.7	17.0	47.5	42.1
2012	44.2	48.3	55.3	40.9	16.5	17.1	15.8	45.3	38.9

¹ Since the revision of the vocational training statistics and the changeover to individual data collection, it has been possible to differentiate age and previous vocational training among the apprentices who have passed their final examinations; during the reporting year 2009, the apprenticeship graduate percentage was introduced. The method for calculating the percentage of apprenticeship graduates was refined during 2011, however, so that the apprenticeship graduate percentages revealed in chapter A4.5 of the 2011 BIBB data report were recalculated.

² As the apprentices' residence is not recorded in vocational training statistics, commuter movement cannot be taken into consideration. This may distort the calculated percentages for individual regions as commuters, in the case of the apprenticeship graduates, are assigned to the location of the vocational training facility while they are recorded at their main place of residence in the case of the resident population.

Source: BIBB "Apprentice Database" on the basis of vocational training statistics from the German Federal Statistical Office and the state statistical offices (survey for 31 December), reporting years 2009 to 2012, and population projections from the German Federal Statistical Office, reporting years 2009 to 2012 (on the basis of the 1987 census (West) or 1990 (East); see [B](#)); BIBB calculations.

Participation in the vocational education and training in the dual system varies between the different groups of people. The percentage of the male resident population who begin vocational education and training in the dual system is 64.7 % (-2.3 %); the percentage of apprenticeship beginners in the female population was 46.2 % (-1.9 %). The number of beginners in 2012 fell by approximately 3.5 % among men and women.

It is not only entry into vocational training and education that is decisive here, but also the successful completion and acquisition of a vocational qualification. In the reporting year 2012, 445,443 apprentices in the dual system passed their final examination. Among these, 421,728 apprentices, or 94.7 %, completed their dual vocational training and education successfully for the first time.

Learning trajectories and career paths

Profiles of apprentices by previous education and training activities

In the reporting year 2012, 58,443 (10.6 %) of apprentices with a new contract were registered as having

previous vocational preparation qualifications or basic vocational training (Table 11). Compared with previous years, this share has continued to fall slightly.

The individual types of school leaving certificate are represented to varying degrees among the apprentices with new contracts. The largest group in the reporting year 2012, at 42.3 % (231,048), was made up of those with a general certificate of secondary education. Further statistics are presented in table 12.

The percentages of the different school leaving certificates vary significantly according to spheres of competence. With the exception of home economics, all areas have seen an increase in the percentage of people with a university entrance qualification. In 2012, apprentices with a general certificate of secondary education were largely to be found in industry and commerce, the largest sphere of competence (43.6 %). Due to the increase in previous years, the proportion of people with a university entrance qualification was 30 %. More than half of the skilled trades apprentices had a secondary school leaving certificate (50.4 %); 36.8 % had a general certificate of secondary education and only 9.1 % had a university en-

Table 11: Apprentices with new contracts and previous participation in vocational preparation qualifications or basic vocational training according to highest general certificate of secondary education, reporting year 2012

Highest general certificate of secondary education	Total new contracts	Previous participation in vocational preparation qualifications or basic vocational training											
		Overall		darunter:									
				In-company qualification measure		Vocational preparation measure		School-based vocational preparation year		School-based basic vocational training year		Vocational school with no fully qualifying vocational qualification	
		Abs.	in %	Abs.	in %	Abs.	in %	Abs.	in %	Abs.	in %	Abs.	in %
With no secondary education leaving certificate	15,516	3,945	25.4	360	2.3	2,097	13.5	1,065	6.9	159	1.0	510	3.3
Secondary education leaving certificate	168,126	27,156	16.2	4,725	2.8	6,828	4.1	5,349	3.2	4,656	2.8	7,080	4.2
General certificate of secondary education	231,048	19,983	8.6	3,759	1.6	2,334	1.0	1,188	0.5	2,313	1.0	11,070	4.8
University entrance qualification	130,968	6,780	5.2	1,578	1.2	270	0.2	96	0.1	258	0.2	4,662	3.6
Overall	549,003	58,443	10.6	10,440	1.9	11,565	2.1	7,779	1.4	7,440	1.4	23,724	4.3

Source: BIBB "Apprentice Database" on the basis of vocational training statistics from the German Federal Statistical Office and the state statistical offices (survey for 31 December), reporting year 2012; absolute values rounded off to a multiple of 3 for reasons of data protection; as a result, the total value may differ from the individual totals.

Table 12: **Apprentices with newly-concluded apprenticeship contract according to highest general certificate of secondary education and region 2012**

Region	Total new contracts	Highest general certificate of secondary education									
		With no secondary education leaving certificate		Secondary education leaving certificate		General certificate of secondary education		University entrance qualification		No information ¹	
		Absolute	in %	Absolute	in %	Absolute	in %	Absolute	in %	Absolute	in %
East	78,465	3,639	4.6	19,707	25.1	37,173	47.4	17,871	22.8	75	–
West	470,541	11,880	2.5	148,419	31.8	193,875	41.5	113,100	24.2	3,267	–
Germany	549,003	15,516	2.8	168,126	30.8	231,048	42.3	130,968	24.0	3,345	–

¹ No information includes qualifications attained abroad which cannot be assigned. As it may be assumed that missing information was also reported here, this is not included in the percentage calculation.

Source: BIBB "Apprentice Database" on the basis of vocational training statistics from the German Federal Statistical Office and the state statistical offices (survey for 31 December), reporting year 2012 Absolute values rounded off to a multiple of 3 for reasons of data protection; as a result, the total value may differ from the individual totals.

trance qualification. There is a clear trend in the increase of university entrance qualifications in public service occupations: This share increased from 41.7 % in 2009 to 49.2 % (2012).

Participation to final examinations and graduations

Between 2000 and 2006, the number of final examinations carried out moved between just under 560,000 and approximately 600,000. Considerably fewer examination cases have been counted since 2008 as, since the rearrangement of vocational training statistics in 2007, the external examinations and partly also retraining examinations are no longer included in the final examination participation figures. The year 2009 shows an increase of final examinations carried out by approximately 15,000 cases (+3.0 %) to 520,000 participations compared with the previous year. In 2010, the number of examinations has increased once again by approximately 15,000 cases (+3 %). This increase may be partly attributed to the altered recording of repeat examinations. For 2008 and 2009, only one (the final) repeat examination was counted for each year; since 2010, all repeat examinations (i.e. up to 2) have been recorded – as with the years leading up to 2006. The year 2011 saw only a very slight change to the number of final examinations carried out with a minus of approximately 4,000 cases (-0.8 %) compared with the previous year. In 2012, a renewed decline in the number of final examinations carried out may be observed, while the clear minus compared with the

previous year of approximately 36,000 examination cases (-6.8 %) may be attributed, in principle, to the low numbers of new contracts in the years 2009 and 2010. At the same time, the number of approximately 495,000 final examinations carried out in the year under review marks the lowest value since the rearrangement of vocational training statistics in 2006. The percentage of examinations carried out by women remained relatively constant over the period under consideration with values between good 41 % and marginal 43 %.

In the reporting year 2012, a good 445,000 men and women passed their final examinations and therefore completed their apprenticeship with a vocational qualification (Table 13). In terms of the total of approximately 495,000 final examinations carried out in the reporting year, the success rate I (EQ I⁴), at 89.9 % is slightly above that of the level of the previous year, which was 89.7 %.

Many examination participants who were unsuccessful repeat the final examination to acquire the desired vocational qualification. In the reporting year 2012, the repeat examination share of all final examinations carried out was 7.0 %; an increase of 0.2 percentage points in comparison with the reporting year 2011.

⁴ success rate I – proportion of examinations passed as a share of all examinations carried out

Table 13: **Participation in final examinations in 2012 and examination success according to spheres of competence¹, Germany**

Sphere of competence ¹	Examination participation							
	Men	Women	Overall	Change compared with 2011 in %	Including:			
					Examinations passed		Retakes	
	Figure			Figure	in % ² (EQ I)	Figure	in %	
Industry and commerce ³	178,821	124,953	303,771	-7.0	277,371	91,3	19,395	6.4
Skilled trades	95,328	30,333	125,661	-8.5	108,216	86,1	11,382	9.1
Public service	4,395	8,562	12,957	4.5	12,249	94,5	345	2.7
Agriculture	10,140	3,009	13,146	-7.0	11,184	85,1	1,227	9.3
Independent professions	1,992	34,584	36,576	-2.9	33,618	91,9	2,190	6.0
Home economics	216	2,886	3,102	-4.4	2,805	90,4	192	6.2
All areas	290,889	204,324	495,213	-6.8	445,443	89,9	34,731	7.0

¹ It is usually the body responsible for the training occupation which is charged with placing the apprentices into the spheres of competence and not the business providing the vocational education (cf. [E in chapter A1.2](#)). Apprentices who are trained in public service organisations or for trade and industry occupations in the independent professions, for example, are assigned to the industry and commerce or skilled trade spheres of competence.

² Proportion of examinations passed as a share of all examinations carried out (success rate I); the calculation is based on the rounded off absolute values (see source citation).

³ Including banks, insurance companies, transport and hospitality industry

Source: BIBB "Apprentice Database" on the basis of vocational training statistics from the German Federal Statistical Office and the state statistical offices (survey for 31 December), reporting year 2012 Absolute values are rounded off to a multiple of 3 for reasons of data protection; as a result, the total value may differ from the individual totals.

Termination of training contracts

Apprenticeship contracts which have been started do not always lead to successful completion. Final examinations which are ultimately not passed or premature contract

terminations may bring an end to the apprenticeship contract or vocational qualification.

In the reporting year 2012, approximately 150,000 apprenticeship contracts were terminated prematurely

Table 14: **Premature contract terminations according to spheres of competence¹ and time of contract termination² (absolute and in %³), Germany 2012**

Sphere of competence	Premature contract terminations overall		of which terminated:									
			during probationary period		after 5 to 12 months		after 13 to 24 months		after 25 to 36 months		after more than 36 months	
	Absolute	in %	Absolute	in %	Absolute	in %	Absolute	in %	Absolute	in %	Absolute	in %
Industry and commerce	79,464	100.0	27,846	35.0	26,454	33.3	18,537	23.3	5,505	6.9	1,122	1.4
Skilled trades ⁴	52,746	100.0	16,458	31.2	16,173	30.7	13,905	26.4	5,322	10.1	885	1.7
Public service	831	100.0	219	26.4	243	29.2	231	27.8	120	14.4	18	2.2
Agriculture	3,396	100.0	969	28.5	984	29.0	954	28.1	417	12.3	72	2.1
Independent professions	11,271	100.0	4,752	42.2	3,198	28.4	2,175	19.3	984	8.7	162	1.4
Home economics	927	100.0	168	18.1	300	32.4	276	29.8	150	16.2	33	3.6
Germany overall⁴	148,635	100.0	50,412	33.9	47,349	31.9	36,078	24.3	12,501	8.4	2,295	1.5

¹ Placement according to competence regarding the respective training occupation (cf. [E in chapter A1.2](#)).

² Period between beginning and contract termination (in months).

³ Percentage of contract terminations for which the beginning of the vocational training dates back a certain number of months, as a share of all contract terminations (this does not concern the termination rate or actual longitudinal data).

⁴ Due to a reporting error made by one chamber of crafts, 1,194 premature contract terminations from the skilled trades sphere of competence are missing.

Source: BIBB "Apprentice Database" on the basis of vocational training statistics from the German Federal Statistical Office and the state statistical offices (survey for 31 December), reporting year 2012 Absolute values rounded off to a multiple of 3 for reasons of data protection; as a result, the total value may differ from the individual totals.

Table 15: Training occupations' with the highest and lowest contract termination rates in %, Germany 2012

Training occupations with the highest termination rates	Sphere of competence	New contracts	Termination rate (TR _{new})	Training occupations with the lowest termination rates	Sphere of competence	New contracts	Termination rate (TR _{new})
Beautician	Industry and commerce/Industry and commerce occupation trained in skilled trade	324	53.2	Clerk in public administration	Public service/Industry and commerce occupation trained in skilled trade	5,286	4.7
Restaurant specialist	Industry and commerce/Industry and commerce occupation trained in skilled trade	3,774	50.7	Specialist in media and information services	Industry and commerce/Public service	591	5.0
Chef	Industry and commerce/Industry and commerce occupation trained in skilled trade	10,719	48.4	Process mechanic in the metallurgical and semi-finished goods industry	Industry and commerce/Industry and commerce occupation trained in skilled trade	546	5.2
Specialists in furniture, kitchen and removal services	Industry and commerce/Industry and commerce occupation trained in skilled trade	477	46.2	Bank clerk	Industry and commerce/Public service	13,323	6.1
Industrial cleaner	Skilled trade	1,257	46.2	Social insurance clerk	Public service	2,463	6.2
Service employee for protection and security	Industry and commerce	270	46.0	Electronics engineer for automation technology	Industry and commerce/Industry and commerce occupation trained in skilled trade	1,935	6.4
Professional driver	Industry and commerce/Industry and commerce occupation trained in skilled trade	3,273	45.9	Aircraft mechanic	Industry and commerce/Industry and commerce occupation trained in skilled trade	672	6.7
Hospitality industry specialist	Industry and commerce/Industry and commerce occupation trained in skilled trade	2,712	45.1	Chemical technician	Industry and commerce/Industry and commerce occupation trained in skilled trade	1,938	6.7
Hairdresser	Skilled trade	11,892	44.6	Biological laboratory technician	Industry and commerce	504	6.9
Protection and security specialist	Industry and commerce	1,008	44.3	Production mechanic	Industry and commerce/Industry and commerce occupation trained in skilled trade	882	6.9
Building and object coater	Skilled trade	1,035	42.7	Road maintenance worker	Industry and commerce/Public service	381	7.4
Systems catering specialist	Industry and commerce/Industry and commerce occupation trained in skilled trade	2,124	42.2	Media agent for digital and print media	Industry and commerce	879	7.4
Equine manager	Agriculture	786	41.4	Industrial clerk	Industry and commerce/Industry and commerce occupation trained in skilled trade	19,764	7.5
Specialised food industry shop assistant	Industry and commerce/Industry and commerce occupation trained in skilled trade	9,303	41.0	Chemical laboratory assistant	Industry and commerce/Industry and commerce occupation trained in skilled trade	1,680	7.8
Plumber	Skilled trade	381	40.6	Forest manager	Agriculture	612	7.8
Scaffolder	Industry and commerce/Skilled trade	438	39.6	Electronics engineer for operating technology	Industry and commerce/Industry and commerce occupation trained in skilled trade	6,306	7.8
Baker	Industry and commerce/Skilled trade	3,330	39.2	Employment market service specialist	Public service	594	7.8
Fully-trained hotel clerk	Industry and commerce/Industry and commerce occupation trained in skilled trade	9,867	39.0	Shipping agent	Industry and commerce	339	7.8
Painter and decorator	Skilled trade	7,890	38.4	Toolmaker	Industry and commerce/Industry and commerce occupation trained in skilled trade	3,492	7.9
Sports and fitness administrator	Industry and commerce	1,734	37.8	Materials tester	Industry and commerce/Industry and commerce occupation trained in skilled trade	381	8.1

¹ Training occupations for which at least 300 apprenticeship contracts had begun in 2012.

² BIBB layer model according to new calculation method; in % of apprenticeship contracts begun; data from the previous 4 reporting years are incorporated to calculate the share.

Source: BIBB "Apprentice Database" on the basis of vocational training statistics from the German Federal Statistical Office and the state statistical offices (survey for 31 December), reporting years 2009 to 2012. Absolute values rounded off to a multiple of 3 for reasons of data protection. Calculations from the BIBB.

(Table 14). If one considers the period between the beginning of the apprenticeship contracts and the premature termination for the contract terminations in the reporting year 2012, it may be seen that the majority of apprenticeship contract terminations took place within the first year of the apprenticeship contract beginning.

The termination rate of 24.4 % in the reporting year 2012 is within the normal range of the last two decades. It has fluctuated between 20 % and 25 % of apprenticeship contracts begun across Germany since the early 1990s. Therefore, the termination rate did not increase further in 2012 in relation to the previous year. The fact that this topic is currently receiving a lot of attention cannot, therefore, be explained by changes to the termination rate itself. This must rather be viewed as being a result of the risks of a skilled labour shortage following demographic developments and developments regarding the trend to study among school graduates. The termination rates differ considerably between the states and range from an average of just under 22 % in Baden-Württemberg and Bavaria to a good 33 % in Mecklenburg-Vorpommern and Berlin. The termination rates in eastern Germany tend to be higher overall. The termination rates vary just as considerably between the spheres of competence (Table 15). The termination rates vary even more considerably between the individual dual vocational training professions (Table 15). If the 20 professions with the highest and lowest respective termination rates are taken into consideration, largely analogue results arise in comparison with the previous years.

Access to labour market

In 2012, 2 out of 3 apprenticeship graduates were taken on as employees. If one differentiates according to company size, the probability of being taken on in the smallest companies is the lowest – only every second graduate continues to be employed by the business providing vocational education here (Table 16).

In 2011, 131,000 were reported as being unemployed after completing external/in-company vocational training according to projections based on information from the German Federal Employment Agency. In relation to the overall number of graduates of a dual vocational education and training apprenticeship (445,000), this means an unemployment rate of 29.5 %, and therefore a slight decline of 2 percentage points in comparison with the previous year (31.5 %). In 2010, the unemployment rate had already decreased by 2.4 percentage points. The unemployment rate directly after apprenticeship completion continued to vary between the western and eastern federal states.

A principle cause for any problems matching work supply and work demand may be found in qualification developments. For example, in the period from 2012 to 2030, approximately 10.46 million people who have completed vocational education and training will leave the labour market, but only 7.55 million people will train for an occupation at this level of qualification. Therefore, the number of people in the labour force who have completed vocational education and training will decrease by a total of approximately 2.90 million by the year 2030 (Figure 4).

Table 16: Recruitment rate by size of companies in %

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Germany													
1–9 employees	46	43	46	47	40	48	45	48	48	44	47	59	50
10–49 employees	57	50	51	52	53	51	56	56	60	56	57	60	64
50–499 employees	60	61	57	54	57	54	55	63	67	60	64	68	70
500+ employees	70	70	68	63	62	64	69	70	72	73	76	80	79
Overall	58	55	55	53	53	54	56	60	62	58	61	66	66

Rate of successful apprenticeship graduates being offered contracts by their training companies: Proportion of apprentices signing an employment contract with their training company as a share of all apprenticeship graduates (see note in [I](#) regarding data corrections).

Source: IAB company panel 2000 to 2012, extrapolated information

Figure 4: **Development of new supply of labour force in comparison with people leaving gainful employment 2012 to 2030 (in millions).**

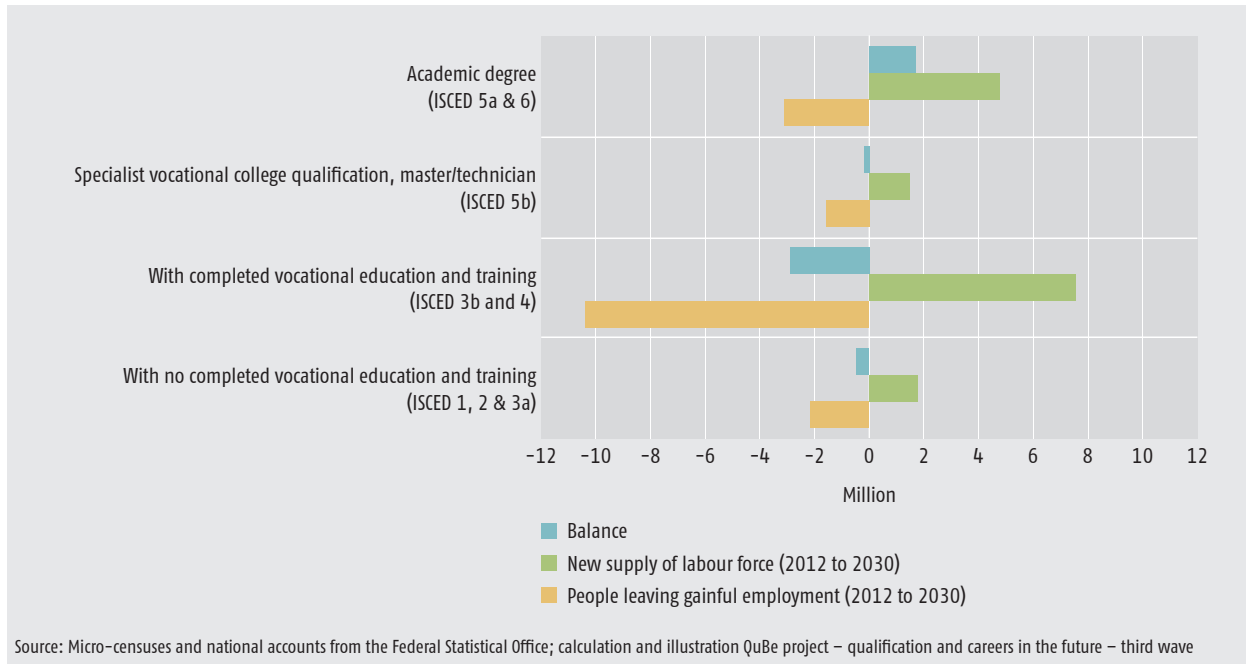
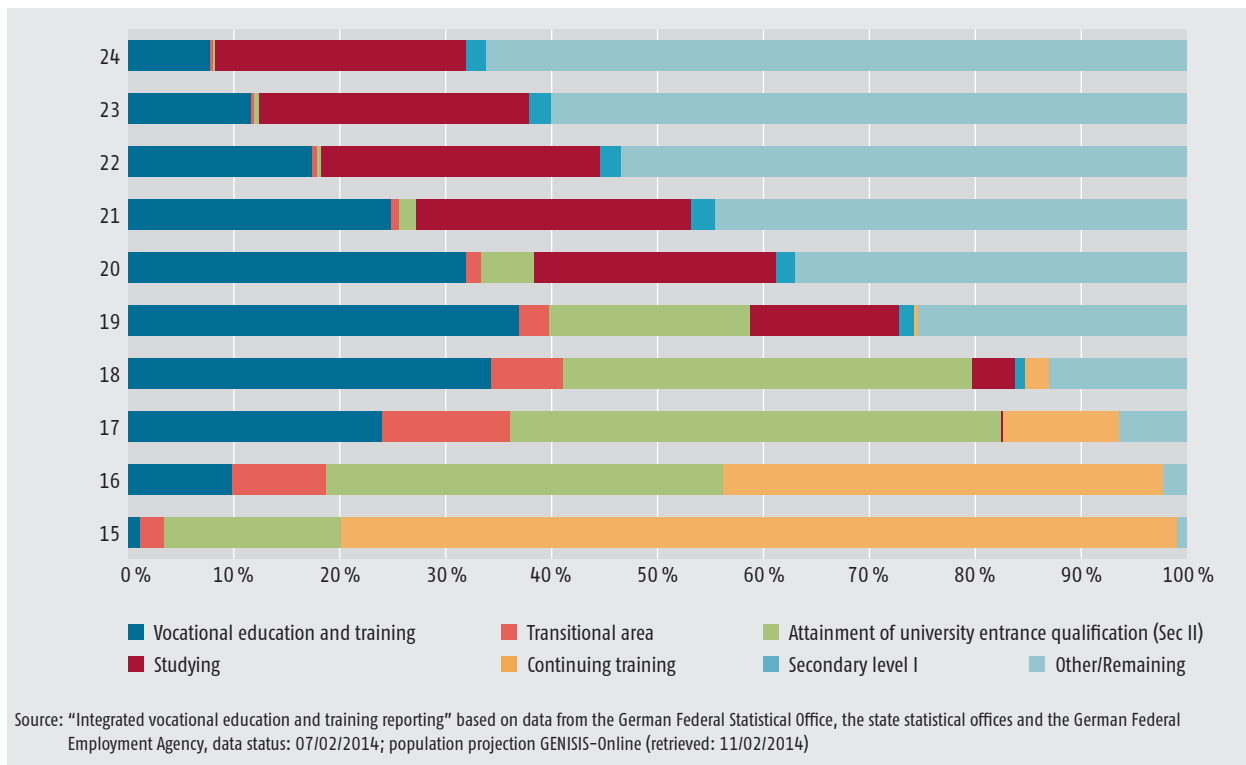


Figure 5: **Young people in integrated VET according to age in 2012 (in %) (stock data; 100 % = resident population of respective age)**



Qualification background in the German youth population

If young people aged 15 to 19 in training are compared with the resident population of the same age, around 63 % were in training in Germany in 2012. If the young people attending secondary level I (27.0 %), or continuing training (0.5 %) are added, a total of 90.4 % of young people under the age of 20 years were in professional training or general education provision.

Figure 5 shows which qualification provision young people aged 15 to 24 were in – sorted according to the training sectors. It shows that there is a clear qualification-specific character in the respective age group. In the 15-year-old age group, 79.1 % of young people were still in “secondary level I”. The percentage of young people aged 17 in the transitional area was comparatively high (12.2 %). Among the 19 year olds, most were in vocational education and training (37 %). In 2013, 35.7 % of apprenticeship beginners started a fully qualifying vocational education and training placement (718,630), while 12.8 % entered the transitional area (257,626). Approximately 26.1 % aspired to a university entrance qualification (525,018). At the same time, 25.4 % began to study (510,672).

Companies in vocational education and training

Company education behaviour has been at the centre of cooperation between the Federal Institute for Vocational Education and Training and the German Institute for Employment Research since 1995, in particular the research area “companies and employment”. Using jointly-compiled indicators, company education activities are analysed.

Participation of companies in VET

Of the 2.102 million companies across Germany with at least one employment relationship subject to social security contributions, approximately 447,700 companies participated in the vocational education and training of young people as of 31 December 2012, meaning that the number of businesses providing vocational training shrunk by 7,300 (-1.6 %) in the reporting year 2012 to the lowest value since 1999 (Figure 6). At the same time, the total business stock increased for the seventh time in a row, rising to 8,200 companies (+0.4 %). In comparison with the previous 3 years, losses in the number of companies providing vocational training and gains in the number of businesses have decreased overall, meaning that the de-

Figure 6: Development of participation of companies in providing training in Germany between 1999 and 2012 (reference year 1999 = 100 %)

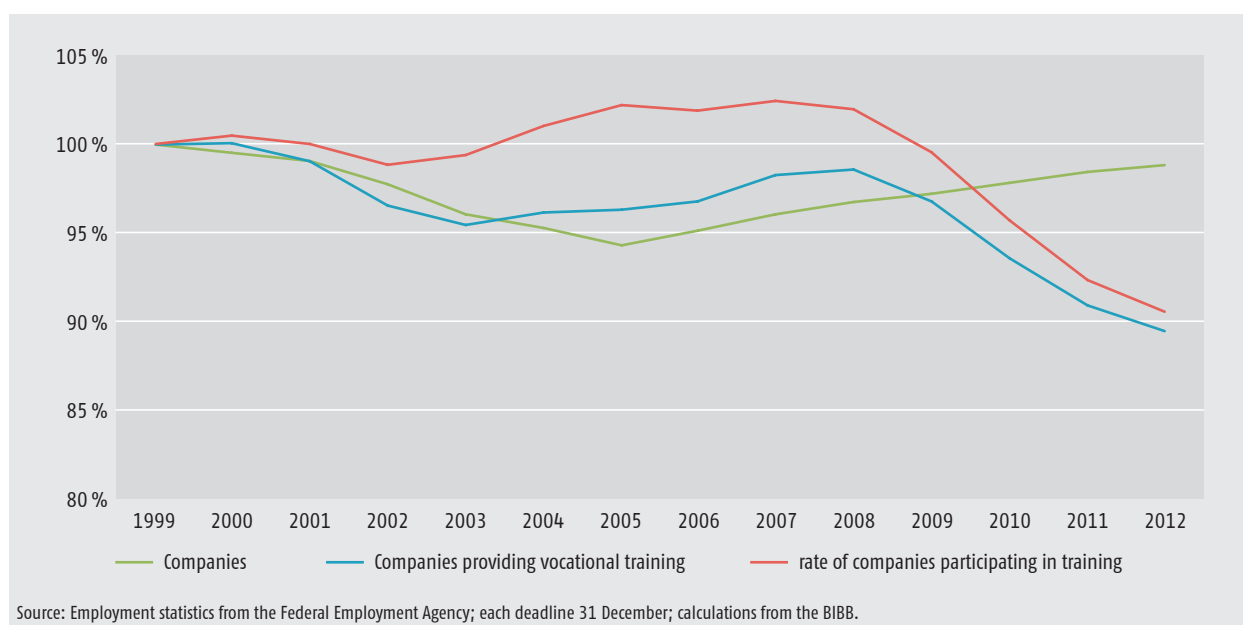
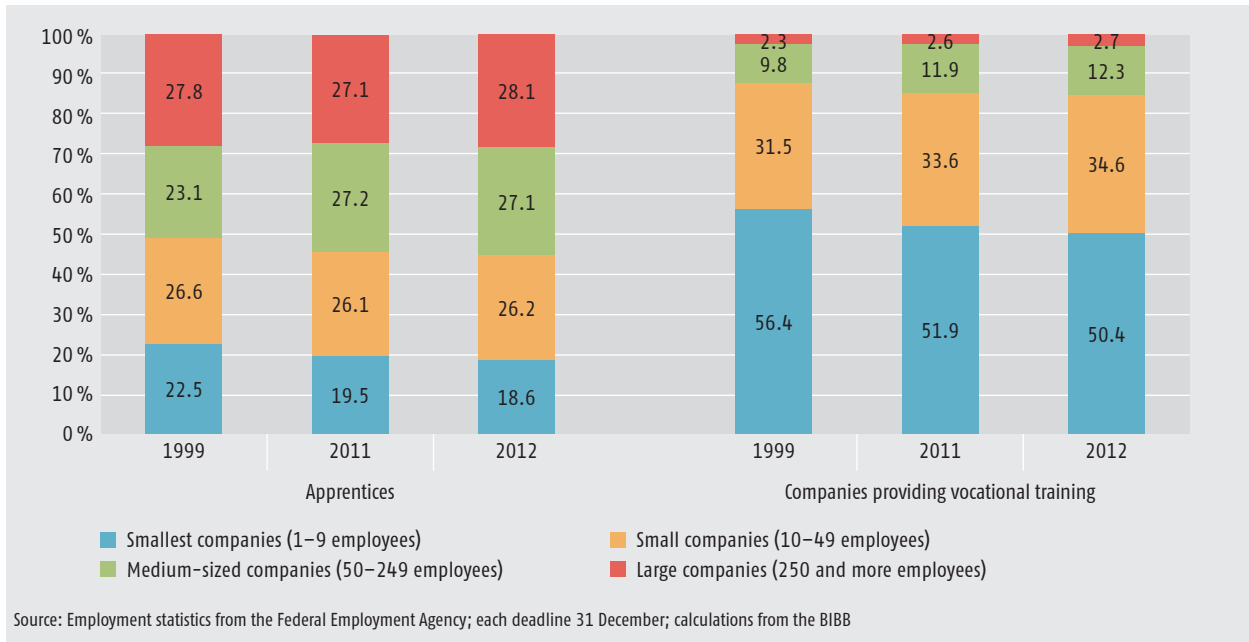


Figure 7: **Distribution of percentage of apprentices and businesses providing vocational training into categories of business size 1999, 2011 and 2012 in Germany**



cline in the rate of companies providing vocational training was decelerated slightly. The rate of companies providing vocational training continued to fall with a figure of -0.4% and reached a new low of 21.3%.

With the employment data for the reporting year 2012, it is now possible to carry out an analysis which differentiates the provision of in-company vocational education and training by professions for the first time. As to be expected in view of the different qualification requirements in the various occupational fields, the vocational training rate varied considerably between the 37 main occupational groups. The highest vocational training rate was to be found in the mechatronic, energy and electronic occupations (12.2%), the non-medical health, body care and wellness occupations and the medical-technical occupations (11.8%) as well as the (interior) construction occupations (11.3%). Occupations either frequently exercised by unskilled and semi-skilled workers or predominantly by people with academic qualifications accounted for the lowest vocational training rates. Accordingly, the cleaning occupations (0.5%), linguistic, literary, humanities, social and economic occupations (0.8%) and teaching and training occupations (0.8%) marked the lower end of the spectrum.

As in the previous year, the falling stock of businesses providing vocational training can be exclusively traced back to losses in the smallest businesses. The large companies registered the greatest growth in businesses providing vocational training percentage-wise with a plus of 2.5%, followed by the medium-sized and small businesses with growth rates of 1.9% and 1.3% (Figure 7).

The results supported prior observations that in-company vocational education and trainings increasingly shifting from the smallest companies to small and medium-sized companies. This trend continued in 2012 and caused the proportion of smallest companies as a percentage of all businesses providing vocational training to fall by 1.5% to 50.4%. At the same time, the proportion of small and medium-sized businesses providing vocational training increased jointly by 1.4 percentage points to 46.9%. There was also a slight increase in the number of large companies providing vocational training, which were able to increase their share to 2.7%.

Companies accreditations

If a company intends to commit to vocational education and training, it must meet the statutory requirements. Table 17 shows that approximately 58% of all companies

Table 17: Entitlement to provide vocational education and training according to company size (in %)

Germany		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
1–9 Employees	No entitlement	47	52	49	46	50	48	48	49	49	49	49	50	50
	Entitled in combination	1	3	3	4	3	3	3	3	3	3	3	3	3
	Entitlement	52	46	48	51	47	49	50	48	49	49	49	48	47
10–49 employees	No entitlement	30	30	29	27	27	28	29	28	25	28	26	26	26
	Entitled in combination	4	5	5	6	5	6	5	5	5	4	5	4	5
	Entitlement	68	66	67	68	69	68	68	69	71	70	71	71	70
50–499 employees	No entitlement	18	16	16	14	14	14	14	14	13	13	12	12	12
	Entitled in combination	8	8	8	8	7	8	9	9	8	8	9	7	8
	Entitlement	77	79	78	81	81	81	80	80	82	82	82	83	83
500+ employees	No entitlement	6	4	5	4	3	3	3*	3*	4	3	3	4	3
	Entitled in combination	11	11	11	10	10	11	13	11	11	9	11	8	8
	Entitlement	88	91	88	90	91	92	91	93	92	93	91	93	94

Training entitlement: Proportion of companies entitled, entitled in combination or not entitled to provide training as a share of all companies. As these are multiple answers, some of the information provided regarding entitlement may exceed 100 %.

* = fewer than 30 cases (participating)

Source: IAB company panel 2000–2012 extrapolated information

Table 18: Training activities by size of companies (in %)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Germany													
1–9 employees	38	43	43	38	42	42	41	41	42	41	41	42	38
10–49 employees	70	74	70	67	72	71	70	70	71	72	71	69	68
50–499 employees	84	87	87	86	88	87	87	87	87	87	85	87	87
500+ employees	93	94	96	96	95	95	94	95	96	97	97	97	96
Overall	50	55	53	49	53	53	52	53	54	54	53	54	52

Training activity: Proportion of companies providing training as a share of all companies entitled to provide training.

Source: IAB company panel 2000–2012, extrapolated information

in Germany meet the formal conditions for vocational education and training, as in the previous year. The proportion of companies entitled to provide vocational education and training is also only subject to slight fluctuations when compared in the long term. Almost all companies entitled to provide vocational education and training meet the statutory requirements on their own (55 %); approximately 4 % of all companies meet the requirements in combination with other companies or educational institutions.

A very broad definition has been selected to illustrate vocational education and training activities because of the survey deadline lying between the vocational training years (30 June). According to this definition, slightly more than half of all companies entitled to provide vocational education and training participated in vocational education and training (Table 18). As with the entitlement to provide vocational education and training, the proportion of companies actively providing vocational education and training also increases with the number of employees here. While 38 % of the smallest companies

provide vocational education and training, a good 2 out of 3 small companies, 87 % of medium-sized companies and nearly all large companies do the same.

Evolution of companies participation in VET (BIBB Qualification panel)

In-company vocational education and training continues to play an important role in comparison with other forms of recruiting employees and skilled labour, despite all of the problems on the regional vocational education and training markets. The Federal Institute for Vocational Education and Training company panel on qualification and competence development is a repeat survey carried out annually which gathers representative, longitudinal data on qualification in companies in Germany. The BIBB qualification panel has been financed by the German Federal Ministry of Education and Research since 2010 and is carried out by BIBB in collaboration with TNS Infratest Sozialforschung. 2,000 companies took part in the survey in the first three waves between 2011 and 2013. Approximately 75 % of the surveyed businesses and companies each also took part in the respective follow-up survey (panel rate). Overall, the proportion of businesses providing vocational education and training continuously declined in the 3 reporting years – similar to the basic population – first from 23.6 % in 2011 to 22.1 % and then to 21.0 %.

The proportion of companies providing vocational education and training increased constantly and considerably with the size of the company. At the same time, the proportion of companies constantly not providing vocational education and training continued to decrease. Companies in the production industry are among those companies which have not only the highest level of participation in vocational education and training, with an average figure of 26.2 % in the 2012/2013 training year, but also the most stable. In contrast, companies in the business-related and personal service sector have relatively low values of 12 % and 15 % respectively when it comes to the whereabouts of young people in vocational education and training (Figure 8).

When the link between the sectoral proportion of companies with new supplies of apprenticeship placements on offer and the sectoral proportion of companies with unoccupied apprenticeship placements is considered,

the following result emerges: The higher the sectoral proportion of companies with apprenticeship placements on offer is, the lower the proportion of companies with unoccupied apprenticeship placements (Figure 9).

Training personnel in in-company training

The statutory provisions specify that, along with professional knowledge, skills and competences, trainers in the dual system must also have those relating to occupational and work education which are necessary to convey the content of the vocational training and education. Personal aptitude is also required. The people in the companies responsible for the vocational education and training 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 Aptitude⁵.

Ordinance on Trainer Aptitude

In 2012, a total of 91,284 trainer aptitude examinations were carried out in the training areas of industry and commerce, skilled trades, agriculture, public service and home economics. 65.1 % of the examination participants were male and 34.9 % were female. 85,269 people passed the examination, corresponding to a success rate of 93.4 %. The proportion of women among the successful trainer aptitude examination participants was 35.4 %. It is apparent that the number of examinations increased again in 2012. In total, 47,295 of the registered trainers did not have to prove their technical aptitude in an examination in accordance with the Ordinance on Trainer Aptitude; the industry and commerce training area accounted for 37,242 of these people exempt from the aptitude examination.

Master Craftsman Examinations

In 2012, a total of 40,473 people participated in master craftsman examinations in the areas of industry and commerce, skilled trades, agriculture, public service and home economics. Of these, 84.7 % were male and 15.3 % female. 36,777 of the participants passed the examination. The success rate was therefore 90.9 %. In home

⁵ See www.bibb.de/dokumente/pdf/ausbilder_eignungsverordnung.pdf.

Figure 8: **Percentage of companies providing vocational training and education in the training years 2010/2011, 2011/2012 and 2012/2013**

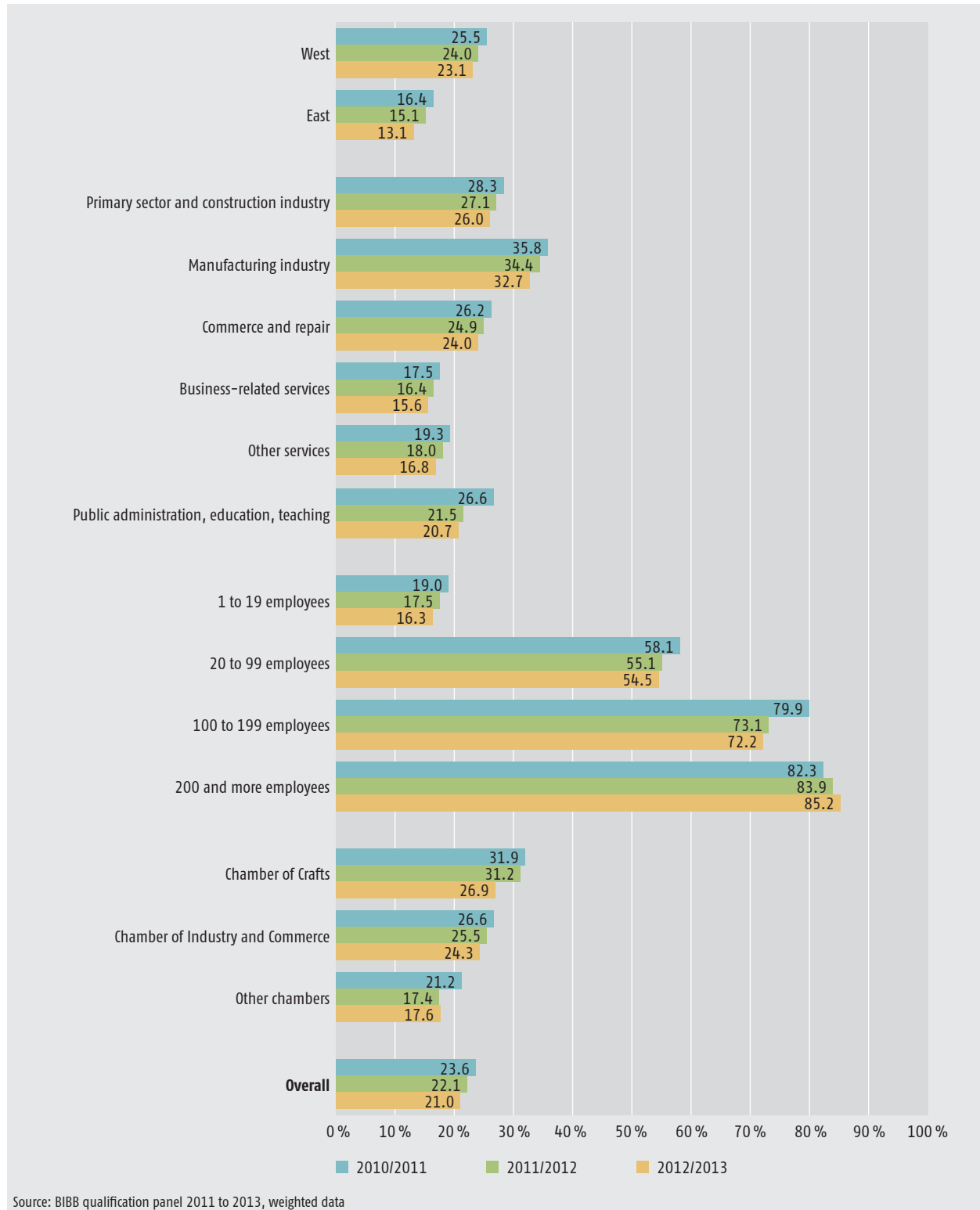
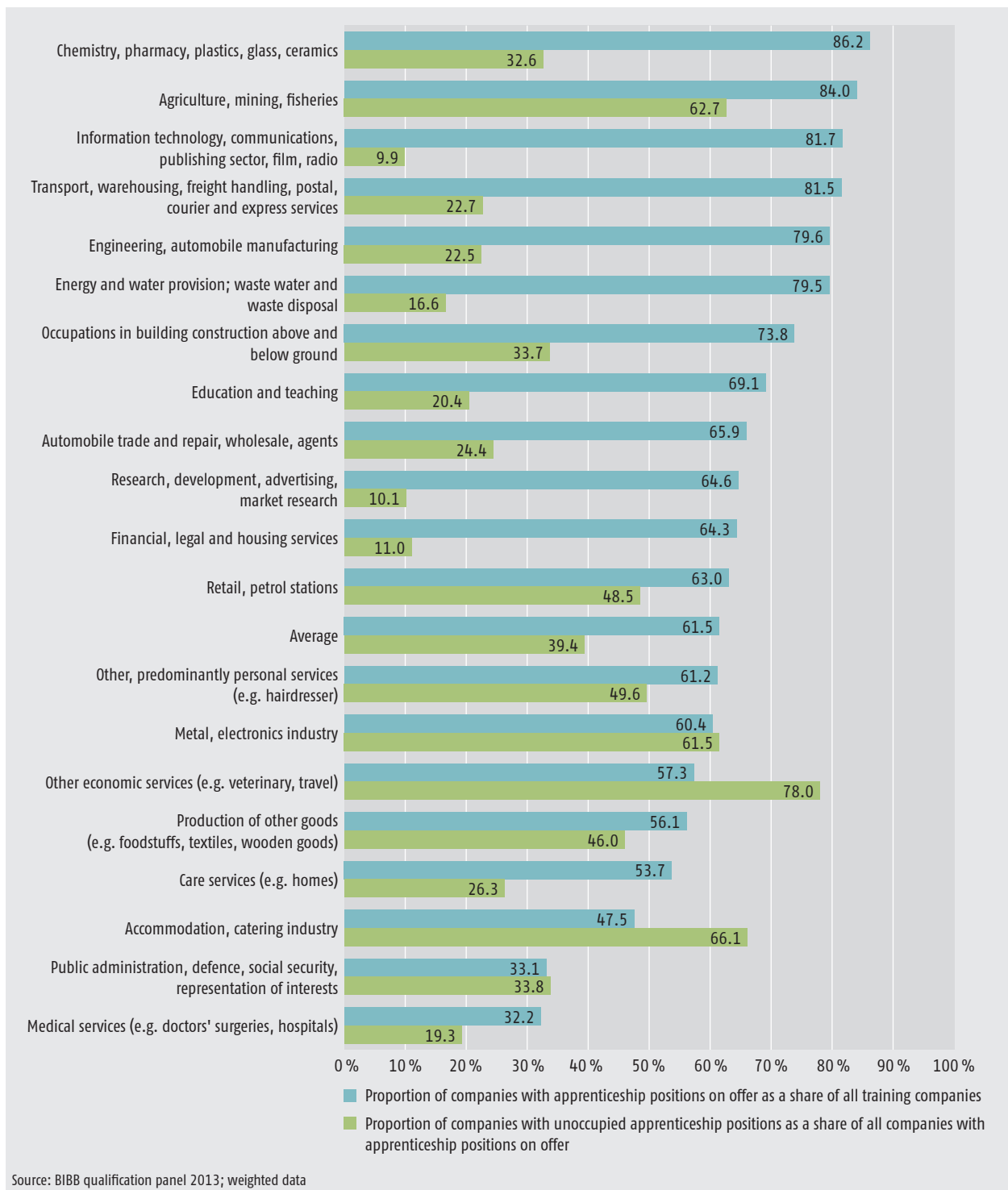


Figure 9: **Proportion of companies with apprenticeship placements on offer in all companies providing vocational education and proportion of companies with unoccupied apprenticeship placements in all companies with apprenticeship placements on offer in the training year 2012/2013 according to selected structural features (in %)**



economics, the proportion of women among the successful master craftsman examination participants was once again the highest by far, at 97.8 %. This was followed by agriculture at 23.9 % and skilled trades at 19.3 %. 7.1 % of the successful examination participants were from the area of public service and 6.4 % were from industry and commerce.

Number of trainers registered with the competent bodies

A total of 671,985 trainers were registered in the areas industry and commerce, skilled trades, agriculture, public service, the independent professions and home economics in Germany. This figure was 577,389 (85.9 %) in western Germany; in eastern Germany it was 94,596 (14.1 %). 43.3 % of the trainers worked in the area industry and commerce, 36.0 % in skilled trades and a further 13.7 % in the independent professions. The share was 3.5 % in the area of agriculture, 3.1 % in public service and 0.5 % in home economics. Compared with the previous year, the total number of registered trainers increased by 6,477.

Financing and costs of training

Training allowance

Any company in Germany providing training is obliged by law to pay its trainees an adequate compensation that increases with each year of training (§ 17 BBiG). The training allowances are the biggest cost factor for the companies in providing vocational education and training, since they account for 46 % of the gross training costs.

The average tariff monthly apprenticeship wage in the old federal states was € 767 per month in 2013; therefore it had increased by 4.1 % compared with the figure of € 737 from the previous year. The average monthly wage in the new federal states increased to € 708, therefore by 5.0 % compared with the previous year (€ 674). The wage increase was therefore relatively strong in 2013, as with the previous year: Tariff wages in the old federal states were also raised by an average of 4.1 % in 2012 and in the new federal states by 5.0 %. As a result of the somewhat stronger wage increase in the eastern states, percentage-wise, the gap between this average and that of the western German tariff level diminished in 2013.

The apprentices were distributed as follows in 2013 according to the occupation-specific apprenticeship wage level: 26 % of apprentices in the western states received high monthly amounts of € 900 and more. For 61 % of them, wages ranged from € 600 to € 900. 13 % of apprentices received relatively low amounts of less than € 600. In the eastern states, 16 % of apprentices received a wage of € 900 and more. For 52 % of apprentices, wages ranged from € 600 to € 900. 32 % of apprentices received wages of less than € 600. Clear wage differences were ascertained between male and female apprentices in 2013. The average monthly amount for male apprentices in the western states was € 781; female apprentices it was € 745. In the eastern states, male apprentices received € 726 and female apprentices € 674. The differing wage averages are solely a result of the varying distribution of male and female apprentices across the occupations.

Public expenditure

Tables 20 and 21 document the amounts from public budgets spent on vocational education and training from 2001 to 2013. All expenses which are linked to the development, improvement, execution and promotion of training courses on a costs-by-cause principle and in accordance with Section 1 Paragraph 1 and 2 Vocational Training Act are taken into account. Crosses are used in Tables 19 and 20 to indicate whether an expense item is caused by the recognised dual system of vocational education (DS), measures in the transition system (ÜS) and/or the school-based vocational educational system (SBS). The classification is not exact, however; one item may contain expenses for one or more areas. In addition, there is no clear definitional distinction for ÜS. Some individual items furthermore include expenses for continued training to a partly considerable extent.

As a result of these demarcation difficulties, aggregating the lines in the table which are marked accordingly only provides an upper limit to the total public expenses for vocational education and training in DS, ÜS and SBS.

The public financial contribution is complemented by the contribution from businesses providing vocational training in the private sector and public service. Their expenses are traditionally estimated by the BIBB. According to calculations which are based on a representative survey for the year 2007, the gross costs, i.e. the apprenticeship

Table 19: Public expenses for vocational education and training (Part I)

	2001	2006	2010 ¹⁷	2011	2012	2013		School-based vocational educational system	Transitional system Transitional system	includes continuing vocational education ¹⁸
	In € billion	In € billion	In € billion	In € billion	In € billion	In € billion	Dual system			
Federal Ministry of Education and Research¹										
Funding for cross-company vocational education and training centres ²	0.043	0.029	0.043	0.040	0.040	0.040	X		X	
Special federal programmes, programmes created by the new federal states and Berlin to create additional apprenticeship positions in the new federal states ³	0.095	0.077	0.032	0.016	0.006	0.023	X	X		
Student loan for full-time vocational students (vocational school, school of further vocational education and specialised vocationally-oriented upper secondary school with no vocational training) ⁴	0.148	0.221	0.253	0.271	0.277	n.a.		X	X	
International exchange and cooperation in vocational education and training	0.007	0.005	0.010	0.011	0.012	0.011	X	X		X
Innovations and structural development in vocational education and training	n.a.	0.044	0.050	0.101	0.091	0.088	X	X	X	X
BIBB (Operation and investment)	0.028	0.027	0.030	0.028	0.030	0.039	X	X	X	X
Funding for the highly talented in vocational education and training ⁵	0.014	0.015	0.035	0.039	0.042	0.045				X
Special programme for apprenticeship position developers and regional vocational education and training associations in the new federal states (including East Berlin)	0.021	-	-	-	-	-	X			
Future-oriented development for vocational education and training institutions	0.175	-	-	-	-	-	X	X		X
Measures to improve occupational orientation	-	-	0.019	0.035	0.060	0.075			X	
Federal Ministry of Economic Affairs and Energy¹										
Vocational education and training for medium-sized business- training apprentices ⁶	0.042	0.040	0.047	0.046	0.043	0.045	X			
Customised placement of apprentices in companies willing to provide training ⁷	-	-	0.003	-	0.003	0.004	X		X	
Federal Ministry of Labour and Social Affairs⁸										
Benefits for people with disabilities within the jurisdiction of SGB [German Social Code] II ⁸										
▶ Participation costs for measures to include disabled persons in working life	n.a.	0.076	0.084	0.076	0.065	0.062				X
Special measures for younger people within the jurisdiction of SGB II ⁸										
▶ Funding for vocational education and training for disadvantaged apprentices	n.a.	0.166	0.378	0.331	0.222	0.169	X		X	
▶ Measures for intensified occupational orientation	n.a.	0.001	0.001	0.001	0.000	0.000			X	
▶ Entry qualification ⁹	n.a.	-	0.017	0.016	0.012	0.011			X	
Federal states¹⁰										
Vocational education and training institutions ¹¹										
▶ Part-time vocational education and training institution	3.453	2.870	3.147	3.158	3.145	n.a.	X			
▶ Vocational schools	1.965	2.365	2.270	2.260	2.225	n.a.		X	X	
▶ Year of basic vocational training, year of vocational preparation	0.502	0.501	0.390	0.386	0.379	n.a.			X	
▶ Other vocational schools (apart from universities of applied sciences)	0.954	1.095	1.453	1.539	1.582	n.a.		X		
Student loan for full-time vocational students (vocational school, school of further vocational education and specialised vocationally-oriented upper secondary school with no vocational training) ⁴	0.079	0.119	0.136	0.146	0.149	n.a.		X	X	
Federal state training programmes ¹²										
▶ West Germany ¹²	0.053	0.126	approx. 0.5	approx. 0.5	approx. 0.5	n.a.	X	X	X	
▶ East Germany	0.120	0.066					X	X	X	

Table 20: Public expenses for vocational education and training (Part II)

	2001	2006	2010 ¹⁷	2011	2012	2013	Dual system	School-based vocational educational system	Transitional system Transitional system	includes continuing vocational education ¹⁸
	In € billion	In € billion	In € billion	In € billion	In € billion	In € billion				
German Federal Employment Agency⁸										
Vocational education and training assistance (in-company vocational education and training, educational measures in preparation for an occupation) including second vocational training course assistance	0.405	0.506	0.579	0.540	0.454	0.390	X		X	
Training course costs for educational measures in preparation for an occupation	0.388	0.365	0.326	0.293	0.241	0.221			X	
Vocational education and training of disadvantaged youth	0.811	0.808	0.672	0.587	0.493	0.416	X		X	
Training measures to promote occupations for the disabled										
▶ For first vocational training course	n.a.	0.323	0.295	0.284	0.222	0.202				
▶ Education expenditure not allocable to first vocational training course or continuing training	n.a.	1.690	1.871	1.806	1.747	1.716				X
Training bonus ¹³	–	–	0.036	0.032	0.021	0.012	X			
Entry qualification ⁹	–	0.070	0.055	0.049	0.039	0.031			X	
▶ Measures for intensified occupational orientation ¹⁴	n.a.	0.004	0.066	0.061	0.059	0.049			X	
Immediate programme to reduce youth unemployment ¹⁵	0.862	–	–	–	–	–			X	
Youth supervisor for career entry	–	–	0.055	0.060	0.053	0.066			X	
Funding for youth residences ¹⁶	0.044	0.004	–	–	–	0.001	X	X	X	X

¹ Actual values according to the budget accounting of the federal government. Budget estimates for 2013

² This information contains expenditure for investment and ongoing objectives.

³ The federal government bears the cost of 50 % of overall funding of the whole of Germany and the federal states.

⁴ Funding for students in vocational schools, schools of further vocational education and in vocationally-oriented upper secondary school classes which do not require completed vocational education and training. Actual values for all calendar years indicated according to BAFöG [German student loan legislation] statistics from the German Federal Statistical Office. Of the data provided, 65 % was attributed to the federal government and 35 % to the federal states. Until the 2012 data report, the federal state share was not accounted for separately.

⁵ Depending on purpose, this item rather contains expenditure for continuing vocational education (continuing vocational education and training scholarship) and funding for academic education (upgrading scholarship).

⁶ Until 2011, this row displays the Federal Ministry of Economic Affairs and Energy's expenditure summarised under the omitted title heading "Funding for cross-company vocational education and training apprenticeships in the skilled trades".

⁷ From 2012, programme expenditure is not displayed under one single heading; it is integrated into the heading "Safeguarding the skilled labour supply for small and medium-sized companies".

⁸ Actual values for the respective budget year.

⁹ A standard benefit within the scope of SGB III since 1 October 2008. Previously financed by the Federal Ministry of Labour and Social Affairs budget as a special programme.

¹⁰ Actual values for 2001, 2006 and 2010. Preliminary actual values for 2011, budget estimates for 2012. Nominal values for 2013 were not available when the report went to press.

¹¹ Basis for expenditure estimates in the calendar years 2001, 2006, 2010 and 2011: Student numbers for the school years ending and beginning in the respective calendar year and expenditure for vocational education and training institutions. Basis for 2012 estimate: Student numbers in the 2011/2012 school year and expenditure for the vocational education and training institutions. Since the 2011 data report, the expenditure concept has been changed from net expenditure to basic funds. As this also occurred retroactively for the years beginning with 2007, the data provided for the year 2010 differs slightly from the corresponding data provided in earlier data reports.

¹² Until 2006: Estimated funding volume according to data from federal states (including ESF) for the training year beginning in the respective calendar year. The data provided for 2006 does not contain the programmes of the state of Rhineland-Palatinate as there was no information available from the competent ministry. The values displayed for 2010 and 2011 are based on a BIBB survey; take note of the references in the text.

¹³ Does not apply since 01/04/2012.

¹⁴ According to Section 33 SGB III, a condition for the funding is a minimum third-party participation rate of 50 %. However, there are no figures available for the proportion of public and private funds within the scope of this co-financing.

¹⁵ Only expenditure for benefits in accordance with Articles 2, 3, 4, 6, 7 and qualification proportion according to Article 9 (in the case of qualification/job-creation measures) of the immediate programme, partly co-financed by ESF. 2006 and the following years may include remaining sums which are not displayed here.

¹⁶ Institutional funding in the area of vocational training and continuing vocational education was abolished in 2009. Since April 2012, however, it has been possible to provide funding again for the construction, extension, renovation and furnishing of youth residences.

¹⁷ See 2012 and 2013 data reports for information on the years 2007 to 2009.

¹⁸ Items which also include continuing vocational education expenditure to a significant degree are marked with a cross.

Sources: Federal Ministry of Finance, federal budget

Federal Ministry of Finance, federal budget accounting

Federal Statistical Office, subject-matter series 11, series 2 – Vocational education and training institutions

Federal Statistical Office, subject-matter series 11, series 7 – BaFöG

Federal Statistical Office, subject-matter series 14, series 3.1 – Accounting results, overall budget

Federal Employment Agency, quarterly reports

Federal Employment Agency, statistics on income and expenditure within the jurisdiction of SGB II and SGB III

Federal Employment Agency information (January 2013) and the Federal Employment Agency (January 2014).

Table 21: Extract from the budget for education, research and science – Expenses in € billion

	1995	2007	2008	2009	2010
Education budget	125.4	147.8	153.9	164.6	172.4
<i>of which:</i>					
In-company vocational training in the dual system*	10.4	10.8	11.1	10.9	10.6
Budget for education, research and science	162.5	204.1	214.2	224.8	234.7

* Expenditure for in-company, cross-company and external vocational training in the dual system, without vocational schools, including training-related grants from the Federal Employment Agency and Federal Ministry for Labour and Social Affairs.

Source: Federal Statistical Office, budget for education, research and science

costs without considering the apprenticeship gains, were approximately € 23.8 billion. The company costs for the dual system of vocational education and training were around € 5.6 billion, although it must be considered that the net costs are accompanied by gains which are, however, difficult to quantify, such as the costs saved in acquiring new personnel or image improvement. The net costs have fallen considerably since the last survey thanks to a more productive deployment of apprentices in the companies.

In total, expenses of € 10.6 million from the education budget are accounted for in 2010 for dual vocational education and training (Table 21). This corresponds to 0.4 % of the gross domestic product (GDP). Public budgets contributed around € 2.9 billion to the financing; the private sector accounted for around € 7.7 billion. Expenses for in-company vocational education and training in the dual system have fallen since 2008. This is linked to the decline in apprentice numbers.

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 in three parts: regulated continuing education, in-company 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. Meisterbrief or another diploma, e.g. from a Fachschule (trade and technical schools and master's schools) are classified as ISCED 5B or EQF level 6 respectively.

Key facts in brief

According to the results of the 2012 Adult Education Survey (AES), the **rate of participation** in occupation-specific continuing education and training in the age group 25–64 in Germany was 42 %.

Based on data from the German Institute for Employment Research company panel, **53 % of companies participated in continuing occupational education** measures in 2012. Compared with 2010 (44 %), participation in continuing occupational education measures has increased significantly.

Evaluations of the Fourth European Continuing Vocational Training Survey (CVTS4) on the relationship between internal and external courses show that an overwhelming majority of companies offering courses used **external courses** to train their employees. The share of companies offering internal courses was significantly lower.

According to data from the BIBB qualification panel, the rationale behind companies implementing continuing occupational education measures is particularly the **introduction of new products or services**, reactions to the wishes of employees or leadership development.

The 2013 wb-monitor survey shows that the **business climate in continuing education is positive** overall and as high as in 2012. However, the business climate has shown a negative development in some areas. The current survey documents the great significance of continued education counselling.

The **courses offered by adult education centres** in continuing vocational education comprised 63,163 courses in 2012 and declined in comparison with the previous year. This is a decline of 4.7 % compared with the previous year.

In 2012, there were 299,652 admissions into measures for the **promotion of continuing vocational education** in accordance with the German Social Code III and II. After steep declines in previous years, the number only fell slightly compared with 2011 (-1.8 %).

In 2012, 168,284 people were supported within the framework of the **Upgrading Training Assistance Act**, which just about corresponds to the participation rate of the previous year.

By 31 December 2013, a total of approximately 244,000 bonus vouchers had been handed out within the scope of the **education voucher programme**.

There are now a total of **222 statutory federal provisions** for advanced vocational training and retraining.

In the 2012/2013 school year, there were **59,223 graduates from technical colleges** who had passed their final examinations.

The number of **further training examinations** passed in 2012 was approximately 103,000 and therefore hardly altered in comparison with the previous year.

Occupation-related continuing education and training

General trend

In 2007, a total of almost two fifths of the age group 25–64 among the population participated in at least one occupation-specific continuing education measure (39%). In the 2010 Adult Education Survey (AES), the rate of participation in occupation-specific continuing education was 36%. One explanation for this decline is the economic crisis in the year 2009, to which the participation information in the 2010 AES largely relates. One fact in favour of this explanation is that the decline has a greater impact on companies' continuing education than on individual, occupation-specific continuing education. Participation increased to over two fifths (42%) in the 2012 AES. This increase may be principally attributed to an increase of participation in companies' continuing education (Table 22).

The figures show that companies are making an increasing contribution to the continuing education of individuals and that this contribution has been underestimated in the past. However, individuals also make their own significant contributions by co-financing in the form of money or free time. In the 2012 AES, 17% of all continuing education activities were co-financed in this way between the (future) employers and the individual.

In-company continuing education and training in European comparison

Enterprise-funded continuing education and training is an important part of lifelong learning. The fourth European Continuing Vocational Training Survey (CVTS4⁶), conducted in 2011, provides European comparative data on in-company continuing vocational education and training activities for 2010. According to the results of CVTS4, progress has been made in in-company continuing vocational education and training activities in many countries. Increases were achieved in particular in the inclusion of as many employees as possible and the

intensity of continuing vocational education and training in almost all countries. However, this does not necessarily mean that the expenditures of the companies were greater.

The central results from CVTS4 were discussed in the 2013 VET Data Report Germany⁷. There was a positive development in Germany in 3 of the 4 core indicators.

1. 73% of companies offered continuing education in the form of courses or other forms in 2010 (up by 4 percentage points in comparison with 2005),
2. the rate of employees participating in continuing education courses increased by 9 percentage points to 39%
3. the share of company expenses for continuing education as part of the overall labour costs increased from 0.6% to 0.8%.

On the other hand, hours spent in continuing education courses per 1,000 working hours stagnated (6 hours for both years). Compared with the other participating countries, Germany occupies the middle of the field, as was the case in 2005.

On EU-28 average, 56% of companies offer their employees continuing education measures in the form of continuing education courses. At least 80% of companies offering courses offer external courses in 20 countries; this figure is even 90% or more in 11 countries, including Germany. The figure is slightly lower in Malta, Bulgaria, Greece, Latvia, Italy and Romania, but even Romania achieves a value of 72%. The EU-28 average is 87%.

If the proportion of hours allocated to external or internal continuing education courses is taken into consideration, the differences are significantly less than with the proportion of companies which offer the respective courses. This relates to the fact that a larger number of company employees usually participate in internal courses; however it is frequently only one person who participates in external courses and the number of hours is accordingly low.

6 The results for the countries concerned are published in the Eurostat database. Results were available for 25 countries as of March 2013. The data is provisional. Cf. <http://epp.eurostat.ec.europa.eu/portal/page/portal/education/data/database> (access date: 20.02.2013).

7 Available online: http://datenreport.bibb.de/html/index_en.html; see page 33

Table 22: Rates of participation in occupation-related continuing education and training by selected items, 2007 to 2012 (%)

	Occupation-related continuing vocational education overall				In-company continuing vocational training				Individual, occupation-related continuing vocational education			
	Trend comparison			2012 extended information basis. ¹	Trend comparison			2012 extended information basis. ¹	Trend comparison			2012 extended information basis. ¹
	2007	2010	2012		2007	2010	2012		2007	2010	2012	
Region												
Germany	39	36	42	42	30	28	35	37	13	12	11	8
Old federal states	38	36	41	41	30	28	35	36	13	12	10	8
New federal states	42	36	47	47	32	27	39	40	14	12	12	10
Sex												
Men	43	38	46	47	35	30	40	41	13	11	9	8
Women	34	33	38	38	26	25	30	32	13	13	12	9
Employment status												
Employed full-time	51	46	54	54	43	39	48	49	15	12	10	8
Employed part-time	40	40	46	46	31	30	37	40	14	14	14	10
Unemployed	22	21	22	22	8	4	6**	6**	15	18	17	16*
People in school education/vocational education and training	47	25	35*	35*			15**	16**	36	17	22**	20**
Other unemployed persons	7	7	10	10	4	3	5*	6*	4	5	5*	4*
Age												
25 to 34 years old	42	34	45	45	32	24	37	38	14	14	12	10
35 to 49 years old	44	41	47	47	35	33	39	41	14	13	12	9
50 to 64 years old	29	30	36	36	23	23	30	31	10	10	9	7
Migration background												
Germans with no migration background	41	38	46	46	32	30	38	40	14	12	11	9
Germans with migration background	28	25	28	28	23	18	21*	22	8	10	9	8**
Foreigners	24	22	24*	24*	17	13	18*	19*	9	11	6**	6**
Certificate of secondary education												
Low	24	21	27	27	19	15	22	23	7	7	6	5
Medium	44	39	45	45	35	30	38	40	13	12	10	8
High	55	49	57	57	42	39	47	49	23	17	17	14
Vocational qualification												
No vocational education or training	19	18	25	25	13	10	18	19	7	10	7	7*
Apprenticeship/Vocational school	38	33	37	37	31	26	32	33	11	9	8	7
Master/Other specialist vocational school	53	48	58	58	43	41	51	53	17	13	12	9*
Degree from a university (of applied sciences)	57	56	61	61	44	43	50	52	24	22	19	15
N absolute maximum (unweighted)	6.509	6.103	6.213	6.213	6.509	6.103	6.213	6.213	6.509	6.103	6.213	6.213

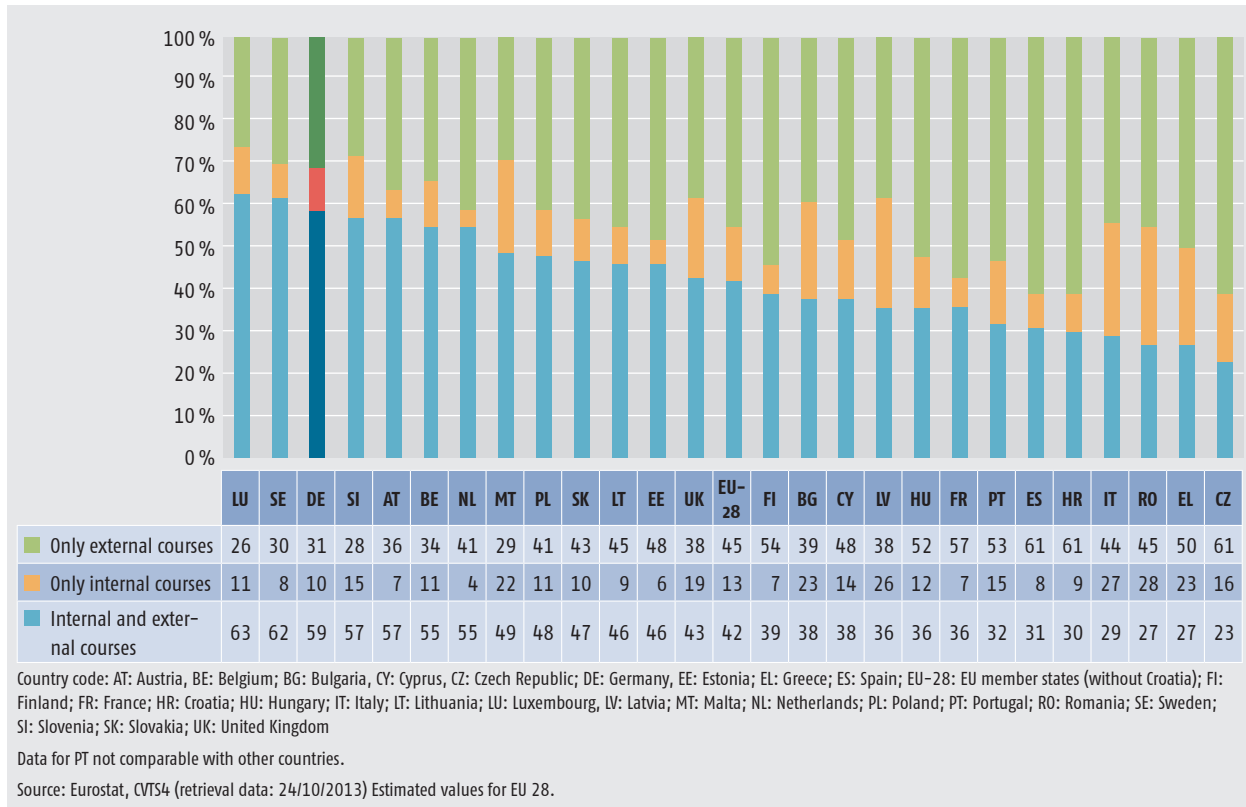
¹ 2012 extended information basis.

* Number of cases (unweighted) 40–79 cases

** Number of cases (unweighted) 20–39 cases

Source: Adult Education Survey (AES) 2007, 2010, 2012; calculations from the German Institute for Adult Education

Figure 10: Proportion of companies with internal courses, external courses or both course forms in 2012 (in % of companies with courses)

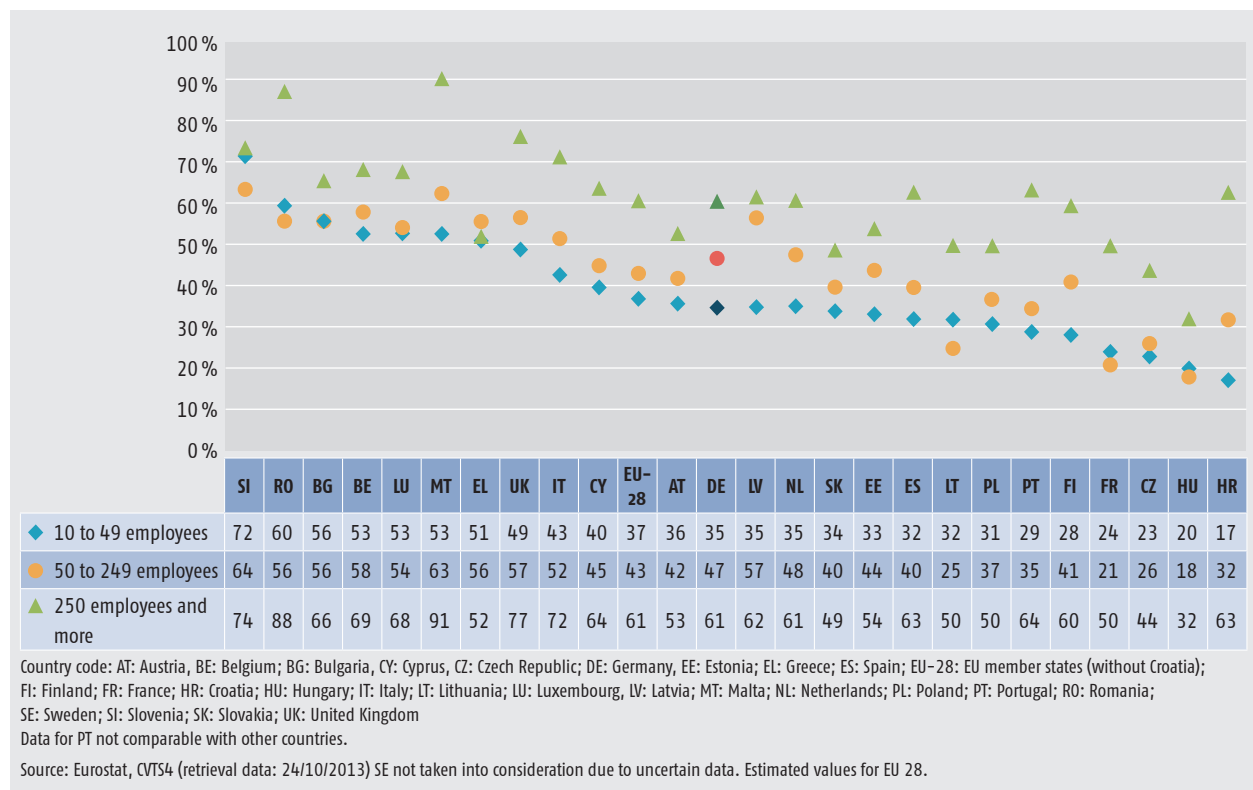


On EU-28 average, the share of internal course hours as part of all course hours was slightly higher than that of external course hours, at 53 %. The internal courses registered a higher share in 15 countries, including Germany. The prevalence is particularly marked in 8 countries, especially in Malta and Romania, with shares of 81 % and 85 % respectively. External courses account for the larger share of course hours in 10 countries. Particularly high shares are reached in Hungary, with 72 %, and the Czech Republic and Lithuania, with 64 % each. Preference for internal or external courses measured against volume of hours did not change in most countries or the EU-28 average between 2005 and 2010. Although the share of internal course hours as part of all course hours increased in 12 countries and the share of external course hours in 8 countries, this did not lead to the 50 % mark being exceeded in most countries. In Latvia, the Netherlands, Slovenia and Cyprus, internal courses had a higher share of overall course hours in 2010 in contrast to 2005; in the Czech Republic, the number of external hours is now

greater. If the results from 1999 are also considered, it appears that Belgium, Bulgaria, Germany, Italy, Luxembourg and Romania had a higher share of hours falling to internal courses in all 3 survey periods. In contrast, external courses in Estonia, Lithuania and Hungary each presented a higher share of hours (Figure 10).

The clear predominance of internal course hours still existing in 1999 and 2005 with shares of 63 % each has become less in Germany. Internal courses accounted for 56 % of course hours in 2010. With an evaluation according to company size categories, therefore, a stronger link to the internal courses on offer and a weaker link to external courses is to be expected. In all countries, the proportion of companies offering courses with internal courses increases with the size of the company. In Germany, the proportion of companies offering courses with internal courses is very high: 64 % for small companies, 77 % for medium-sized companies and 93 % for large companies. In all size categories, Germany is well above

Figure 11: Share of internal course hours as part of all course hours according to company size categories in 2010 (in %)



the EU-28 average and in the top group of countries (5th or 6th place). Compared with 2005, however, the shares have decreased slightly (-3 percentage points for small and medium-sized companies and -2 percentage points for large companies) (Figure 11).

If the proportion of hours accounted for by external or internal courses is considered, it appears that external course hours are clearly predominant when it comes to small companies. Overall, the share of internal course hours as part of all course hours has fallen in all 3 size categories; external courses have gained significance accordingly.

Participation in occupation-related continuing education and training

Over half of all companies (53 %) promoted continuing education activities in 2012. The high participation level in 2011 is thereby confirmed – in comparison with 2010 there was an increase of 9 percentage points. Explanatory approaches to this development are the demographic change and the increased need for skilled labour caused

by the baby boom generation approaching retirement age as well as balancing processes for continuing education activities which were suspended after the 2008 economic and financial crisis.

While 44 % of the smallest companies commit to their employees' continuing education, this figure is 70 % for small companies, 90 % for medium-sized companies and nearly all large companies. When the regions are taken into consideration, it becomes evident that there are hardly any regional differences.

In 2012, the percentage of all employees involved in continuing education was 32 %. Almost every third employee therefore participated in continuing, company-promoted education measures. This means that the share increased slightly in comparison with the previous year and can confirm the previous year's high level analogously to companies' participation in continuing education. Compared with the beginning of the observations available here, the rate of continuing education registered an increase of 14 percentage points.

In-company continuing education and other strategies to meet personnel requirements

Against a backdrop of increasing qualification and work requirements, in-company continuing education has been given a central role in meeting company-specific training needs. The 2013 BIBB qualification panel identifies company activities for the year 2012. According to this panel, more than two thirds (70.0 %) of the approximately 2 million companies in Germany with employment relationships subject to social security contributions supported continuing education measures for their employees in 2012. Participation in continuing education therefore decreased slightly compared with the previous year's value of 72.3 %, but is at a similarly high level.

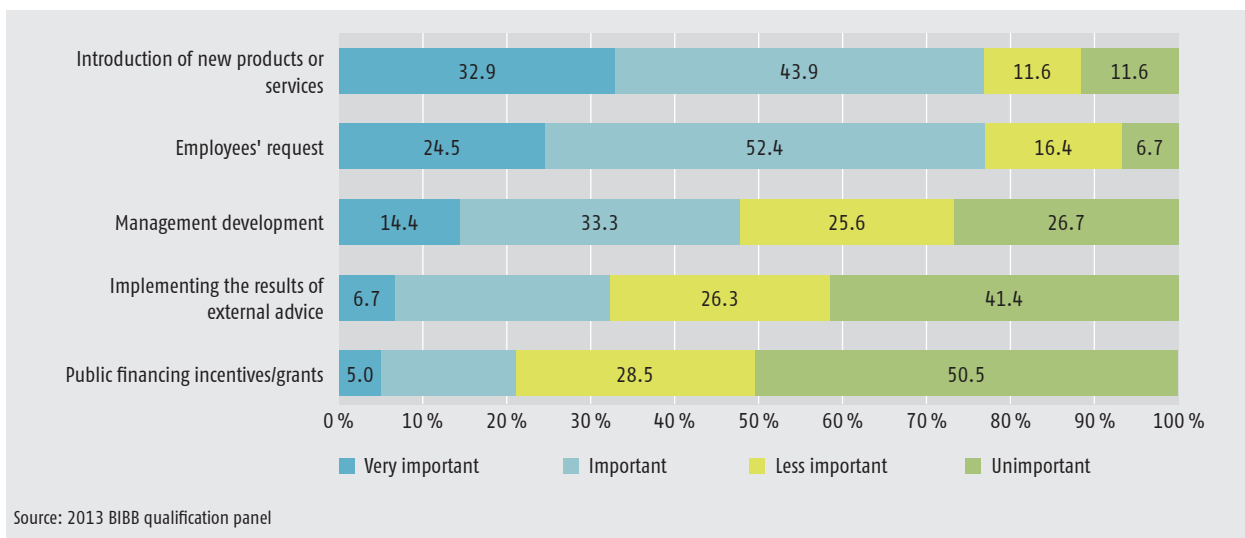
For every third company (32.9 %) participating in continuing education, the introduction of new products or services is a very important reason for supporting continuing education measures for its employees; for a further 43.9 %, this is considered an important reason. In-company continuing education is used to meet the need for new qualification requirements. Employees' requests for appropriate continuing education measures are similarly important in the companies' decision to implement continuing education measures. This may be interpreted as a reference to the implementation of continuing education measures being largely geared towards demand from employees and possibly also being used as a management tool, for example

to increase motivation. The management development is a very important (14.4 %) or important (33.3 %) reason for investing in continuing education measures for employees for almost half of all companies (see Figure 12).

It has also become apparent that companies which offer employment and thereby try to meet their need for new skilled labour by recruiting employees on the external labour market are more frequently active in continuing education than companies which do not offer employment. A combination of participating in vocational education and training and recruiting employees externally results in 4 company types which are distributed as follows: Of the approximately 21.1 % of companies which employed apprentices in 2012, more than half of the companies (11.4 %) offered additional employment positions. Just under a third of all companies (30.0 %) offered employment positions in 2012 but did not employ any apprentices. With a figure of 49.0 %, just under half of all companies belonged to the group of companies which neither provided training nor offered employment positions in 2012.

The following result emerges, distinguished according to company type: With a figure of 85.9 %, the group of companies which employed apprentices and offered employment positions in 2012 included the highest share of continuing education companies. The second-highest share can be found in companies which offered employ-

Figure 12: Companies' rationale for implementing continuing education measures (in %)



ment positions but do not provide vocational education and training (78.9%). If apprentices are employed but no employment positions are offered, the share of companies providing continuing education and training is 73.2%. The group of companies which neither provided training nor offered employment positions in 2012 accounts for the lowest share by far (60.5%) of companies providing continuing education. A possible explanation for this is that there is relatively little need for qualification measures and skilled labour within this group because these results confirm, overall, that in-house commercial training and recruitment of external labour represents a complementary strategy for in-company continuing education.

Considerable differences are evident between the four company types among the smallest and small companies with up to 19 employees: The share of companies providing continuing education is higher for companies which employ apprentices and/or offered employment positions than in the group of companies with no apprentices or offers of employment positions. In contrast, participation in continuing education among all companies with 100 or more employees is almost 100%. In this case, whether or not they are companies providing vocational education and training or offering employment positions is insignificant. It should be observed, however, that the larger the company, the more likely it is that it will provide training or offer employment positions. In a comparison of the 4 company types, it is also apparent for companies with 20 to 99 employees that the companies which did not provide training or offer employment positions in 2012 showed the highest share of continuing education; however, this statement should be interpreted carefully and is of only limited reliability due to the low number of cases.

Provision of continuing education and training

A key topic of the 2013 wbmonitor survey⁸ was the creation of transparency regarding learning services and new forms of provision, beyond the classic courses, which have not yet been sufficiently recorded in education report-

8 wbmonitor is a collaborative effort of the Federal Institute for Vocational Education and Training (BIBB) and the German Institute for Adult Education – Leibniz Centre for Lifelong Learning e.V. (DIE). In May every year, all providers of vocational and/or general continuing education known to the wbmonitor (2013: 15.900 providers) are called to participate online in the survey.

ing. The economic climate of continuing education was ascertained, as it is each year, and structural data from the provider landscape was gathered.

Providers of continuing education and training

The wbmonitor climate value for all providers was +28 in 2013 and therefore a few points higher than in previous years (2012: +25; 2011: +22; 2010: +23) (see table 23). Considering the 4 main segments of the continuing education sector puts the impression of economic stability into perspective, however.

While the economic mood of providers predominantly financed by participants and particularly those predominantly financed by employment agencies/job centres saw a positive development, the climate values of the providers which predominantly obtain their revenues from municipalities, states, the federal government and/or the EU got weaker. The continuing education sector was divided into two parts, economically: Compared with the positive economic situation of the providers predominantly financed by private funds (companies/participants), the economic climate of the providers financed primarily by public or German Federal Employment Agency funds was much more cautious, but nevertheless slightly positive.

The thematic spectrum of continuing vocational education is wide in Germany and the supply situation can be viewed as comprehensive. The range of themes most frequently offered includes management training and training in self-management and soft skills; 68.1% of all providers offer this and for 27.8% this is a key aspect of their offering.

Like the spectrum of topics on offer, the types of continuing education provider are heterogeneous. Private institutions make up the largest group of the active continuing education providers known to wbmonitor at the time of the 2013 survey with a figure of 45.2%, while 27.4% are commercially structured and 17.8% are non-profit. Institutions operated by large social groups (churches, political parties, unions, foundations, associations, clubs and similar) make up 16.7% of the provider spectrum, followed by adult education centres with a share of 13.5%. The remaining provider types make up a quarter

Table 23: Climate value, business situation and expectations for selected categories of CVET providers in 2013

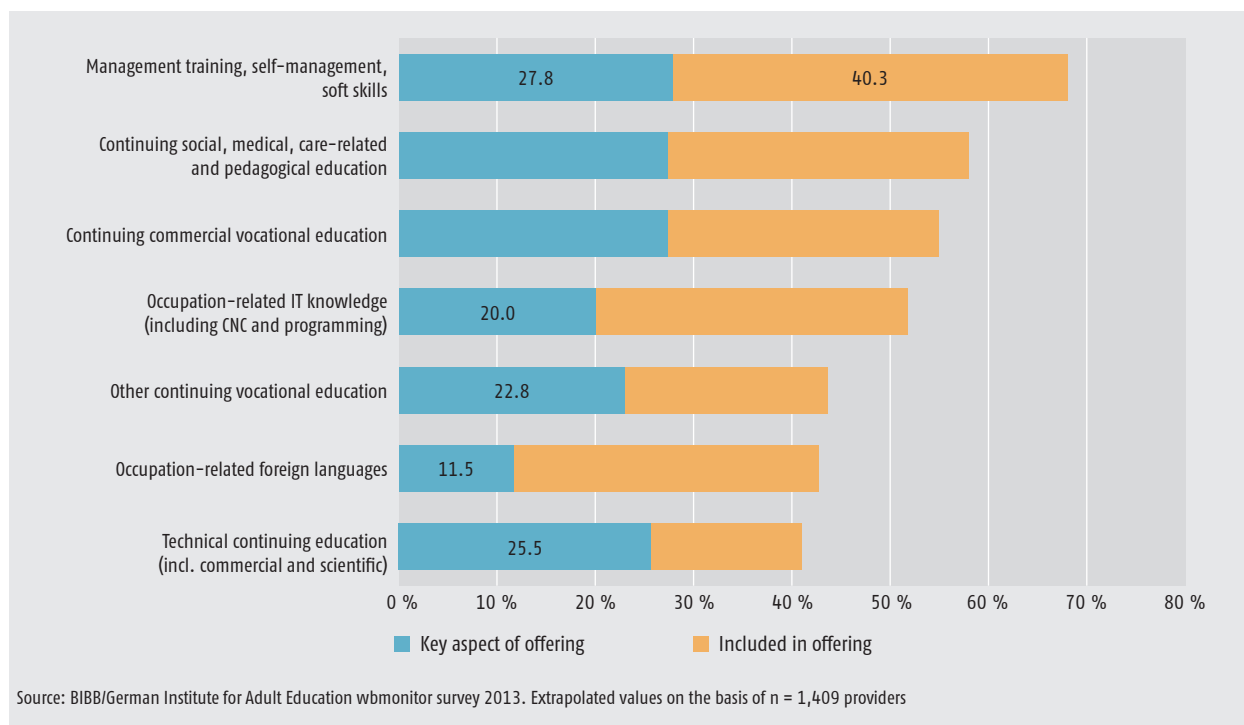
		Climate value	Situation assessment	Expectation in one year	Number of providers (situation)
		Averaged from situation and expectation	Balance* positive/negative	Balance* better/worse	Extrapolation based on n providers
All providers		28	34	22	1.086
Type of institution	Commercial private	35	31	38	294
	Non-profit private	31	41	21	192
	Company educational institution	11	10	12	38
	Adult education centre	7	19	-5	184
	Vocational school, university (of applied sciences), academy	44	45	43	111
	Industry-oriented (chamber, guild, professional association and similar)	51	60	42	73
	Church, party, union, foundation, association or club institution	30	38	23	181
Type of institution, summarised**	Private/Industry-related	36	35	37	405
	(Rather) non-profit	31	40	22	373
	School/public	17	26	8	295
Location	Old federal states	30	35	24	884
	New federal states and Berlin	21	26	16	202
Employees/civil servants in continuing education	0 to 9	28	32	25	703
	10 to 49	22	33	11	275
	50 and more	50	50	49	56
Participants' revenue/contribution	No revenue	30	31	30	190
	1 % to 25 %	25	28	21	357
	26 % to 49 %	10	20	1	155
	50 % and more	45	53	38	350
Companies' revenue/contribution	No revenue	21	29	13	373
	1 % to 25 %	26	33	19	384
	26 % to 49 %	38	43	34	88
	50 % and more	50	46	53	207
Employment agencies' revenue/contribution	No revenue	31	37	25	542
	1 % to 25 %	36	40	32	297
	26 % to 49 %	20	16	23	59
	50 % and more	14	25	4	154
Municipalities', federal states', federal government's, EU revenue/contribution	No revenue	44	44	43	454
	1 % to 25 %	31	34	28	261
	26 % to 49 %	13	32	-4	144
	50 % and more	13	20	6	193
For comparison	ifo Institute for Economic Research service sector	15	21	10	

* The balance is the difference between the positive and negative proportion values with a theoretical margin of +100 to -100.

** 1: Industry-related or in-company educational institution active in the private and commercial sectors; 2: Active in the private and non-profit sectors or institution run by a large social group (church, party or similar); 3: Vocational university (of applied sciences) or adult education centre

Source: BIBB/German Institute for Adult Education wbmonitor survey 2013. Extrapolated values on the basis of n = 1,086 valid indications of data.

Figure 13: Topics in continuing vocational education (multiple answers, in %)



of all providers between them (these are: 3.7%; vocational colleges: 6.5%; universities [of applied sciences], academies: 4.2%; industry-oriented institutions: 8.4% as well as miscellaneous: 1.8%).

Learning services and new formats for continuing training

The continuing education providers' learning services and types of provision today go beyond what is depicted in the education reporting statistics as a result of surveys of courses, seminars and lecture events (e.g. adult education centre statistics, continuing education statistics from the states). The personnel costs associated with this are not transparent here either. The 2013 wbmonitor documented the following trends:

1. Of the providers who responded, an outstanding 85% share carried out continuing education consultations. Professional continuing education consultation requires both specialist knowledge of continuing education and its frameworks and consultation skills. In almost half of these continuing education institutions (45%), all consultants employed held a special, formal qualification; 38% of providers

which offered consultation had personnel of whom at least some were appropriately qualified and only every tenth.

2. In 2012, the consultations carried out dealt most frequently with "general orientation regarding continuing education opportunities". These either related to the institution's own provision or offers from other continuing education providers within the scope of cross-provider consultation. 60% of the institutions which responded had already exercised a piloting function such as this.
3. Continuing education consultation frequently relates to professional development processes and changes as an occasion for (potential) continuing education activities as well as their conditions, in particular financing/support. Approximately half (51%) of providers gave consultations on the second most common advice topic "Professional path, career" in 2012. Consultation on "Training company personnel", carried out by 46% of providers, is primarily geared towards management and human resources developers and not the employees themselves. Company training needs are the focus instead of individual continuing education interests.

4. Consultation on “Funding/financing continuing education” has increased considerably in the past 5 years. The reason for this may be the expansion of demand-driven funding models and programmes which are geared, above all, towards employee groups with unused labour market potential (such as the low-qualified, older people) with low incomes and in small and medium-sized companies.
5. Continuing education consultation and participation often takes place in conjunction with situations of personal change and provides accompaniment in transitions into new living contexts. “Returning to professional life” was a consultation topic for 45 % of providers in 2012. A good quarter of all providers (28 %) provided consultation on “Identifying/balancing competences”, a topic intended to shed light on the strengths of the people seeking advice. Although “Qualification for recognising foreign vocational qualifications” or “Access to university without a university entrance qualification” were only offered as a consultation topic by approximately every tenth continuing education provider (13 % and 10 %, respectively), they registered the greatest increases.
6. Online consultation has shown the biggest increase among the forms of consultation in the past few years. 42 % of the providers which carried out continuing education consultation in 2012 and provided information on forms of consultation used online consultation.
7. Another learning service offered by continuing education providers is conducting examinations and tests. They often help to acquire diplomas and certificates of special significance in the German education system as the qualification they provide enables access to further educational programmes and are a requirement for entry into various positions on the labour market. These were most commonly (final) vocational examinations (certificate courses, recognised diplomas, etc.) (59 %)
8. The technical innovations and developments in digital media have been vast. The increase in use of digital media in the context of the teaching and learning reported by the continuing education providers has been accordingly strong. This is particularly the case in the use of mobile learning (e.g. apps) and Web 2.0/social media which include blogs, wikis, Facebook groups, etc. However, only a minority of continuing education providers are affected by this because the

incidence of this kind of learning is still low: In 2012, only 12 % of providers who responded used Web 2.0 and social media as a learning form and 4 % used mobile learning.

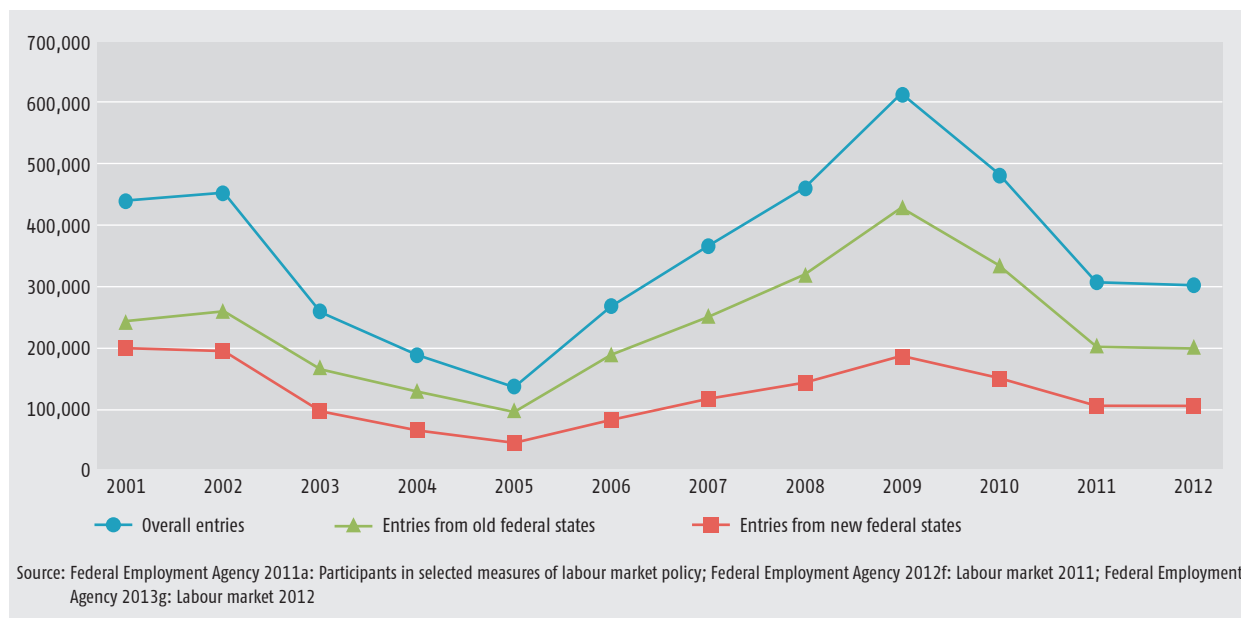
Publicly funded continuing education and training

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 Book Three of the Social Code (SGB III). Support by the job centres for employable persons requiring assistance is provided under Book Two of the Social Code (SGB II). Among the labour market policy instruments that make qualification possible for people within the jurisdiction of SGB II and SGB III are continuing vocational education and training, continuing vocational education and training for persons with disabilities and ESF-financed qualification programmes while on short-time work.

The promotion of measures for continuing vocational education and training pursuant to SGB III (employment promotion) and since 2005 pursuant to SGB II as well (basic income support for job-seekers) is one of the essential elements of active employment promotion. It aims to improve the individual opportunities of people in the labour market and at the same time the competitiveness of the enterprises. In the last few years, initially between 2000 and 2005, support for continuing vocational education and training has been curtailed through redirection of funds in the context of the regional labour market programmes. Within the scope of services to improve skills, training activities pursuant to § 48 SGB III were increasingly used as well. The decline in funding for continuing vocational education and training activities continued to a lesser extent until 2005. Starting in 2006, funding for continuing vocational education and training was increased temporarily; it reached its high point in 2009. The support diminished again in 2010. With 299,652 entering continuing vocational education measures in 2012, funding levels declined by 1.8 % and hardly changed in comparison with the previous year.

Figure 14: Entry into continuing vocational education measures according to SGB II and SGB III from 2001 to 2012



The proportion of measures with qualification in a recognised training occupation has almost doubled since 2008. Of the 299,652 admissions in 2012, measures with qualification in a recognised training occupation accounted for 39,485 of them; this corresponds to a share of 13.2%. Many people who have not completed vocational education training, however, participate in vocational education and training courses which do not result in a certificate. In 2012, people without a vocational qualification accounted for 35.4% of admissions into vocational education and training (2011: 33.2%; 2010: 30.7%).

The funding decreased along with the participation figures in 2012. Total expenditure in the jurisdiction of SGB III for funding participation in continued vocational education measures was € 1.44 billion (2011: € 1.7 billion). This expenditure consists of the continuing education costs from the integration budget (training course costs, travel costs, childcare costs, overnight accommodation and meal costs) and expenditure for granting unemployment benefit in the event of participation in continuing education. The total expenditure for basic social security on funding for continuing vocational education also declined and was € 571.62 million (2011: € 645 million).

Upgrading training assistance act

The Upgrading Training Assistance Act (AFBG), funded jointly by the federal and state governments since 1996 – the so-called „Meister-BAföG“ – establishes an individual legal claim to support for upgrading vocational training, that is, master’s courses or other training leading to the acquisition of an equivalent further training certificate.

According to the Upgrading Training Assistance Act statistics published in September 2012, the number of persons receiving funding in 2012 was 168,284. This corresponds to an increase of 1.1% in comparison with the previous year. 68,863 (40.9%) completed full-time measures, 99,421 (59.1%) part-time measures. In comparison with the previous year, the rate of change in the number of people receiving funding for full-time measures was +2.8% and for part-time measures -0.9%. The proportion of women in the overall figure of people receiving funding was 32.2% (54,159). As in previous years, the largest share of people receiving funding was the age group 20 to under 35 (83%). In contrast with the previous year, the largest share of participants among those receiving funding was the age group 20 to under 25 (34.2%), followed by the age group 25 to under 30 (33.6%).

Figure 15: **Approved grants pursuant to the Upgrading Training Assistance Act (AFBG) total, full-time and part-time, from 2001 to 2012**



Continuing education and training scholarship programme

The continuing education and training scholarship programme of the Federal Ministry of Education and Research (BMBF) supports the further qualification of talented entry-level workers following successfully completed initial vocational education and training. Scholarship holders can apply for grants totalling € 6,000 for any number of eligible continuing training activities within the three-year eligibility period.

In 2013, more than 6,300 new scholarship students were accepted into the scholarship programme by just under 300 chambers and other responsible bodies. The German Federal Ministry of Education and Research provided approximately € 21.8 million to fund 3 active scholarship student years in 2013. In 2013, a total of 879 scholarship students with a migration background were accepted into the funding programme. The agricultural and home economics occupations account for the lowest share of 4.5 % and the independent professions the highest of 19.7 %.

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. The only funding programme for talented people 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. By the end of 2013, 5,881 scholarship students had been accepted and there were 946 new intakes in 2013 alone. Since the beginning of the programme, it has been possible to grant a good quarter of all applicants a scholarship, in total. By the end of 2013, 1,202 people receiving funding had successfully completed their studies.

Promotion of subsequent acquisition of a vocational qualification

Vocational qualifications can be acquired later on within the scope of retraining according to Section 58 et seq. Vocational Training Act, Section 42 e-I of Crafts and Trades Regulation Code or via admission into examinations in accordance with Section 45 Paragraph 2 Vocational Training Act or Section 37 (2) Crafts and Trades Regulation Code (external examination). As a high number of young adults have not yet completed any vocational education and there is little prospect of entry into and success in retraining which is shorter in comparison with the normal apprenticeship period, the concept of second chance programmes leading formal qualification was developed in the mid-1990s.

At present, training leading to formal qualification is being addressed on a federal level in the following programmes:

1. The vocational qualification prospects programme launched by the German Federal Ministry of Education and Research for the period 2008 to 2013 has the aim, within a funding initiative for modular training programmes leading to a formal qualification, of creating a sustainable framework for second-chance qualification and thereby decreasing the proportion of semi-skilled and unskilled young adults with and without employment.
2. With national training modules which have been tested by the JOBSTARTER CONNECT programme, funded by the German Federal Ministry of Education and Research since 2009, the intention is for sub-sections of vocational training – from the so-called transitional area to second-chance qualifications – to be organised in a more efficient and viable way in order to enable even more young people to gain professional qualifications and entry into working life.
3. The continuing education (partially leading to formal qualification) of people with low qualifications (employed or unemployed) can be funded in accordance with Section 81 SGB III. The funding opportunities for people with low qualifications were extended with the “Gesetz zur Verbesserung der Eingliederungschancen am Arbeitsmarkt” (German Act Improving Chances of Integration into the Labour Market) passed in December 2011.

Regulated further training qualifications

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 222 federal ordinances and statutory provisions for further vocational training and retraining. In 2012 and 2013, 12 federal ordinances for further vocational training were enacted: Master butcher, master miller, master model maker, certified logistics systems assistant, certified business administrator for freight haulage and logistics, certified business administrator for passenger transportation and mobility, certified foreman for shoe manufacturing, certified social security business administrator, certified service technician for two-wheeled vehicles, master textile designer, master container and apparatus builder, certified foreman for glass.

The qualifications from the federally-governed further training programme are allocated to levels 5 to 7 of the German Qualifications Framework (DQR); the academic qualifications (B.A., M.A., PhD) to levels 6 to 8. The DQR level assigned to each will be disclosed on certificates in future, meaning that the equivalence of vocational and academic education will be recognised socially.

Continuing vocational education and training in trade and technical schools

In the area of regulated continuing vocational education, people who are interested in continuing vocational education will 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 education courses at technical colleges are among the continuing vocational training options governed by state law. They are linked

with first vocational training qualifications and professional experience.

For the 2012/2013 school year, there were a total of 1,416 technical colleges (+1.9% compared with the previous year) with a total of 185,202 pupils (+2.5% compared with the previous year) across Germany. If one considers the development of the number of pupils at technical colleges since the 2008/2009 school year in Germany overall, it appears that there has been an increase of more than a fifth (+21.6%), from a total of 152,268 pupils in the 2008/2009 school year to 185,202 in the 2012/2013 school year, with a balanced male/female ratio during the entire period under review. In total, 59,223 graduates passed their final examinations at technical colleges in the 2012 school year. This is an increase of 4.9% in comparison with the previous year. Most qualifications were registered in the categories “education, social and home economics professions, theology” with 20,508 graduates.

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). Further training is usually taken after vocational training and appropriate professional experience, usually over several years. The quantitatively most significant regulated further training occupations include those of master, technician, business economist, business administrator and assistant. Within the German qualification framework, a master, technician or business administrator are classed as being equal to a B.A. at level 6.

Figure 16: Development of passed further training examinations in accordance with the Vocational Training Act/Crafts and Trades Regulation Code according to sex, 1992 to 2012

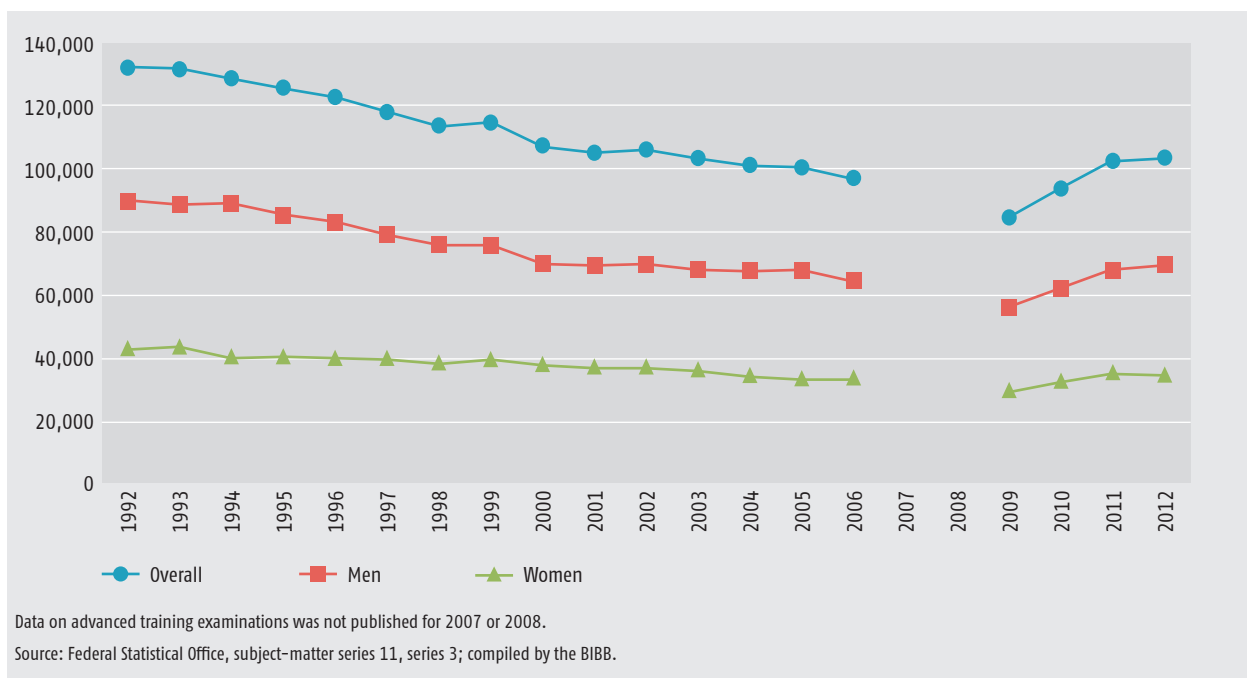
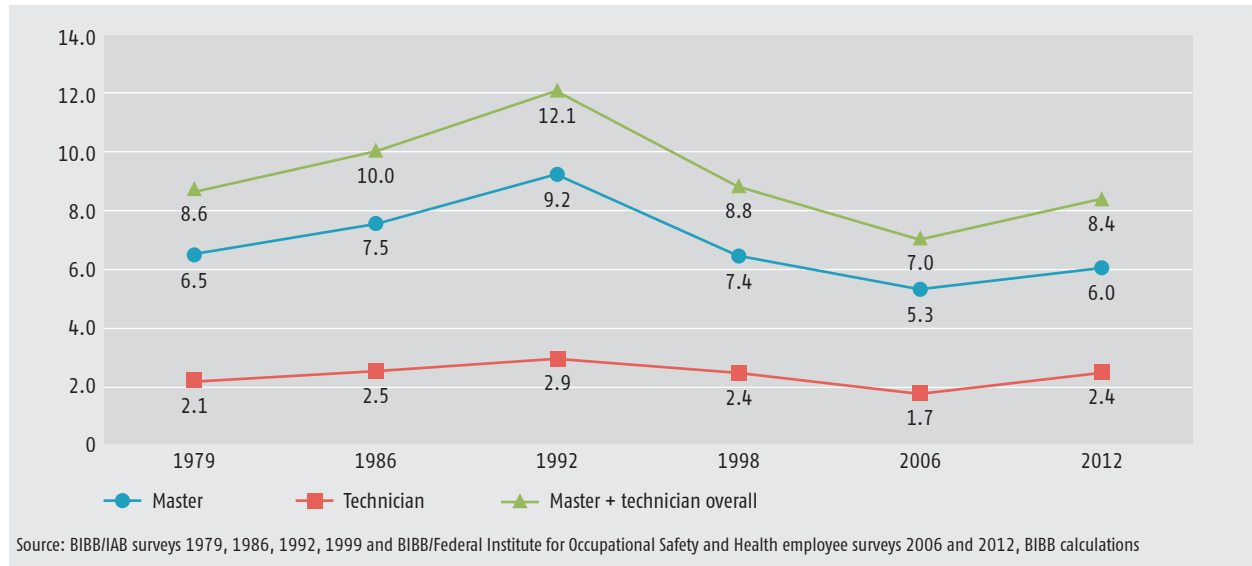


Figure 17: **Proportion of male employed persons from 15–65 with a master/technician qualification (in %) in western Germany**



A significant decline in further training examinations being passed has been registered since 1992, while the total number of further training examinations being passed has stabilised again since the beginning of the millennium.

Distinguished by sex, it becomes apparent that the examination figures have declined more strongly among the men than the women. If the most common specialist fields are considered, it becomes apparent that the decline was to the disadvantage of master craftsmen (49 % decline between 1992 and 2012; -21,731) and foremen (34 % decline between 1992 and 2012; -5,081). In contrast, there were gains in the commercial sector. The examination figures for most commonly filled business administrator examination group more than tripled from 9,833 to 31,353 (+219 %). The specialist fields of business administrator and business economist also registered increasing examination figures. The proportion of commercial further training examinations. Distinguished by specialist field and sex, it appears that 55,404 of the 102,987 advanced training examinations passed in the reporting year 2012 may be allocated to commercial advanced training examinations (regardless of training area).

Someone who passes an further training examination receives a recognised further vocational qualification

with their own designation of occupation. 6.7 % of employed persons in Germany (absolute: 2,624,428 employed persons) specify their highest vocational qualification as being an further vocational qualification. In 2012, 7.6 % of employed persons were able to provide evidence of further training as their highest vocational qualification.

3. International issues: apprenticeship systems, recognition and mobility

Forms of company-integrated vocational education and training in Europe

The alarmingly high level of youth unemployment in many European countries is one of the most important reasons for the high degree of interest shown in the dual vocational education and training system in the past two years. The European Commission and member states' increasing interest in dual vocational education and training began in the face of the poor labour market situation in the mid-2000s.

Forms of duality in vocational education and training

In 2014, a public consultation on the quality of traineeships/internships was conducted and included in the recommendation of a European framework for internships. Apprenticeships (company vocational training contracts)

were ruled out if it was assumed that sufficient regulation was already in place. In order to distinguish the two concepts better, the following synopsis was developed in combination with the study on internships in Europe. It becomes apparent that the term "apprenticeship" is defined and regulated more narrowly with regard to many different aspects.

If one considers the different vocational education and training systems, three basic forms can be identified along the criteria outlined above:

1. "Apprenticeships", or regulated company vocational training contracts, exist in many countries and also in the USA and Canada, for example. They are often established in the post-secondary education segment or in continued vocational education. Some are only directed and controlled by companies and others as a social partnership. They allow for learning "on the

Table 24: Key characteristics of apprenticeship versus traineeship

	Apprenticeship	Traineeship
Scope	Training with vocational qualification	In-company practice in addition to a training programme or individual education process
Objective	Vocational qualification/Formal qualification	Documented practical experience
Education system levels	Generally EQF levels 3–5	All levels (including education and university education prior to joining the work force), partly even after completing training
Content	Full set of knowledge, skills and capabilities required for the occupation	Orientation and/or components of knowledge required for an occupation and corresponding skills and capabilities
Learning in the work process	Equivalent to school lesson	Usually in addition to lesson or as an option
Time	Defined, medium and long-term (up to four years)	Varying, mostly short or medium-term (frequently less than one year)
Status and remuneration	Employee with corresponding contractual relationship, remuneration on a tariff and/or statutory basis	Intern/Pupil/Student frequently on the basis of an agreement with the company or educational institution Varying, frequently unpaid
Regulation	Regulated; often tripartite	Often hardly regulated or unregulated
Stakeholders	Social partners, education providers, state	Individuals, companies, state, education providers

Source: European Commission, Hadjivassiliou et al. (2012). Study on a comprehensive overview on traineeship arrangements in Member States. Final Synthesis Report. Brussels, Institute for Employment Studies, Istituto per la Ricerca Sociale; BIBB, modified and translated by the author.

job” and “off the job” as advanced further training in the company, therefore alternating learning during the work process with accompanying lessons.

2. In-company vocational training, integrated into secondary level II of the education system with great quantitative significance and combined with a specific employee status (in-company apprenticeship contract) is an exception from an international perspective. The countries which have this extended “dual system” are Germany, Denmark, Austria and Switzerland.
3. Cooperative vocational education and alternating vocational education and training constitute further basic forms of dual vocational education and training. On this level of the education system, the model of “co-operative education” is frequently encountered, for example in the North American community colleges. The cooperation here is one initiated on-site between companies and education providers (college, university) and not specified via any form of federally regulated and institutionalised duality.

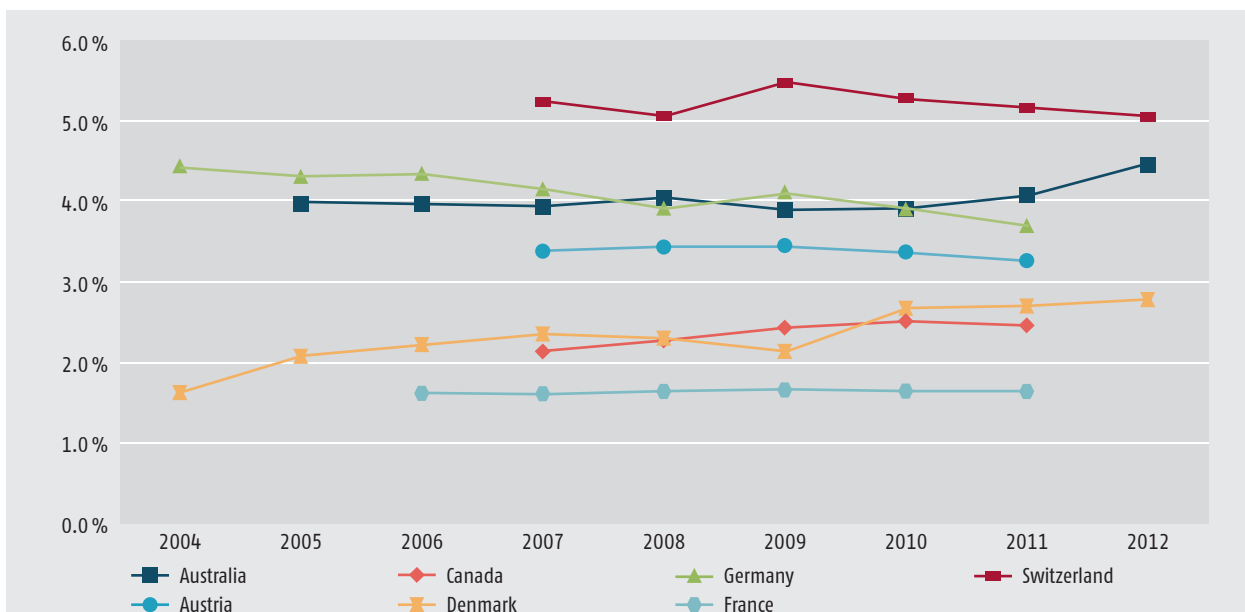
The co-existence of dual vocational education (in-company vocational education as part of the education system) and school-based vocational education is found

in various vocational education and training systems, which includes longer periods of practice, for example pupil internships. Alternating vocational education and training (“alternance”) corresponds to this model. This form of dual learning can be found both in dual vocational education and in vocational education and training systems which are more strongly geared towards schooling, for example France and Finland.

Vocational education and training with a share of in-company training usually takes place following upper secondary education and is statistically considered a part of continuing VET. Hence it makes sense to consider in-company training in the context of employment statistics (figure 18). Using this perspective, Australia appears as an interesting case since the rate is nearly as high as in Germany (Australia 4,0 %; Germany 4,2 % for 2008). These data are usually not considered in the international statistics by OECD and UNESCO.

Dual training schemes are manifold. They can be considered as a continuum starting from non-regulated traineeships to the most regulated forms of in-company training such as the ones existing in dual apprenticeship systems.

Figure 18: Proportion of apprentices among employed persons (apprenticeship rates) – international comparison (in %)



Source: Data on employed persons from the ILO database (ILOSTAT) on the basis of national employee surveys. Data regarding apprenticeship contracts is based on information provided by the national statistic agencies. Deviations from the apprenticeship rate in chapter A4.10.1 are a result of the differing denominators: “Employed persons” here; “Employed persons subject to social security contributions” in the calculation for Germany.

Typical forms of in-company integrated training include apprenticeship, cooperative training and alternating training. Only within the first form do the apprenticeship relationship rely upon a contract with a company. This contractual relationship has to be considered separately from other forms of duality which for instance include work-based learning by a pupil in the course of his or her vocational training.

Mobility

The increase in mobility in vocational education is a high priority in European and national education policy. The goal of increasing mobility in vocational education to 6 % by the year 2020 was defined in the context of the overall European work programme (Council of the European Union 2011). On a national level, in January 2013, the Bundestag formulated the goal of assuring that at least 10 % of apprentices gain experience abroad during their training in 2020 (German Bundestag 2012).

In 2013, funding was approved for over 20,000 scholarship students in just under 700 projects (Table 25), thereby continuing the strong increase in applications and approved applications for periods of learning abroad in 2013. The number of participants in the area of first vocational education and training qualifications more than doubled from 2007 to 2013. Based on the clear growth of the LEONARDO DA VINCI programme in the past 4 years, it can be assumed that this number has increased to over 4.0 %. In 2013, a good 30,000 young people in total took part in a visit abroad in the context of their first vocational education and training course. In

the LEONARDO DA VINCI programme, these periods of stay abroad during first vocational education and training courses last an average of more than 5 weeks. Two thirds of the scholarships were assigned to apprentices and one third to technical college students.

Recognition of foreign professional qualifications

The “Gesetz zur Verbesserung der Feststellung und Anerkennung im Ausland erworbener Berufsqualifikationen” (German Act Improving the Identification and Recognition of Professional Qualifications Acquired Abroad) (Recognition Act) came into force on 1 April 2012. With it, the possibilities of recognising vocational qualifications acquired abroad for the professions within the jurisdiction of the federal government have been expanded. By the end of 2013, corresponding state recognition laws were passed in 11 states for the professions which are based on state regulations.

10,989 applications were made for the recognition of a professional qualification acquired abroad in the reporting period. Almost 80 % of all applications relate to the recognition of a regulated profession; the remaining 20 % relate to non-regulated professions. There is a particular interest in recognising medical, healthcare professions. Over half of all applicants aspired to have a medical licence granted.

In total, more than half of all applicants were citizens of an EU state and more than one fifth were citizens of other European states. German citizens made up the largest

Table 25: Promotion of mobility within the LEONARDO DA VINCI programme, 2013

2013 round of applications LEONARDI DA VINCI mobility applied for/approved						
	Number of projects applied for	Number of projects approved	Number of participants applied for	Number of participants approved	Budget applied for	Budget approved
					In € million	In € million
First vocational training course	543	527	16,704	15,939	25.8	25.8
Persons in the labour market	97	77	3,388	2,286	8.7	7.6
Skilled labour in vocational education and training	80	76	2,206	2,041	2.5	2.5
Overall	720	680	22,298	20,266	37.0	35.9

Source: National Agency Education for Europe at the BIBB, status: September 2013

Figure 19: Results of recognition procedures whereby a decision has already been made for regulated and non-regulated professions

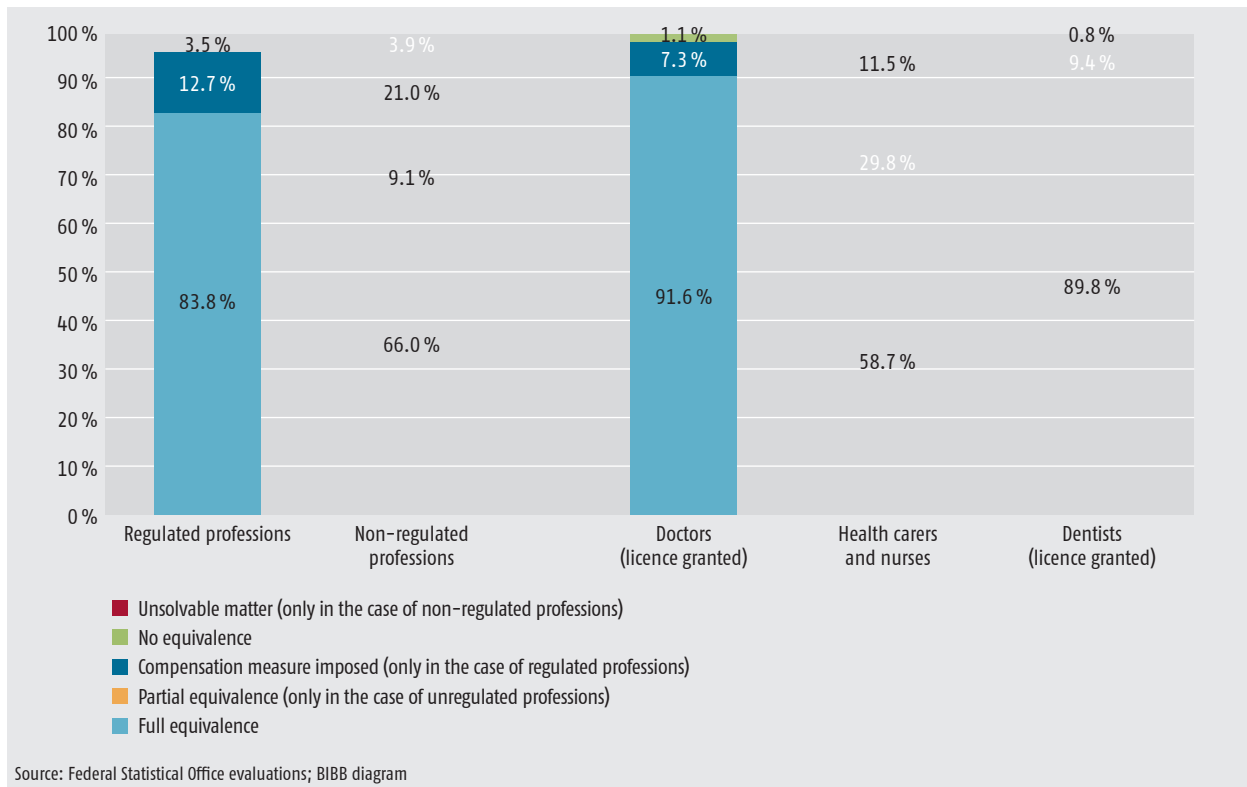


Table 26: Use of German professional profiles (2012 to 2013)

Profession	Competence federal government/federal state	Regulation	One-off page views	Page views
Teacher	Country	Regulated	23,045	32,094
Doctor	Federal government	Regulated	16,829	23,915
Engineer	Country	Regulated	16,312	22,981
Health carer and nurse	Federal government	Regulated	13,932	18,878
Pre-school teacher	Country	Regulated	10,647	14,973
Business economist	No competence	Non-regulated	5,812	8,509
Social education worker, social worker	Federal government	Regulated	5,205	7,134
Psychologist	Federal government	Regulated	4,579	6,240
Dentist	Federal government	Regulated	4,281	6,358
Geriatric nurse	Federal government	Regulated	4,159	6,296

Source: All portal usage figures collected via the web statistic tool PIWIK

national group with 15%. The country in which most applicants completed their training was Romania, which accounted for more than 10% of all applications. More than half of all professional qualifications were acquired in EU countries; more than a quarter were acquired in other European countries. By 31 December 2013, 7,980 applications out of a total of 10,989 had been decided upon. There are clear differences between the regulated and non-regulated professions, here. 81.8% of applications for regulated professions have already been decided upon; for non-regulated professions, the figure is 36.1%. One explanation for this could be that EU, EEA and Swiss citizens may receive automatic recognition for some regulated professions.

The internet portal “Recognition in Germany”, launched in April 2012, offers information on the recognition of foreign vocational qualifications in English and German. The demand for information on the procedures of professional recognition continued to grow in 2013. A total of 559,708 visitors used the portal.

A yearly average of 42% of visitors to the portal accessed it from abroad. 69% of foreign visitors come from an EU or European Economic Area (EEA) country and only 31% from a so-called third country. This lack of interest among people in third countries may be attributed to the fact that the possibility of emigrating to Germany is even more restricted for people from third countries.

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	Weiterbildung	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
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
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	Berufsbildung	Vocational Education and Training

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