

V. Labour market and wages

1. Population and labour market*

Annual averages									
Period	Population ¹ Number (thousand)	Labour force ^{2,3}	Employed persons ^{2,3}		Unemployed ^{3,4,5}	Unemployment rate ^{3,4,5,6} in %	Short-time workers ^{3,7} Number (thousand)	Job vacancies ^{3,4,8}	
			Total	Employees					
1950	49,989	22,608	20,734	14,136	1,869	11.0	.	119	
1951	50,528	22,998	21,286	14,787	1,714	10.4	93	118	
1952	50,859	23,396	21,743	15,330	1,652	9.5	125	116	
1953	51,350	23,810	22,328	15,999	1,491	8.4	83	125	
1954	51,880	24,359	22,960	16,694	1,411	7.6	56	140	
1955	52,382	24,901	23,839	17,618	1,074	5.6	25	204	
1956	53,008	25,409	24,532	18,356	876	4.4	25	223	
1957	53,656	25,851	25,092	18,925	754	3.7	19	222	
1958	54,292	26,068	25,317	19,164	764	3.7	55	222	
1959	54,876	26,127	25,609	19,525	540	2.6	26	291	
1960	55,433	26,325	26,063	20,073	271	1.3	3	465	
1961	56,175	26,604	26,426	20,565	181	0.8	3	552	
1962	56,938	26,672	26,518	20,860	155	0.7	4	574	
1963	57,587	26,767	26,581	21,099	186	0.8	11	555	
1964	58,266	26,771	26,604	21,335	169	0.8	2	609	
1965	59,012	26,901	26,755	21,625	147	0.7	1	649	
1966	59,638	26,842	26,673	21,637	161	0.7	16	540	
1967	59,873	26,270	25,804	20,908	459	2.1	143	302	
1968	60,184	26,139	25,826	21,041	323	1.5	10	488	
1969	60,848	26,403	26,228	21,624	179	0.7	1	747	
1970	60,651	26,738	26,590	22,251	149	0.6	10	795	
1971	61,302	26,895	26,706	22,613	185	0.7	86	648	
1972	61,672	27,101	26,854	22,887	246	0.9	76	546	
1973	61,976	27,463	27,181	23,304	273	1.0	44	572	
1974	62,054	27,524	26,923	23,183	582	2.2	292	315	
1975	61,829	27,330	26,244	22,648	1,074	4.0	773	236	
1976	61,531	27,196	26,141	22,713	1,060	4.0	277	235	
1977	61,401	27,231	26,201	22,904	1,030	3.9	231	231	
1978	61,327	27,449	26,460	23,218	993	3.8	191	246	
1979	61,359	27,840	26,969	23,801	876	3.3	88	304	
1980	61,566	28,318	27,419	24,265	889	3.3	137	308	
1981	61,682	28,247	27,455	24,330	1,272	4.8	347	208	
1982	61,638	28,485	27,241	24,150	1,833	6.7	606	105	
1983	61,423	28,514	26,994	23,935	2,258	8.1	675	76	
1984	61,175	28,558	27,224	24,166	2,266	8.1	384	88	
1985	61,024	28,794	27,612	24,550	2,304	8.2	235	110	
1986	61,066	29,079	28,141	25,056	2,228	7.9	197	154	
1987	61,077	29,283	28,535	25,476	2,229	7.9	278	171	
1988	61,450	29,498	28,937	25,879	2,242	7.7	208	189	
1989	62,063	29,690	29,479	26,399	2,038	7.1	108	251	
1990	63,254	30,322	30,413	27,305	1,883	6.4	56	314	
1991	64,074	30,783	31,264	28,117	1,689	5.7	145	331	
1992	80,594	41,339	38,360	34,567	2,979	7.8	567	356	
1993	81,179	41,281	37,862	34,019	3,419	8.9	890	279	
1994	81,422	41,577	37,879	33,906	3,698	9.6	332	285	
1995	81,661	41,654	38,042	33,993	3,612	9.4	152	321	
1996	81,896	42,022	38,057	33,904	3,965	10.4	204	327	
1997	82,052	42,424	38,040	33,800	4,384	11.4	128	337	
1998	82,029	42,776	38,495	34,186	4,281	11.1	75	422	
1999	82,087	43,220	39,120	34,733	4,100	10.5	97	456	
2000	81,457	43,861	39,971	35,958	3,890	9.6	59	435	
2001	81,517	43,712	39,859	35,832	3,853	9.4	94	434	
2002	81,578	43,727	39,666	35,604	4,061	9.8	174	375	
2003	81,549	43,614	39,237	35,103	4,377	10.5	167	270	
2004	81,456	43,743	39,362	35,101	4,381	10.5	122	207	
2005	81,337	44,172	39,311	34,930	4,861	11.7	103	256	
2006	81,173	44,081	39,594	35,159	4,487	10.8	54	354	
2007	80,992	44,033	40,272	35,803	3,761	9.0	26	423	
2008	80,764	44,097	40,838	36,359	3,259	7.8	58	389	
2009	80,483	44,317	40,902	36,411	3,415	8.1	1,078	301	
2010	80,284	44,287	41,048	36,533	3,239	7.7	429	359	
2011	80,275	44,520	41,544	37,017	2,976	7.1	100	466	
2012	80,426	44,916	42,019	37,497	2,897	6.8	67	478	
2013	80,646	45,300	42,350	37,855	2,950	6.9	77	457	
2014	80,983	45,619	42,721	38,262	2,898	6.7	49	490	
2015	81,687	45,917	43,122	38,717	2,795	6.4	44	569	
2016	82,349	46,352	43,661	39,320	2,691	6.1	42	655	
2017	82,657	46,784	44,251	39,978	2,533	5.7	24	731	
2018	82,906	47,206	44,866	40,641	2,340	5.2	25	796	
2019	83,093	47,543	45,276	41,117	2,267	5.0	60	774	
2020	83,161	47,610	44,915	40,860	2,695	5.9	2,847	613	
2021	83,196	47,597	44,984	41,027	2,613	5.7	1,744	706	
2022	83,798	48,014	45,596	41,687	2,418	5.3	337	845	
2023	84,537	48,542	45,933	42,054	2,609	5.7	149	761	

Sources: Federal Employment Agency, Federal Statistical Office and Bundesbank calculations. * Up to 1991 West Germany, from 1992 Germany. **1** 1961, 1970 and 1987 result of the census. **2** Domestic concept, 1950 to 1967 Bundesbank estimate. **3** Until 1958 excluding Saarland. **4** Up to and including December 2004 month-end figures, as of January 2005 mid-month figures. **5** As of January 2004, unemployed persons excluding participants in aptitude testing and training measures. Early 2005: rise influenced by inclusion of recipients of social assistance who are able to work. From May 2009, unemployed excluding persons newly registered on the books of private employment agencies. **6** Unemployed as a percentage of the civilian labour force; up to and including 1968 as a percentage of employed labour force. See also Table I.3 Unemployment rate according to ILO definition. **7** Until 1952 excluding Berlin. From 1992 to 2006 excluding short-time working in construction and agriculture. From 2007, in accordance with Section 96 of the Social Security Code III (SGB III) excluding recipients of seasonal short-time working benefits and restructuring short-time working benefits (short-time workers in rescue companies). From 2009, values revised following change in data recording methodology. **8** From January 2000, excluding government-assisted forms of employment and seasonal jobs, including jobs located abroad.

V. Labour market and wages

2. Labour income*

Period	Wages and salaries ¹				Net wages and salaries			
	Nominal		Real		Nominal		Real	
	Total	Per employee	Total	Per employee	Total	Per employee	Total	Per employee
	Annual percentage change	€ thousand	Annual percentage change	€ thousand	Annual percentage change	€ thousand	Annual percentage change	€ thousand
1950	.	1.5	.	7.6	.	.	.	.
1951	21.5	1.7	16.3	7.9	.	.	.	.
1952	11.4	1.9	7.9	6.5	.	.	.	.
1953	10.1	2.0	5.9	6.9	.	.	.	.
1954	9.5	2.1	5.2	5.2	.	.	.	.
1955	13.8	2.2	7.9	6.6	.	.	.	.
1956	12.1	2.4	7.9	6.1	.	.	.	.
1957	8.3	2.6	5.2	2.7	.	.	.	.
1958	7.9	2.7	6.7	3.8	.	.	.	.
1959	7.4	2.9	5.5	5.2	.	.	.	.
1960	12.4	3.1	9.4	8.4	.	2.6	.	.
1961	12.8	3.5	10.2	6.7	11.9	2.9	9.3	5.8
1962	10.8	3.8	9.2	6.1	10.1	3.1	8.5	5.5
1963	7.3	4.0	6.1	3.1	6.8	3.3	5.7	2.6
1964	10.1	4.4	9.0	6.6	9.5	3.6	8.4	6.0
1965	10.5	4.8	9.1	5.7	11.3	4.0	10.0	6.5
1966	7.3	5.1	7.3	3.6	5.9	4.2	5.9	2.3
1967	0.0	5.3	3.3	1.7	-0.5	4.3	2.9	1.3
1968	6.8	5.6	6.2	4.5	5.4	4.5	4.8	3.1
1969	12.2	6.1	9.2	7.2	10.4	4.9	7.5	5.5
1970	18.7	7.1	15.5	10.9	15.6	5.5	12.5	8.6
1971	13.0	7.9	11.2	5.3	11.7	6.0	9.9	4.1
1972	10.2	8.6	8.9	4.1	10.7	6.6	9.4	4.6
1973	13.0	9.5	11.0	3.3	9.6	7.1	7.6	0.2
1974	10.1	10.5	10.6	2.4	8.8	7.7	9.3	1.2
1975	3.7	11.2	6.1	0.6	4.1	8.2	6.5	1.0
1976	7.3	12.0	7.0	3.1	5.0	8.6	4.7	0.9
1977	7.5	12.8	6.6	3.8	6.5	9.1	5.6	2.8
1978	6.5	13.4	5.1	3.1	7.6	9.7	6.1	4.1
1979	8.1	14.1	5.5	-0.3	8.7	10.3	6.0	0.3
1980	8.5	15.1	6.5	-0.3	7.1	10.8	5.1	-1.5
1981	4.9	15.8	4.6	-1.4	4.8	11.3	4.5	-1.6
1982	2.9	16.3	3.6	-1.4	2.1	11.6	2.8	-2.1
1983	1.8	16.8	2.7	-0.4	1.1	11.8	2.0	-1.2
1984	3.5	17.2	2.5	0.0	2.5	12.0	1.5	-0.9
1985	4.0	17.6	2.4	0.9	2.9	12.2	1.3	-0.2
1986	5.3	18.2	3.2	4.3	5.7	12.6	3.6	4.7
1987	4.6	18.7	2.8	2.9	3.8	12.9	2.1	2.2
1988	4.2	19.2	2.6	0.7	4.6	13.2	3.0	1.1
1989	4.7	19.7	2.7	-1.1	3.9	13.5	1.9	-1.9
1990	7.8	20.6	4.6	1.6	10.6	14.5	7.3	4.2
1991	25.0	19.9	-3.5	-18.8	24.7	13.9	-3.8	-20.9
1992	8.4	21.9	10.2	5.7	6.8	15.1	8.6	4.2
1993	2.6	22.9	4.3	0.3	2.9	15.8	4.6	0.6
1994	1.7	23.3	1.9	-0.2	0.0	15.9	0.3	-1.9
1995	3.1	24.0	2.9	1.6	0.8	16.0	0.6	-0.7
1996	1.0	24.3	1.2	0.5	1.3	16.2	1.4	0.7
1997	-0.2	24.3	0.0	-1.1	-1.4	16.0	-1.1	-2.2
1998	2.1	24.5	0.9	0.6	2.2	16.2	1.1	0.8
1999	3.0	24.8	1.3	0.7	3.5	16.5	1.8	1.1
2000	3.6	25.1	1.3	0.3	4.9	16.9	2.6	1.6
2001	2.0	25.7	2.4	0.3	3.1	17.5	3.5	1.4
2002	0.9	26.1	1.5	0.2	0.7	17.7	1.3	0.0
2003	-0.1	26.4	1.3	-0.1	-1.0	17.8	0.4	-1.0
2004	0.7	26.6	0.6	-0.4	2.3	18.2	2.3	1.2
2005	0.0	26.7	0.4	-0.6	0.0	18.3	0.5	-0.6
2006	1.6	27.0	0.9	-0.4	0.7	18.3	-0.1	-1.4
2007	3.5	27.4	1.6	-0.3	2.9	18.5	1.1	-0.8
2008	4.1	28.1	2.5	0.5	3.6	18.8	1.9	-0.1
2009	0.2	28.1	0.1	0.0	0.4	18.9	0.2	0.2
2010	3.0	28.8	2.7	1.0	4.6	19.7	4.2	2.5
2011	4.9	29.8	3.5	1.7	4.0	20.2	2.7	0.9
2012	4.2	30.7	2.9	1.5	4.0	20.7	2.7	1.3
2013	3.2	31.4	2.2	0.8	3.0	21.2	2.0	0.7
2014	4.0	32.3	2.9	2.0	3.9	21.7	2.8	1.9
2015	4.2	33.3	3.0	2.4	4.0	22.3	2.8	2.2
2016	4.0	34.1	2.5	1.8	3.8	22.9	2.3	1.6
2017	4.3	35.0	2.7	1.1	4.0	23.4	2.4	0.9
2018	4.8	36.1	3.2	1.7	4.7	24.1	3.0	1.5
2019	4.2	37.2	3.0	1.7	4.7	24.9	3.5	2.1
2020	-0.6	37.2	-0.1	-0.7	-0.1	25.0	0.4	-0.1
2021	3.7	38.4	3.3	0.3	4.1	26.0	3.7	0.7
2022	5.8	40.0	4.1	-2.4	5.3	26.9	3.6	-2.8
2023	7.0	42.4	6.1	-0.2	9.0	29.1	8.0	1.6

Source: Federal Statistical Office and Bundesbank calculations. * From 1960 to 1969 pursuant to ESA 1979, from 1970 to 1990 pursuant to ESA 1995 and from 1991 pursuant to ESA 2010. From 1991 Germany, prior to that West Germany. 1 Excluding employers' contributions to the social security funds.

V. Labour market and wages

3. Labour productivity and wage costs*

Period	Real GDP per employed person ¹		Real GDP per hour worked ¹		Salary per employee		Labour costs per unit of output		Memo item: GDP price index	
	Index 2015=100	Annual percentage change	Index 2015=100	Annual percentage change	Index 2015=100	Annual percentage change	Index 2015=100	Annual percentage change	Index 2015=100	Annual percentage change
	1950	20.6	.	.	.	3.8	.	18.5	.	16.5
1951	22.0	6.9	.	.	4.4	16.3	20.1	8.5	18.5	11.8
1952	23.5	7.0	.	.	4.8	7.9	20.3	0.9	19.4	4.7
1953	24.9	5.9	.	.	5.1	6.1	20.3	0.1	19.1	- 1.3
1954	26.1	4.7	.	.	5.3	4.9	20.4	0.3	19.0	- 0.3
1955	28.2	7.9	.	.	5.8	8.3	20.4	0.2	19.4	2.0
1956	29.5	4.6	.	.	6.2	8.0	21.1	3.3	20.0	2.7
1957	30.5	3.5	.	.	6.6	6.6	21.7	2.9	20.5	2.9
1958	31.5	3.4	.	.	7.1	6.9	22.5	3.4	21.1	3.0
1959	33.6	6.6	.	.	7.5	5.6	22.3	- 0.9	21.5	1.7
1960	35.9	6.8	23.2	.	8.2	8.9	22.7	2.1	22.2	3.1
1961	37.0	3.2	24.3	4.4	9.0	10.2	24.3	6.8	23.2	4.7
1962	38.6	4.3	25.6	5.7	9.8	9.1	25.4	4.6	24.1	3.9
1963	39.6	2.6	26.8	4.6	10.4	6.0	26.3	3.4	24.9	3.1
1964	42.2	6.6	28.3	5.5	11.3	8.3	26.7	1.5	25.6	3.0
1965	44.2	4.8	29.9	5.7	12.3	9.4	27.9	4.5	26.6	3.7
1966	45.6	3.1	31.1	4.1	13.3	7.6	29.1	4.4	27.5	3.5
1967	47.0	3.0	32.8	5.2	13.7	3.3	29.2	0.2	27.9	1.6
1968	49.5	5.4	34.7	6.0	14.6	6.7	29.5	1.3	28.6	2.3
1969	52.4	5.8	37.1	6.9	16.0	9.5	30.6	3.5	29.8	4.2
1970	54.3	3.7	38.8	4.6	18.6	16.0	34.2	11.8	32.0	7.7
1971	55.8	2.7	40.5	4.4	20.7	11.4	37.1	8.5	34.5	7.6
1972	57.9	3.7	42.6	5.0	22.7	9.6	39.2	5.6	36.0	4.5
1973	59.9	3.5	44.7	5.1	25.4	11.8	42.3	8.0	38.3	6.3
1974	61.0	1.8	46.5	4.0	28.2	11.2	46.2	9.2	41.1	7.3
1975	62.1	1.7	48.3	3.8	30.1	6.9	48.6	5.1	43.4	5.7
1976	65.4	5.4	50.5	4.7	32.5	7.8	49.7	2.3	44.9	3.3
1977	67.4	3.1	52.6	4.1	34.6	6.5	51.3	3.2	46.3	3.1
1978	68.8	2.0	54.2	3.1	36.4	5.3	53.0	3.2	47.9	3.5
1979	70.3	2.2	55.8	2.9	38.5	5.6	54.8	3.4	49.9	4.3
1980	70.1	- 0.3	56.3	0.9	41.0	6.6	58.5	6.9	52.7	5.4
1981	70.4	0.4	57.2	1.6	42.9	4.6	61.0	4.2	54.9	4.2
1982	70.6	0.4	57.8	1.0	44.6	3.9	63.1	3.5	57.4	4.6
1983	72.4	2.5	59.7	3.3	46.0	3.1	63.5	0.6	59.0	2.8
1984	73.8	1.9	61.3	2.6	47.3	2.9	64.1	1.0	60.2	2.0
1985	74.5	0.9	62.7	2.3	48.5	2.4	65.0	1.5	61.4	2.1
1986	74.8	0.3	63.6	1.5	50.0	3.2	66.9	2.8	63.3	3.0
1987	74.8	0.0	64.5	1.4	51.4	2.8	68.8	2.8	64.1	1.3
1988	76.4	2.2	66.1	2.6	52.7	2.5	69.0	0.3	65.2	1.7
1989	78.0	2.0	68.5	3.5	54.1	2.6	69.4	0.6	67.1	2.9
1990	79.6	2.1	70.9	3.5	56.6	4.6	71.1	2.5	69.3	3.4
1991	81.3	2.2	73.3	3.5	59.9	5.9	73.7	3.6	71.5	3.1
1992	84.0	3.3	75.2	2.6	66.1	10.3	78.7	6.8	75.3	5.3
1993	84.3	0.3	76.7	1.9	68.8	4.1	81.6	3.7	78.2	3.9
1994	86.3	2.3	78.6	2.6	70.8	2.9	82.1	0.5	79.8	2.0
1995	87.2	1.1	79.8	1.5	73.2	3.4	84.0	2.3	81.4	2.0
1996	87.9	0.8	81.2	1.7	74.0	1.0	84.2	0.2	81.9	0.6
1997	89.5	1.8	83.2	2.5	74.4	0.6	83.2	- 1.2	82.1	0.3
1998	90.2	0.8	84.0	1.0	75.1	0.9	83.3	0.1	82.7	0.7
1999	90.5	0.3	85.0	1.1	76.0	1.2	84.0	0.9	82.9	0.4
2000	91.1	0.7	87.1	2.5	77.2	1.6	84.8	0.9	82.5	- 0.5
2001	92.9	2.0	89.3	2.5	78.8	2.0	84.8	0.0	83.6	1.3
2002	93.2	0.3	90.1	0.9	79.7	1.2	85.6	0.9	84.8	1.4
2003	93.5	0.4	90.8	0.8	81.1	1.7	86.7	1.3	85.9	1.3
2004	94.3	0.9	91.6	0.9	81.4	0.3	86.3	- 0.5	86.8	1.1
2005	95.1	0.9	93.1	1.6	81.7	0.4	85.8	- 0.5	87.2	0.4
2006	98.1	3.1	94.5	1.6	82.5	1.1	84.2	- 1.9	87.5	0.4
2007	99.3	1.2	95.7	1.2	83.4	1.0	84.0	- 0.2	89.1	1.8
2008	98.9	- 0.4	95.7	0.0	85.3	2.3	86.3	2.7	89.9	0.9
2009	93.1	- 5.8	92.8	- 3.0	85.6	0.4	91.9	6.6	91.6	1.8
2010	96.6	3.8	94.9	2.3	87.8	2.6	90.8	- 1.2	92.1	0.6
2011	99.2	2.7	97.4	2.6	90.4	3.0	91.1	0.3	93.1	1.1
2012	98.5	- 0.7	98.0	0.6	92.8	2.6	94.2	3.4	94.5	1.5
2013	98.2	- 0.3	98.5	0.5	94.6	1.9	96.3	2.3	96.4	2.0
2014	99.5	1.3	99.5	1.0	97.3	2.9	97.8	1.6	98.2	1.9
2015	100.0	0.6	100.0	0.5	100.0	2.8	100.0	2.2	100.0	1.9
2016	101.0	1.0	101.4	1.4	102.3	2.3	101.3	1.3	101.3	1.3
2017	102.3	1.3	103.2	1.8	105.0	2.6	102.6	1.3	102.9	1.5
2018	101.9	- 0.4	103.4	0.2	108.0	2.9	106.0	3.3	104.9	2.0
2019	102.0	0.2	104.1	0.7	111.7	3.4	109.5	3.3	107.2	2.1
2020	98.9	- 3.1	105.3	1.2	112.1	0.4	113.4	3.5	109.2	1.9
2021	101.9	3.0	105.9	0.6	115.6	3.1	113.5	0.1	112.5	3.0
2022	102.4	0.4	106.5	0.5	120.1	3.9	117.3	3.4	118.4	5.3
2023	101.3	- 1.0	105.7	- 0.7	127.0	5.8	125.4	6.9	126.2	6.6

Source: Federal Statistical Office and Bundesbank calculations. * From 1960 to 1969 pursuant to ESA 1979, from 1970 to 1990 pursuant to ESA 1995 and from 1991 pursuant to ESA 2010. From 1991 Germany, prior to that West Germany. 1 Real gross domestic product: West Germany in constant prices until 1970, thereafter in prior-year prices.