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## Has Atypical Work Become Typical in Germany?

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## ABSTRACT

### Has Atypical Work Become Typical in Germany?\*

This paper gives an overview of the transformation of the German labor market since the mid-1990s with a special focus on the changing patterns of labor market segmentation or 'dualization' of employment in Germany. While labor market duality in Germany can partially be attributed to labor market reforms promoting in particular non-standard forms of employment and allowing for an expansion of low pay, structural changes in the economy as well as strategic choices by employers and social partners also play a prominent role.

JEL Classification: J21, J31, J58

Keywords: Germany, non-standard work, low pay, labor market segmentation

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**Contents**

- 1 Introduction ..... 3
- 2 Main characteristics of the German labor market ..... 6
  - 1. 2.1 Employment and unemployment ..... 6
  - 2. 2.2 A structural transformation of the German employment system ..... 13
- 3 Institutional background and reforms..... 25
- 4 Policy Conclusions ..... 33
- 5 References ..... 37

## 1 Introduction

Until the mid-2000s Germany used to be perceived as a country of high unemployment and medium employment rates at best (Manow/Seils 2000). However, over the last years, in particular in the aftermath of the Great Recession 2008-09 this picture has changed dramatically (Rinne/Zimmermann 2011, Eichhorst 2012, Caliendo/Hogenacker 2012). This does not hold only for the perception of outside observers but also for real changes in Germany's labor market performance which is now fundamentally different from the situation in the late 1990s and early 2000s. Yet, some of the trends that have become more apparent over the years already started then.

In contrast to most other developed countries that were affected heavily by the global economic crisis Germany could weather the recession with neither an increase in unemployment nor a decline in the number of jobs. In fact, Germany currently shows a record level of employment significantly above the employment figures reported in earlier years. This does hold both for an increase in the absolute number of people in employment and the employment rate. At the same time, while standard employment has recovered somewhat since the mid-2005, we see a rising share of non-standard and low-pay employment (Eichhorst/Marx 2011). The major dividing line for labor market segmentation in Germany is not easy to identify as different forms of standard and non-standard employment exhibit some features of instability, limited professional perspectives, low pay or other elements of 'precariousness'. But it would be misleading to identify 'good' jobs with standard (open-ended full-time) contracts and see all non-standard contracts as 'bad' or inferior in terms of job quality.

Still, one major and quite straightforward criterion for the distinction of labor market segments is the type of employment contract. The crucial division lies between open-ended full-time contracts, identified as 'standard employment' as the primary part of the labor market on the one hand and all other types of contracts on the other, while taking into account the differences that exist in terms of employment logic, labor market perspectives or socio-economic groups affected. Regarding fixed-term contracts, this mostly affects job entrants in the private sector, apprentices and mostly young employees in the public, academic or social sector. Transition probabilities are quite good for entrants in the private sector and vocational graduates, less so in the public, academic and social sector. Agency work is mostly concentrated among basic occupations in the manufacturing sector and some office services

with limited prospects for transition to permanent jobs. Self-employment without employees is concentrated in the crafts and the creative sectors while part-time work is overrepresented in all occupations with high female shares. A major dividing line lies between regular, permanent part-time and marginal part-time jobs. The secondary segments of the labor market are clearly characterized by sectoral patterns (in particular services) and demographic patterns (migration background, gender, educational level). This pattern of segmentation seems to become more important over time as labor market expands, sectoral shifts occur, employers' room to manoeuvre increases, and working conditions also react to role industrial relations/organization and labor demand/supply patterns.

A parallel development can be shown with pay inequalities. Clearly, the low pay sector has grown in Germany as has the overall pay dispersion. While it is true that non-standard contracts in general face a higher share of low pay earners than standard employment, the variation of pay amongst employees on full-time open-ended contracts has increase as well. Here, the coverage by collective agreements makes a major difference. Firms not covered by collective agreements tend to show larger pay dispersion, and the share of companies and workers not covered by collective agreements has risen continuously. Generally binding sectoral minimum wage agreements, which have become more widespread recently, have some limiting effect here.

In general, enforcement of legal obligations is not perceived as a major issue in Germany, yet, there is some evidence of non-enforcement of existing labor and social law in particular with respect to atypically employed people such as fixed-term workers, agency workers, marginal part-time workers or 'dependent' self-employed. In those cases social policy provisions such as sickness pay or paid leave may be violated, and gross wages may be lower for those types of workers.

The macro/micro implications of segmentation are somewhat ambiguous. First, one has to note that the core of the labor market in Germany is still characterized by employment stability and decent wages, in particular in skill-intensive service and manufacturing sectors covered by collective agreements and social protection. This is the backbone of the German economic model and has proven to be both adaptable and competitive in a globalized economy. This segment has also stabilized the domestic demand during the recent economic crisis. The same is true for the continuously growing service sector which is now responsible for about three quarters of total employment. Furthermore, one has to note that stability and flexibility of employment are shared unequally across sectors, occupations and socio-

economic groups. With respect to the crisis, for example, employment stability in the core manufacturing segment was achieved via short-time work and working time accounts whereas flexible workers, i.e. temporary agency workers and fixed-term contract holders, were made redundant. Both short-time work schemes and unemployment benefits can be seen as important automatic stabilizer that helped bridge a difficult time and paved the way for a quick recovery. Still, it is true to say that the secondary segment of non-standard jobs takes major employment risks and acts as an additional buffer that eases the adjustment pressure on the core. Yet, non-standard jobs contribute to better labor market access and additional job creation that is generating additional income from work. Flexible types of contracts also contribute to wage moderation in collective agreements and overall competitiveness.

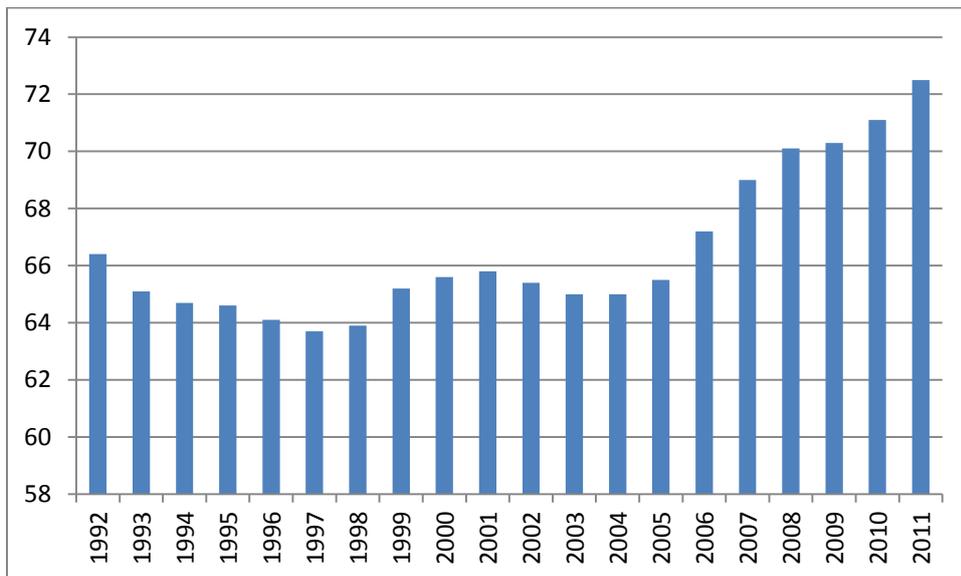
For the foreseeable future we can expect a persistent dualization of the German labor market, yet, there are stronger demands for some reregulation of the margin of the employment system, in particular calling for a narrowing of the regulatory gap between some forms of non-standard employment and for a binding wage floor.

## 2 Main characteristics of the German labor market

### 2.1 Employment and unemployment

The current situation on the German labor market cannot be understood without a view on the major restructuring since the mid-1990s. Over the last two decades or so both levels and structures of employment and unemployment have changed substantially. Looking at total employment figures and the overall employment rate one can see a major increase since the mid-2000s. The German employment rate increased significantly since the mid-2006, reaching more than 72% in 2011, substantially higher than the long-standing average of around 65% which was characteristic for the 1990s and early 2000s (see figure 1).

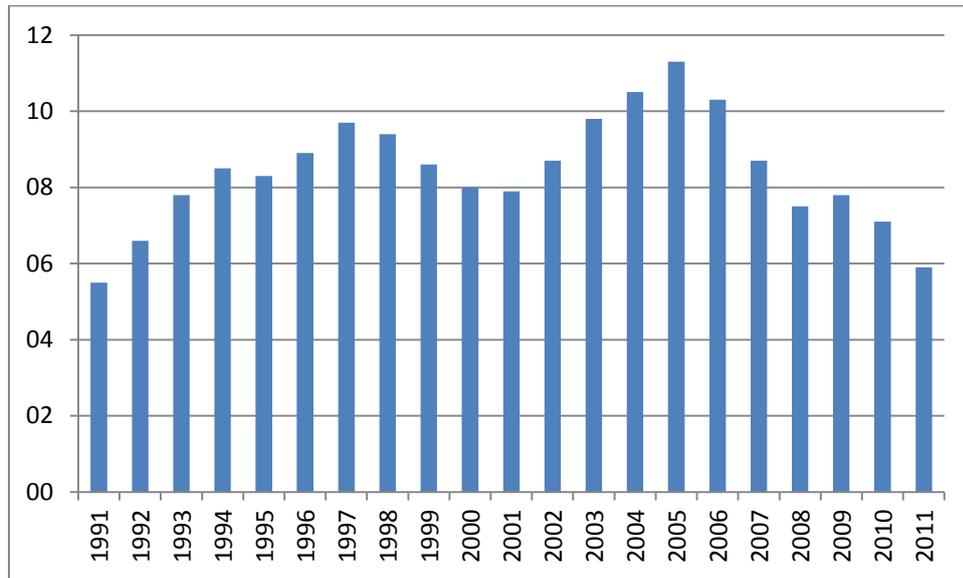
**Figure 1: Employment rates, 1992-2011**



Source: Eurostat.

In parallel, unemployment declined dramatically since 2005, even during the crisis period 2008-09. In absolute figures, German unemployment is now less than 3 million, down from a record level of 5 million in early 2005. The standardized unemployment was less than 6 percent of the labor force in 2011. That also means that massive and apparently persistent unemployment increases in the mid-1990s and early 2000s could be reversed.

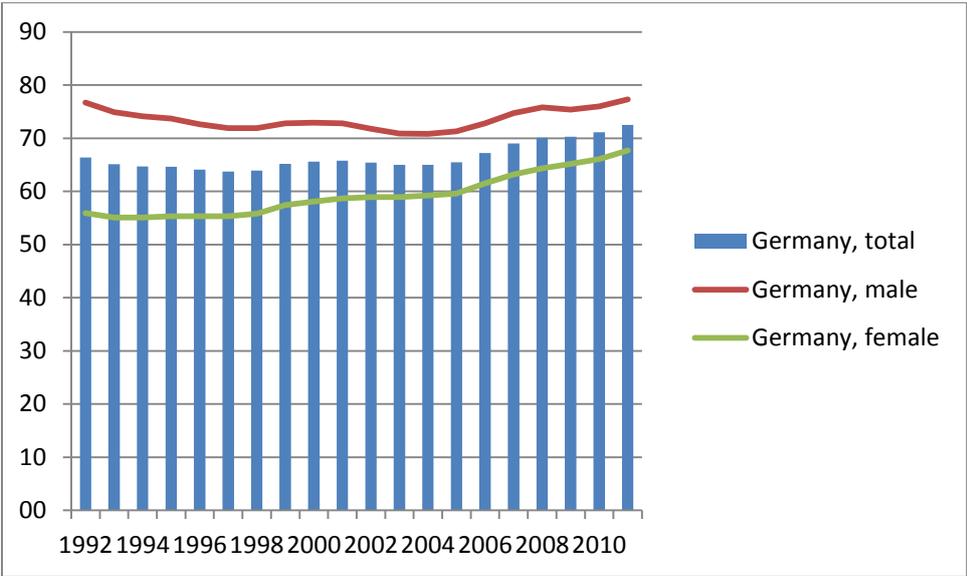
**Figure 2: Unemployment rates, 1991-2011**



Source: Eurostat.

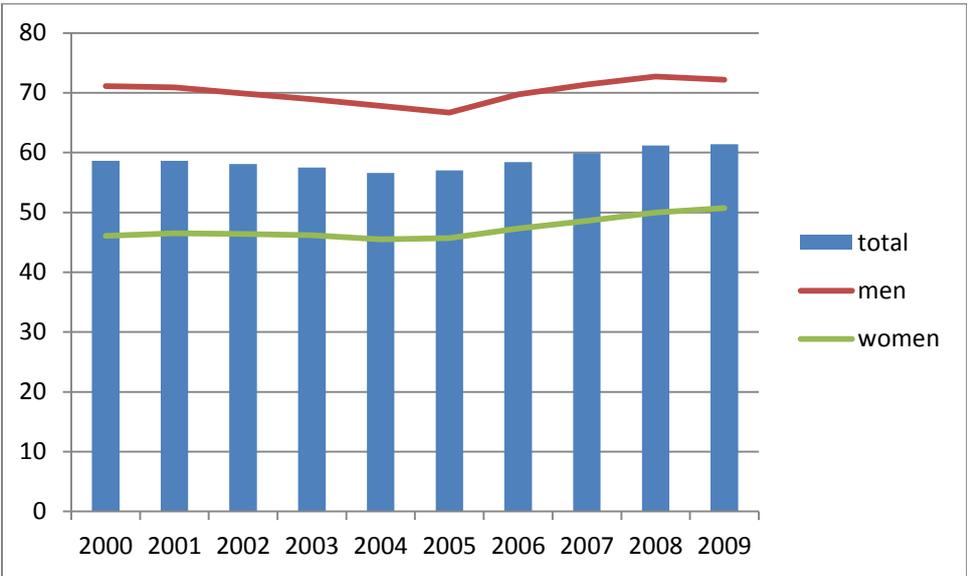
Employment rates still vary significantly between genders, however, based on headcounts, the gap between women and men has closed significantly during the 2000s (figure 3). Women contributed massively to the overall increase in the employment rate while male employment rates have been stagnant at best. Women are now much better integrated into the labor market than they used to be in the 1990s. However, this does not hold for full-time equivalents as figure 4 shows. Here, the huge increase in different forms of part-time work, which is concentrated on women, is related to a persistent gap regarding a more substantial labor market participation between female and male employees.

**Figure 3: Employment rates by gender**



Source: Eurostat.

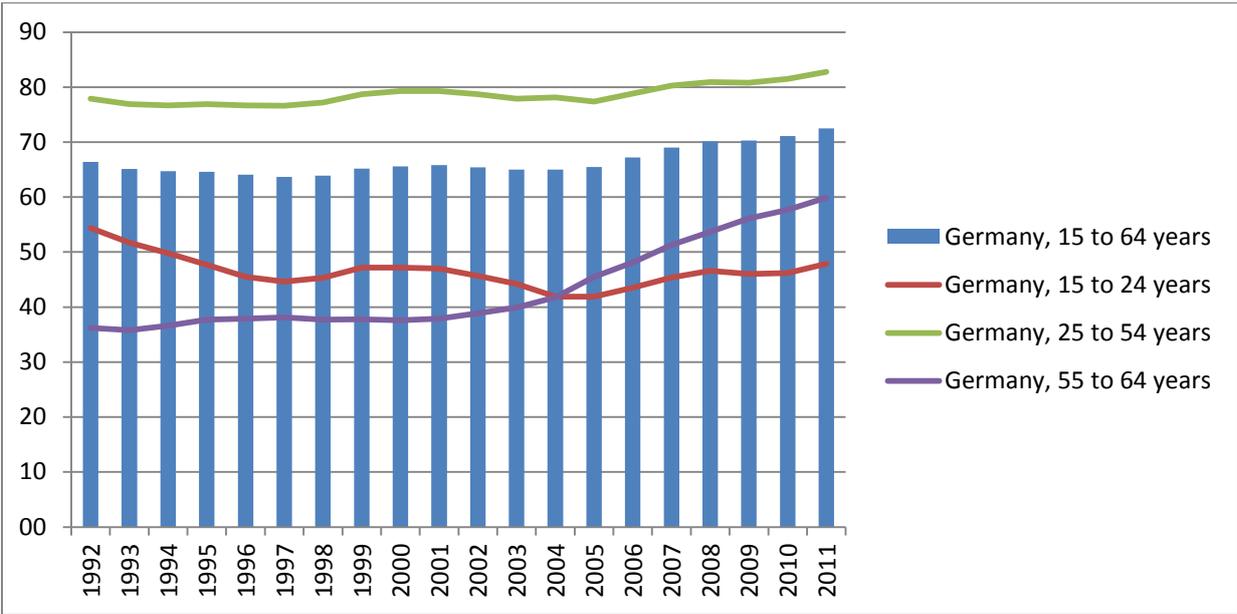
**Figure 4: Full-time equivalent employment rates of men and women**



Source: Eurostat.

The overall employment increase was also partially driven by a massive increase in the employment rate of older workers aged between 55 and 64 in particular, from less than 40% in the 1990s to about 60% most recently as figure 5 shows.

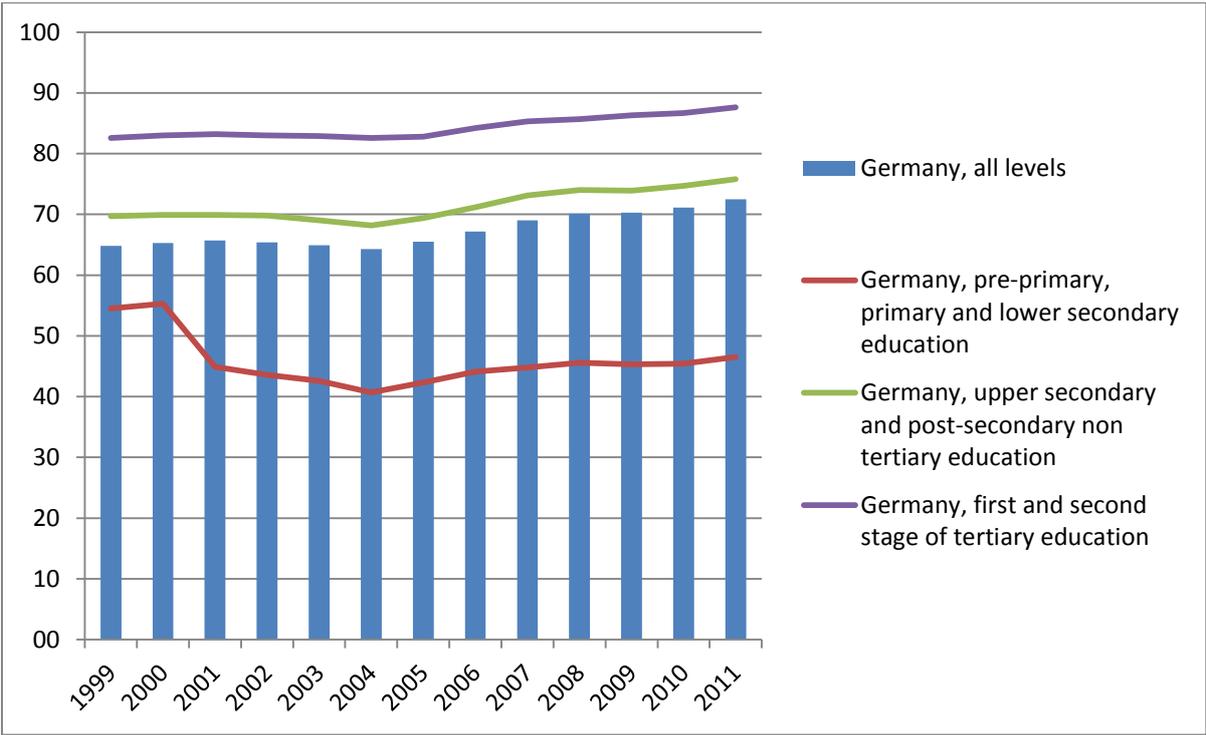
**Figure 5: Employment rates by age groups**



Source: Eurostat.

Employment creation in Germany has been most beneficial to those with medium and higher educational level where there have been some increases in the 2000. At the same time, the employment rate of low-skilled people was more or less stable between 40% and 50% (see figure 6) which is significantly below the employment levels of medium and high skilled people in Germany.

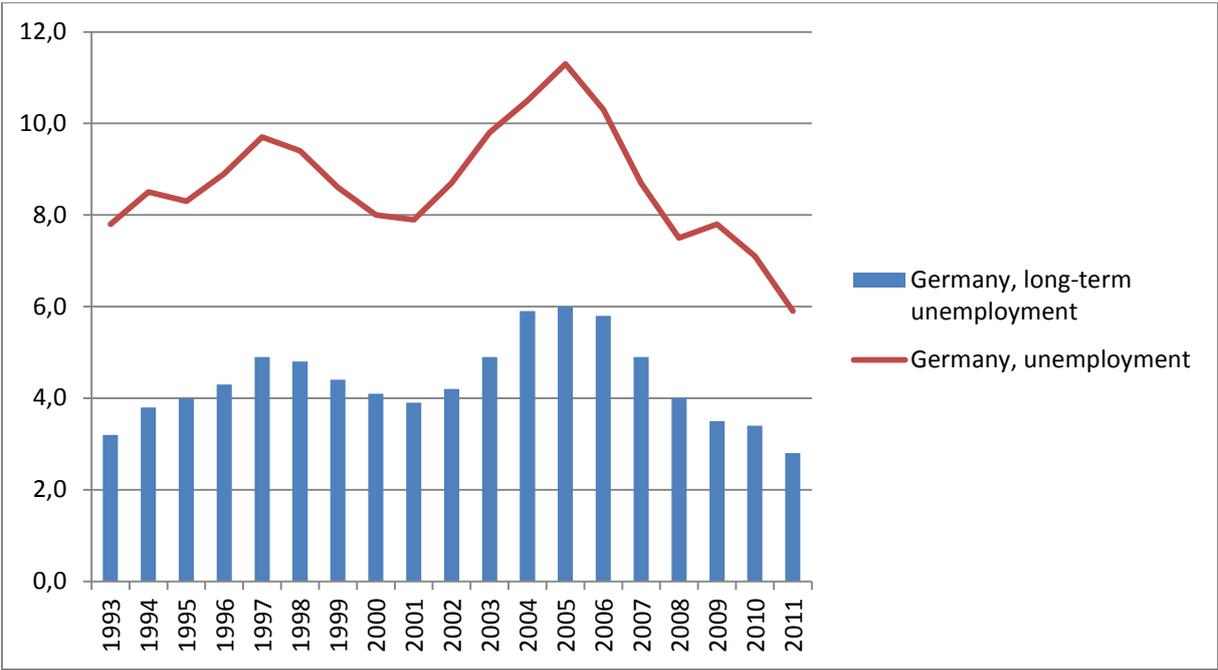
**Figure 6: Employment rates by educational level**



Source: Eurostat.

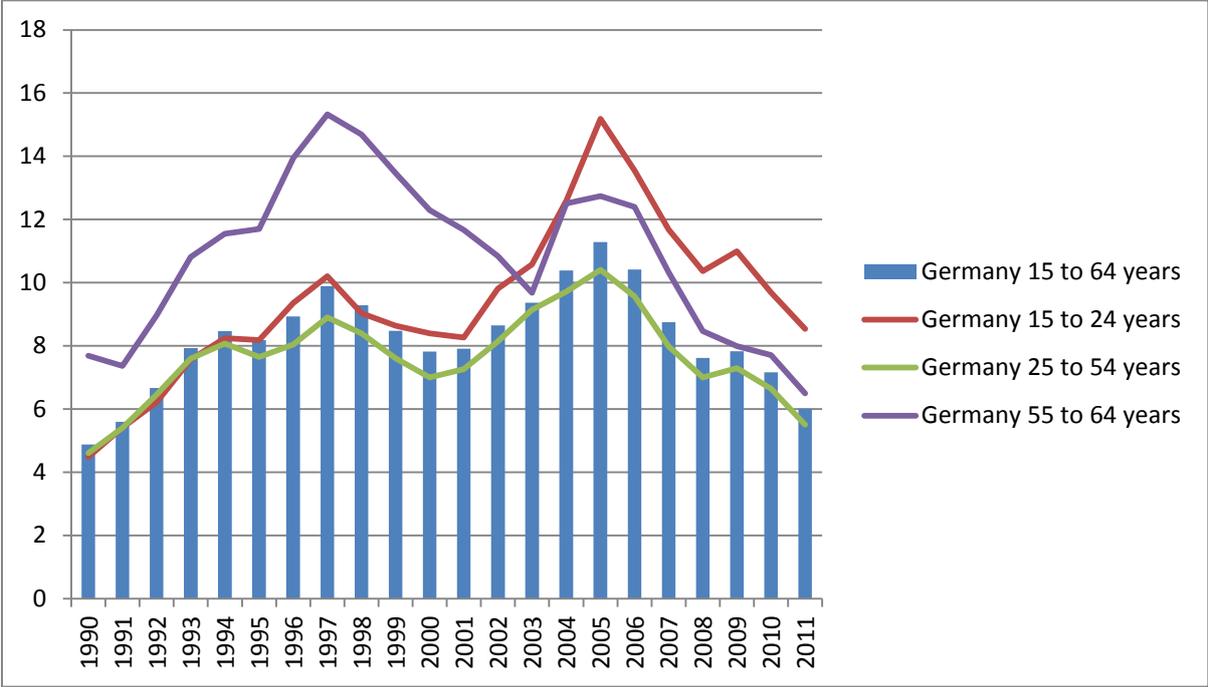
Unemployment rates basically mirrors these differences in employment. First, we can see a remarkable decline also in long-term unemployment, however, the share of long-term unemployed in all unemployed is quite stable around 50% - still one of the highest shares of long-term unemployment in OECD countries (figure 7). Second, there is a somewhat higher risk of unemployment for younger workers, but still below youth unemployment rates in other European countries – and older workers face a somewhat higher than average unemployment rate than prime-aged workers, however, old-age unemployment has gone down significantly in recent years. Figure 8 also shows that the risks of unemployment co-vary for all three groups.

**Figure 7: Unemployment and long-term unemployment in Germany**



Source: Eurostat.

**Figure 8: Unemployment rates by age groups**

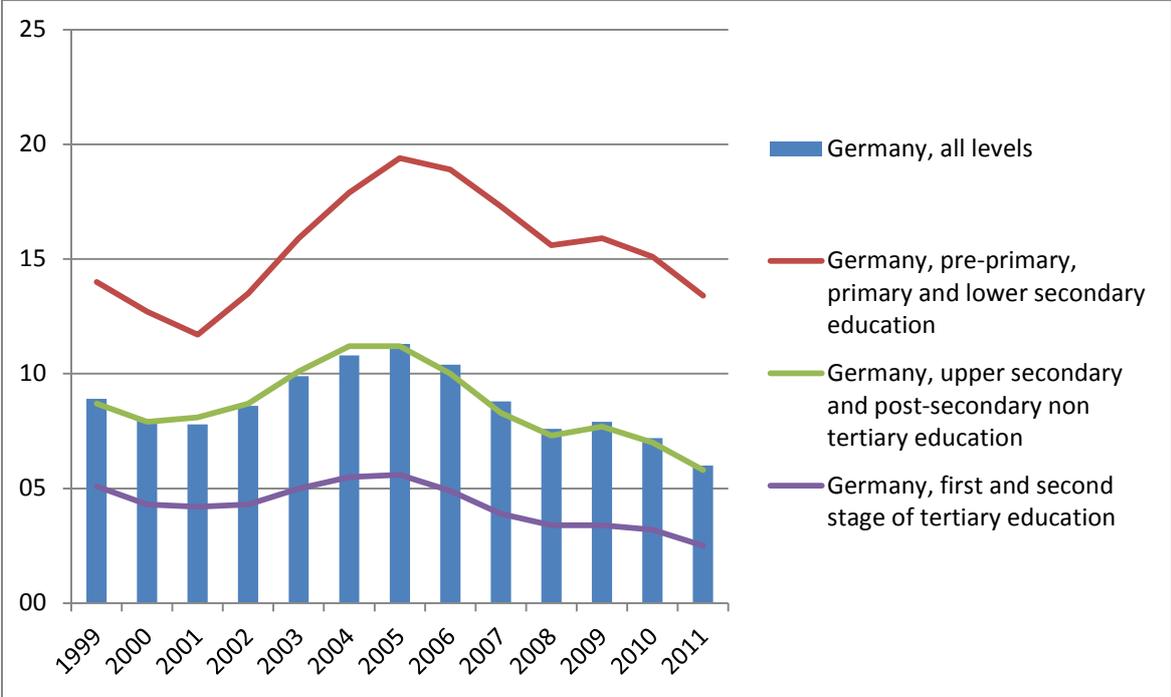


Source: Eurostat.

The group-specific pattern is most pronounced with unemployment by educational level where there is a substantially and persistently higher risk of unemployment faced by low-

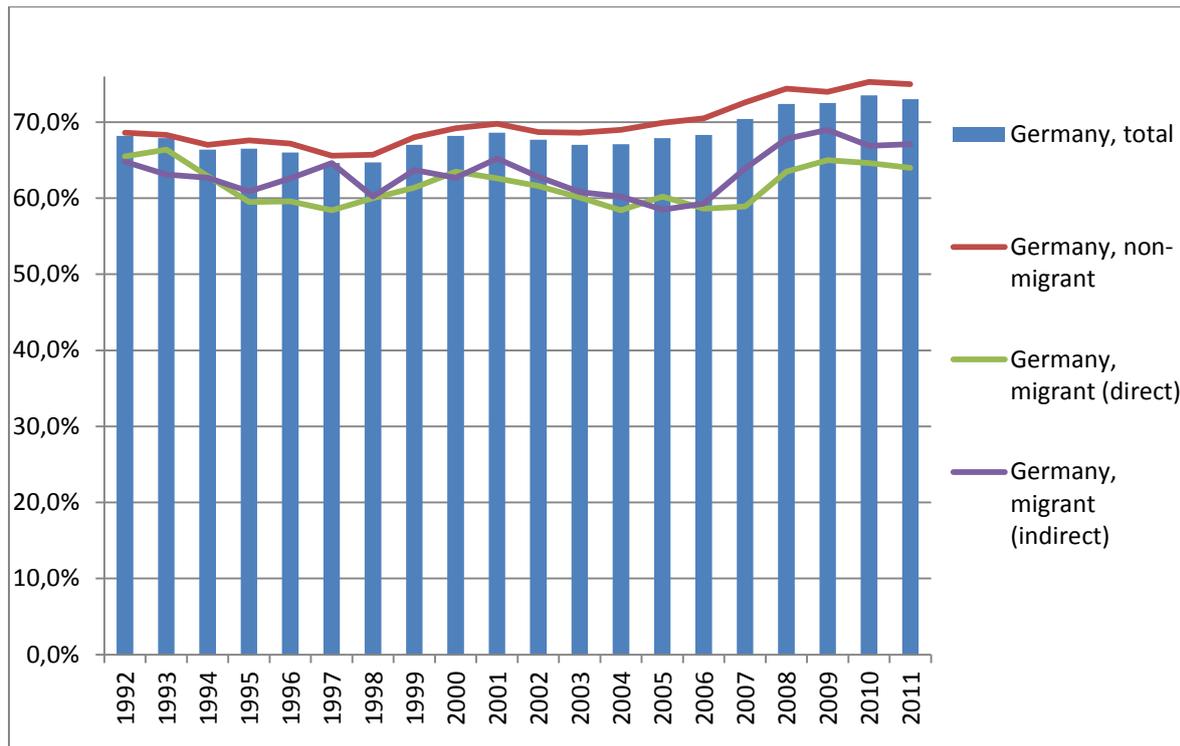
skilled workers. Medium skilled workers with either upper secondary schooling and/or a vocational degree have about an average risk of being unemployed while highly skilled workers (i.e. with a tertiary degree) see virtual full employment. Lack of skills is probably the most important risk of exclusion from the German labor market (see figure 9). As with the age groups, for all skill levels, unemployment rates have gone down substantially since the mid-2000s. Regarding migration background (figure 10), there is a certain and persistent gap in the employment rate of migrants, both of those with direct (i.e. foreign born) or indirect migration experience (i.e. as second generation migrants). The overall employment rate of migrants is also more volatile than the one of non-migrants.

**Figure 9: Unemployment rates by educational level**



Source: Eurostat.

**Figure 10: Employment rate by migration background**

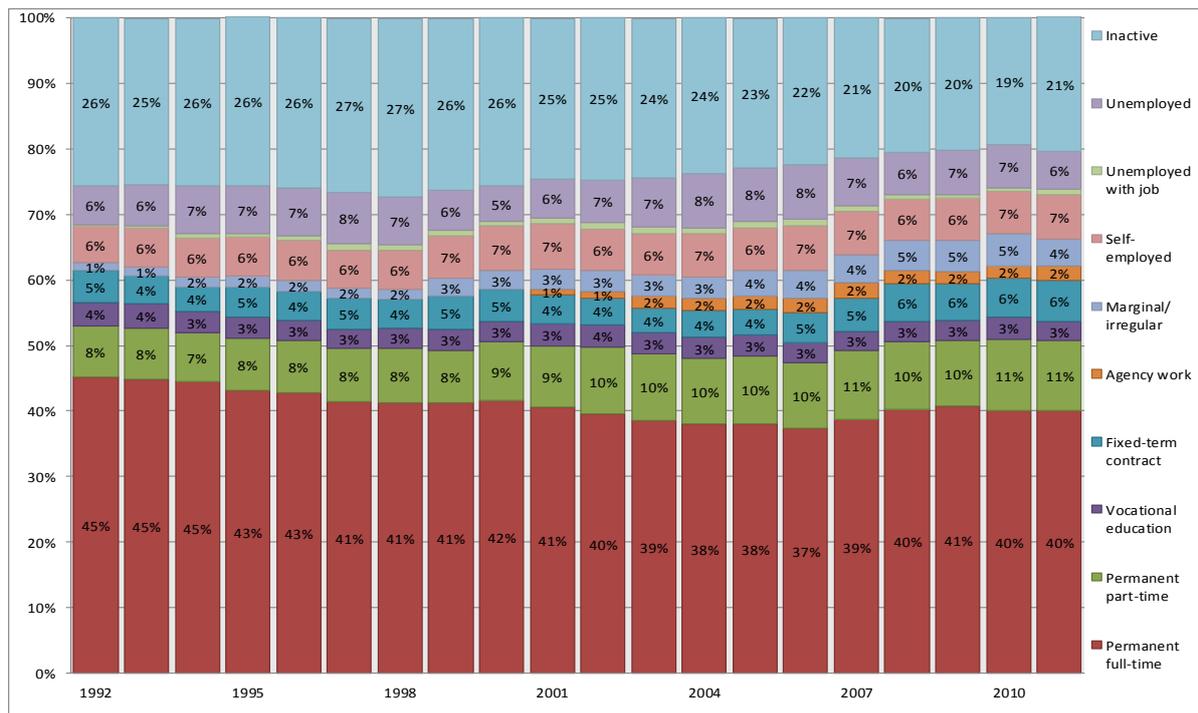


Source: GSOEP, authors' calculation.

## 2.2 A structural transformation of the German employment system

In Germany, and somewhat in contrast to general perceptions of widespread precarious employment, the number of standard employment contracts declined in the early 2000s, but could be restabilized in recent years. It is now only slightly below the level of the mid-1990s. At the same time, but in particular in the early 2000s, Germany experienced an increase in the numbers of different types of non-standard employment along with a steady decline in inactivity.

**Figure 11: Working-age population by employment status**

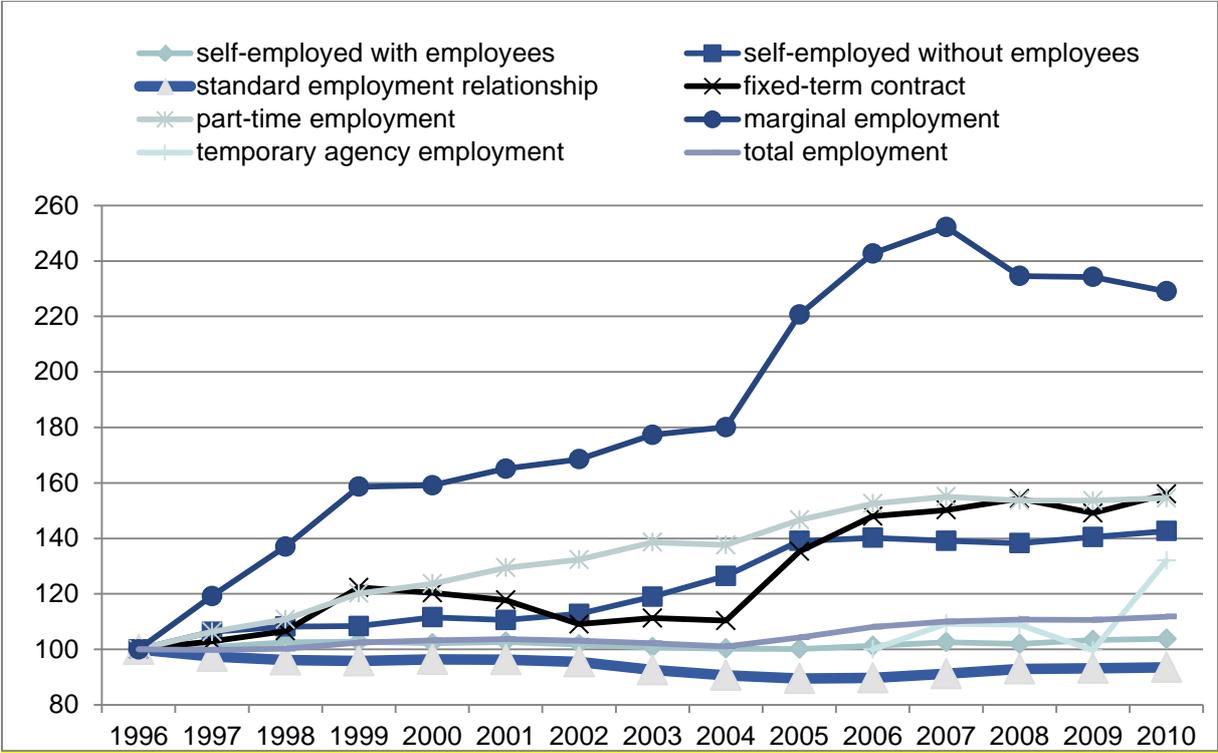


Source: GSOEP, authors' calculation.

Given the overall employment increase, that also meant an increase in the share of non-standard contracts and a relative decline of standard employment. Still, standard employment, defined as permanent full-time work, is the most prominent type of contract in Germany as figure 11 clearly shows. The more widespread use of non-standard contracts apparent from figures 11 and 12 is the major element of labor market segmentation or dualization in Germany along with the growth of low pay. The increase in 'atypical' jobs is partly due to sectoral change in favor of private service sector jobs, but it was also facilitated by some deregulation of legal provisions governing those jobs. Particularly striking is the massive increase in the number of part-time workers covered by social insurance and standard working conditions as well as the expansion of marginal part-time work with gross earnings up to 400 EUR per month (figure 13). The latter can be attributed to a peculiar emerging employment pattern in some private services in reaction to the availability and expansion of the Minijob arrangement (see below). Fixed-term contracts have remained at a medium level over the last years, with about 7 to 8 percent of total employment (excluding about the same share in fixed-term apprenticeship contracts, see figure 14). More dynamics is behind the development of temporary agency work although it is still a quite small segment of the labor market with about 2.5 percent of total employment. The expansion of agency work is mostly due to

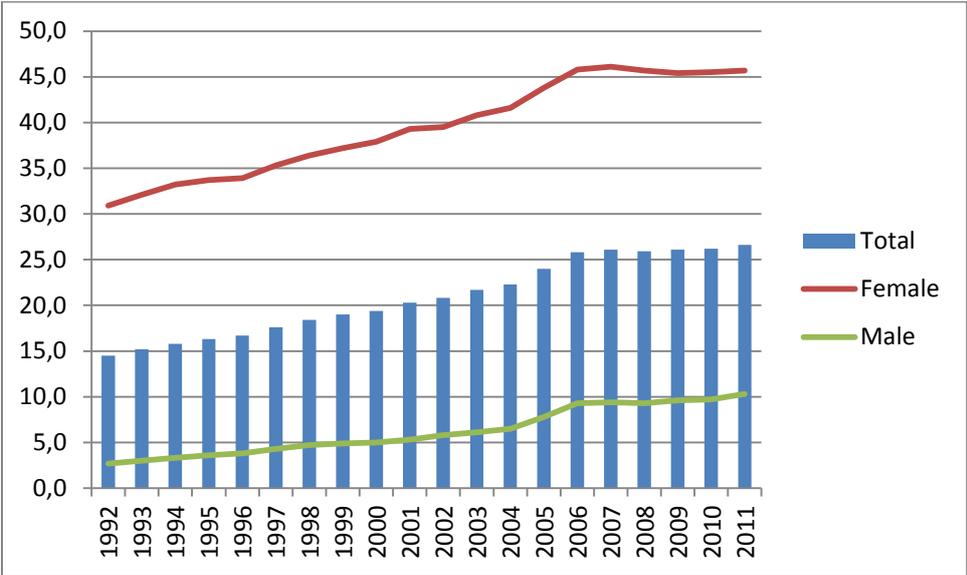
substantial reforms and related restructuring of companies in the manufacturing sector since the mid-2000s. Quite notable, finally, is the increase in the number of self-employed people without employees.

**Figure 12: Forms of non-standard employment in Germany over time, 1996=100**



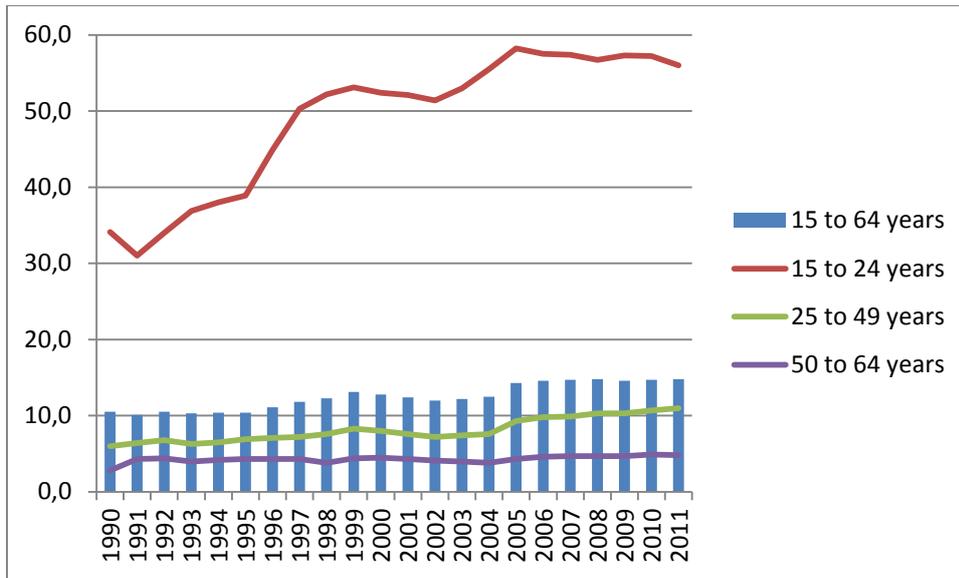
Source: German Statistical Office, author’s calculation.

**Figure 13: Part-time employment shares by gender**



Source: Eurostat.

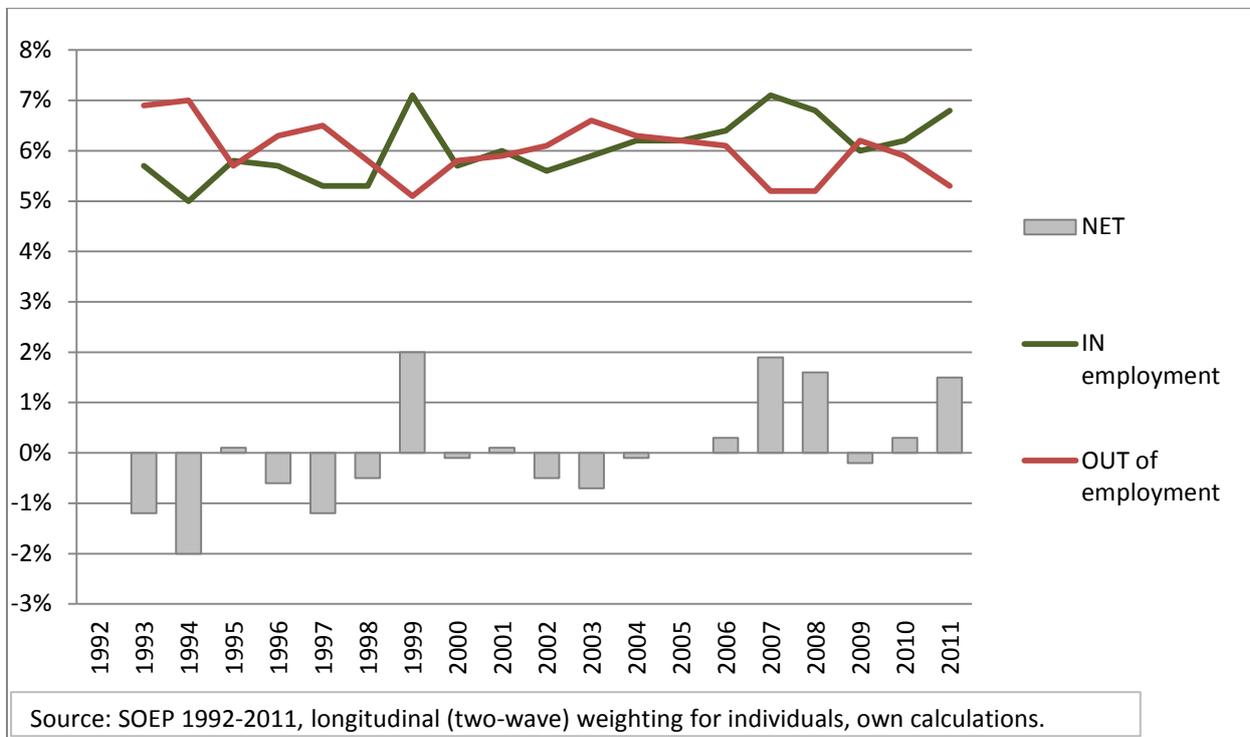
**Figure 14: Share of temporary employment incl. apprenticeships by age group**



Source: Eurostat.

In line with this, inflows into employment very larger in recent years than flows out of employment as figure 15 shows.

**Figure 15: Inflows and outflows of employment**



Source: SOEP, authors' calculations.

As table 1 shows, job tenure in Germany is quite stable at a relatively high level and has increased rather than decreased in recent years. According to OECD data, average tenure increased from 10.3 to 11.5 years between 2000 and 2011. One cannot say that the German labor market has become extremely volatile. Yet, there is some pattern of polarization emerging with longer tenure of prime-age and older worker (also due to the postponement of retirement) and larger shares of mainly younger workers with shorter tenure, in particular in the bracket below 6 months. This is confirmed by table A1 that shows that flows into but also out of employment are particularly pronounced for young people (and the low skilled). But overall, the tenure structure is quite resilient in Germany.

**Table 1: Distribution of dependent employees by tenure brackets, 2000 to 2011**

	<1 month	1 to <6 months	6 to <12 months	1 to <3 years	3 to <5 years	5 to <10 years	10 years and over	Total declared
2000	3.4%	4.7%	7.5%	14.0%	11.4%	20.2%	38.9%	100.0%
2001	3.8%	4.4%	7.9%	14.1%	11.8%	18.2%	39.8%	100.0%
2002	3.4%	4.1%	7.6%	13.8%	13.2%	17.1%	40.8%	100.0%
2003	2.7%	3.8%	6.9%	13.6%	13.9%	17.6%	41.5%	100.0%
2004	2.9%	4.1%	6.4%	11.4%	14.5%	18.7%	42.1%	100.0%
2005	2.7%	4.4%	6.7%	12.2%	13.1%	19.8%	41.2%	100.0%
2006	3.0%	4.9%	7.0%	11.9%	11.5%	20.6%	41.0%	100.0%
2007	3.1%	5.1%	7.3%	12.2%	10.9%	20.3%	41.0%	100.0%
2008	3.2%	5.3%	7.8%	13.1%	10.9%	19.6%	40.2%	100.0%
2009	2.6%	4.7%	7.6%	13.8%	11.2%	18.7%	41.4%	100.0%
2010	2.9%	4.9%	7.0%	13.4%	12.2%	17.0%	42.7%	100.0%
2011	3.1%	5.1%	7.5%	12.6%	12.2%	16.3%	43.2%	100.0%

Source: OECD Employment Statistics Database.

Addressing another dimension of segmentation, table 2 shows the increase in pay dispersion among male and female full-time workers in Germany according to OECD data. The data show that Germany now has a sizeable low pay sector (below two thirds of the median gross hourly pay). Pay dispersion and low pay also grew stronger for women than for men. If we add non-standard contracts, the low pay sector is even bigger. Low pay is now a widespread phenomenon in Germany and does affect non-standard workers and certain medium and low-skilled occupations in particular (see table 3, Kalina/Weinkopf 2012).

**Table 2: Pay dispersion and low pay incidence in Germany**

	2000	2005	2010	Difference 2010-2000
<b>All persons</b>				
Low Pay Incidence	15.9	18.3	20.5	4.6
Decile 5/Decile 1	1.699	1.869	1.8199	0.1209
Decile 9/Decile 1	3.0456	3.1786	3.2001	0.1545
Decile 9/Decile 5	1.7926	1.7006	1.7584	-0.0342
<b>Women</b>				
Low Pay Incidence	25.1	30.7	30.7	5.5
Decile 5/Decile 1	1.7182	1.8333	1.7379	0.0197
Decile 9/Decile 1	2.8001	3.1597	3.0479	0.2478
Decile 9/Decile 5	1.6297	1.7235	1.7538	0.1241
<b>Men</b>				
Low Pay Incidence	11.4	12.2	15.2	3.8
Decile 5/Decile 1	1.6674	1.6932	1.7824	0.115
Decile 9/Decile 1	3.0441	2.8793	3.0741	0.03
Decile 9/Decile 5	1.8256	1.7005	1.7248	-0.1008

Source: OECD Employment Statistics Database.

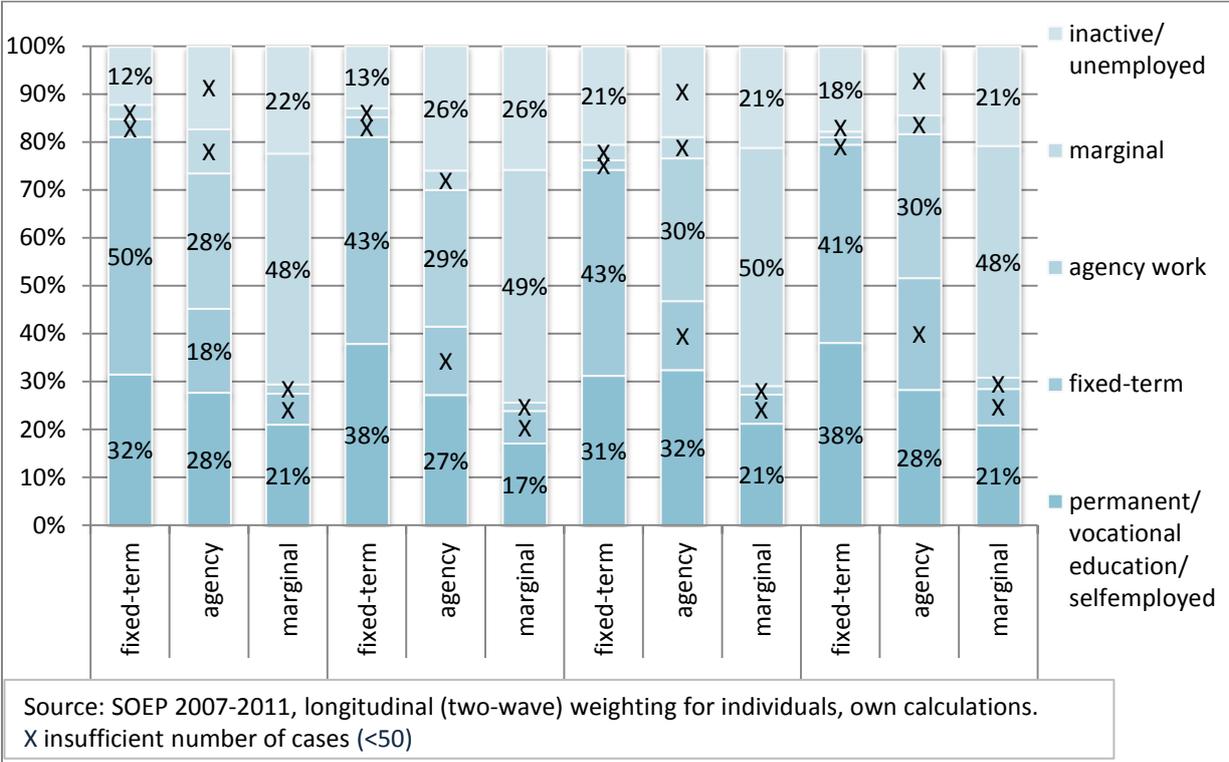
**Table 3: Low pay by type of job**

	Total	Standard employment	Non-standard contracts				
			All non-standard contracts	Part-time work	Fixed-term contracts	Marginal part-time work	Temporary agency workers
<b>Total</b>	<b>20.6</b>	<b>10.8</b>	<b>49.8</b>	<b>20.9</b>	<b>33.5</b>	<b>84.3</b>	<b>67.7</b>
Women	26.5	15.1	47.6	19.2	35.5	84.8	72.9
Men	15.8	8.1	53.7	34.3	31.6	83.4	65.4
Less than upper secondary education	52.8	22.7	77.8	44.7	62.2	88.1	85.5
Upper secondary education	17.7	12.1	39.4	17.1	36.2	77.2	57.6
Tertiary education	1.7	0.5	8.3	2.7	5.7	61.4	20.7
<b>Selected occupational groups</b>							
Academic occupations	3.0	1.0	10.5	3.5	5.7	64.9	/
Technicians and equivalent non-tech. occupations	7.6	4.0	24.9	4.7	17.3	68.1	29.2
Office clerks	23.4	10.9	48.1	13.2	39.4	80.3	62.5
Service and sales occupations	42.3	28.4	65.4	30	58.3	88.6	72.1
Crafts	16.1	11.1	48.7	32.6	31.3	81.0	47.6
Machine operators and assemblers	23.7	17.1	60.6	33.2	39.7	89.3	63.0
Laborers	61.5	39.7	79.2	56.3	70.7	90.3	89.2

Source: Federal Statistical Office.

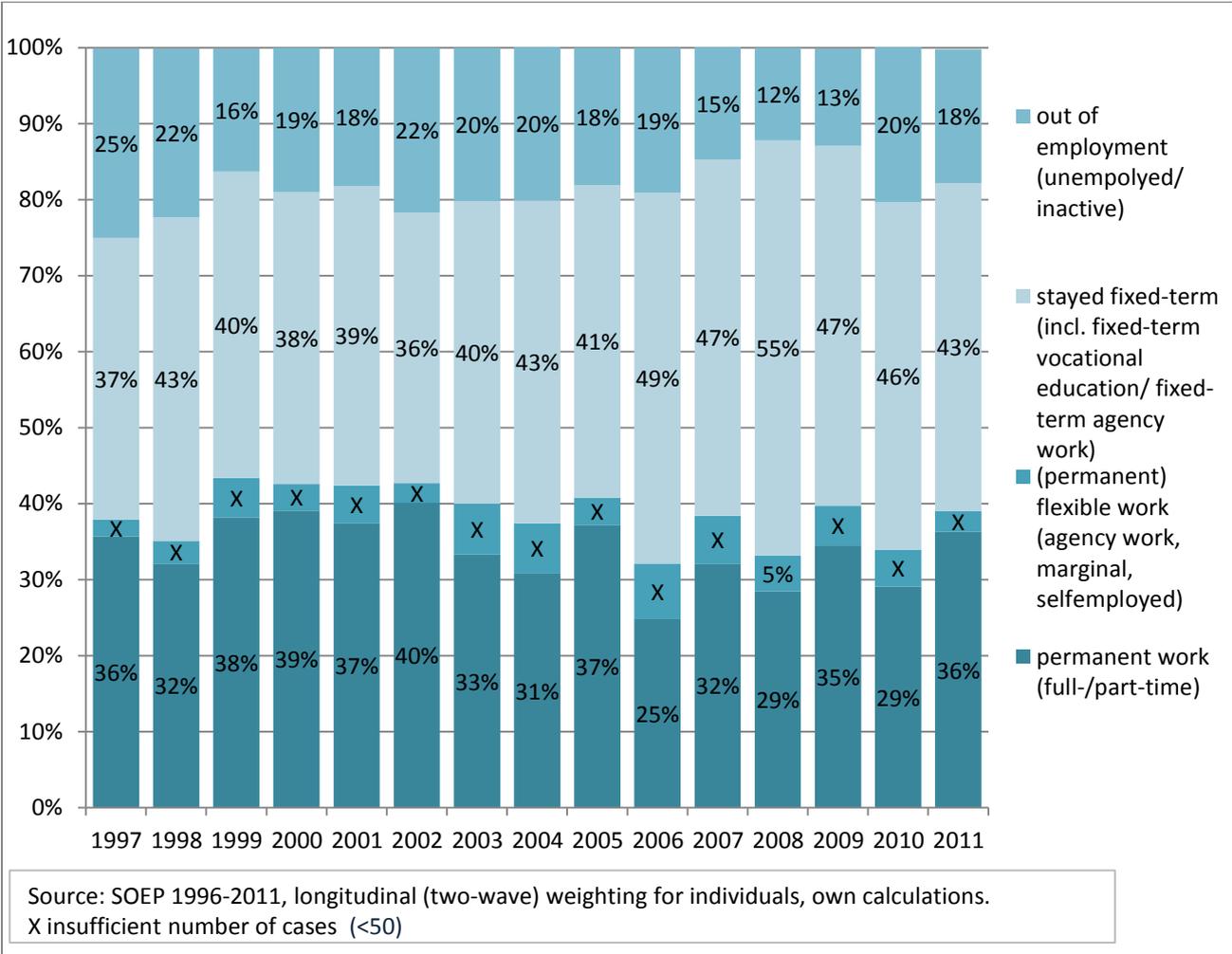
Regarding mobility between different types of jobs, figure 16 shows year-to-year flows from non-standard contracts in the preceding year to the labor market status in the current year for 2008 up to 2011. These descriptive data show for example that during the period under scrutiny, about one third of all fixed-term contract workers could move to an open-ended contract (including vocational education or self-employment) in the subsequent year while 40 to 50% remained in a fixed-term contract. About 30% of all agency workers had left that status in the subsequent year in favor of a permanent full-time or part-time job, vocational training or self-employed status. Persistence is quite high with marginal work, however, where about 50% of all marginal part-time workers remain in that category.

**Figure 16: Flows from non-standard work in the previous year**



Taking a longer time perspective, as figure 17 shows, flows from fixed-term contracts to permanent jobs occur in about one third of all cases on a year-to-year basis with some notable cyclical variations. Over the last years, however, staying in a fixed-term employment status has become somewhat more frequent.

**Figure 17: Flows from fixed-term contracts**



We can further see in table 4, covering the last five years (2007 to 2011), that about 71% of all working-age people in Germany did not experience non-standard work (fixed-term, marginal part-time or agency work), about 47% have always been in stable ‘insider’ jobs over a five-year period, and around 11% have not been in employment at all. Only a small group cumulates longer phases of non-standard work.

**Table 4: Frequency of atypical employment between 2007 and 2011**

How often in atypical employment - on a yearly basis (in percent)	
<b>(0) never</b>	<b>70,93%</b>
<i>never, always inside employment</i>	47,20%
<i>never, always outside employment</i>	10,80%
<i>never, switching between employment and unemployment/ inactivity</i>	12,93%
<b>(1) only once</b>	<b>12,42%</b>
<b>(2)</b>	<b>7,20%</b>
<b>(3)</b>	<b>3,95%</b>
<b>(4)</b>	<b>3,70%</b>
<b>(5) always</b>	<b>1,80%</b>

Source: SOEP, own calculations.

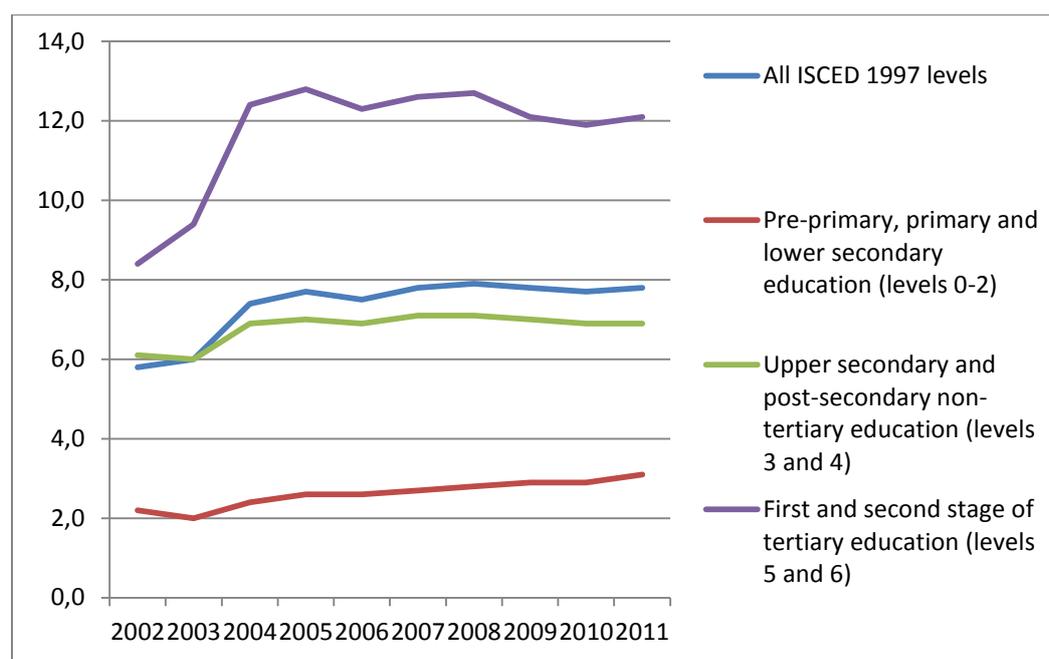
Recent research has analyzed both wage gaps and transition probabilities between atypical and standard employment types. Regarding wage gaps experienced by fixed-term workers, a recent study could show that, controlling for personal characteristics, occupational and firm-specific effects, there is a wage gap of about 10% attributable to the type of contract (Pfeifer 2012). With respect temporary work agency employees, controlling for individual characteristics there is a considerable raw wage gap stemming from differences in collective agreements of agency firms and user firms, tasks, skills and experience amounting to about 40 to 50% (Baumgarten et al. 2012). Controlling for socio-economic characteristics of workers and job characteristics, the corrected wage gap has been estimated at around 32% in the past (Jahn 2010), taking into account tenure and work experience it was estimated at around 15% to 22% for full-time agency workers (Lehmer/Ziegler 2011). Part-time work is also characterized by a wage gap after correcting for worker and job characteristics (Wolf 2010), and there is some evidence that marginal part-time workers receive significantly lower gross hourly wages than other part-time workers (Voss/Weinkopf 2012).

Furthermore, research can show that transition from a fixed-term contract to a permanent one is relatively frequent in Germany, in particular for young people entering the private sector for whom fixed-term contracts (outside genuine apprenticeships which make up for about half of all fixed-term contracts) can be seen as an extended probationary period – continuous renewals of fixed-term contracts are more widespread in the public, academic and social sector where specific conditions prevail (Bellmann/Fischer/Hohendanner 2009, Hohendanner 2010, Boockmann/Hagen 2005, Lehmer/Ziegler 2010). Mobility from temporary agency work to permanent (direct) employment is more problematic, also given the distinct institutional

arrangement and functional logic of agency work in Germany (see also below) (Baumgarten et al. 2012, Spermann 2011, Kwasnicka 2008, Holst/Nachtwey/Dörre 2009, Lehmer/Ziegler 2010, Crimmann et al. 2009). As regards part-time work we can see a significant employment stability of (voluntary) part-time work in Germany which can also be perceived as a standard employment contract at reduced weekly hours, yet most part-time workers would like to expand their working time (Holst/Seifert 2012). Mobility barriers exist with respect to marginal part-time work which can be attributed to the prohibitive marginal tax rates experienced at the threshold earnings level in this segment (Eichhorst et al. 2012, Freier/Steiner 2008). Mobility from low pay to higher wages is more frequent with younger and better skilled workers as well as male workers, in particular if they can leave (i) firms with large segments of low paid jobs and (ii) unskilled service occupations (Mosthaf/Schnabel/Stephani 2011).

Compared with many other countries, participation in on-the-job training is rather limited in Germany, at least when referring to usual cross-country data sets. What is also striking is the quite exclusive character of continuous vocational training as it is basically focused only on medium and highly skilled and mostly young to prime-age workers. Hence, low-skilled people, but also older workers do hardly participate in education and learning in Germany (see figure 18).

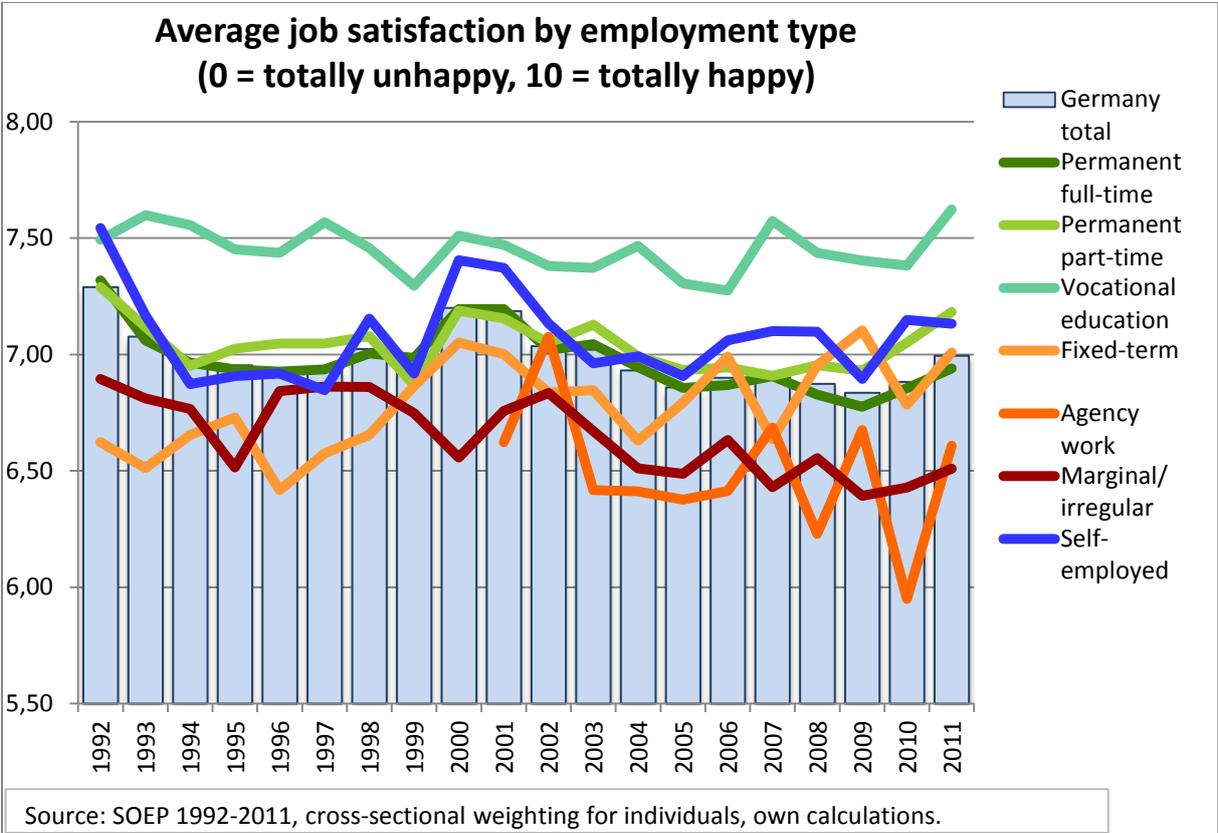
**Figure 18: Participation in training and education by educational level**



Source: Eurostat.

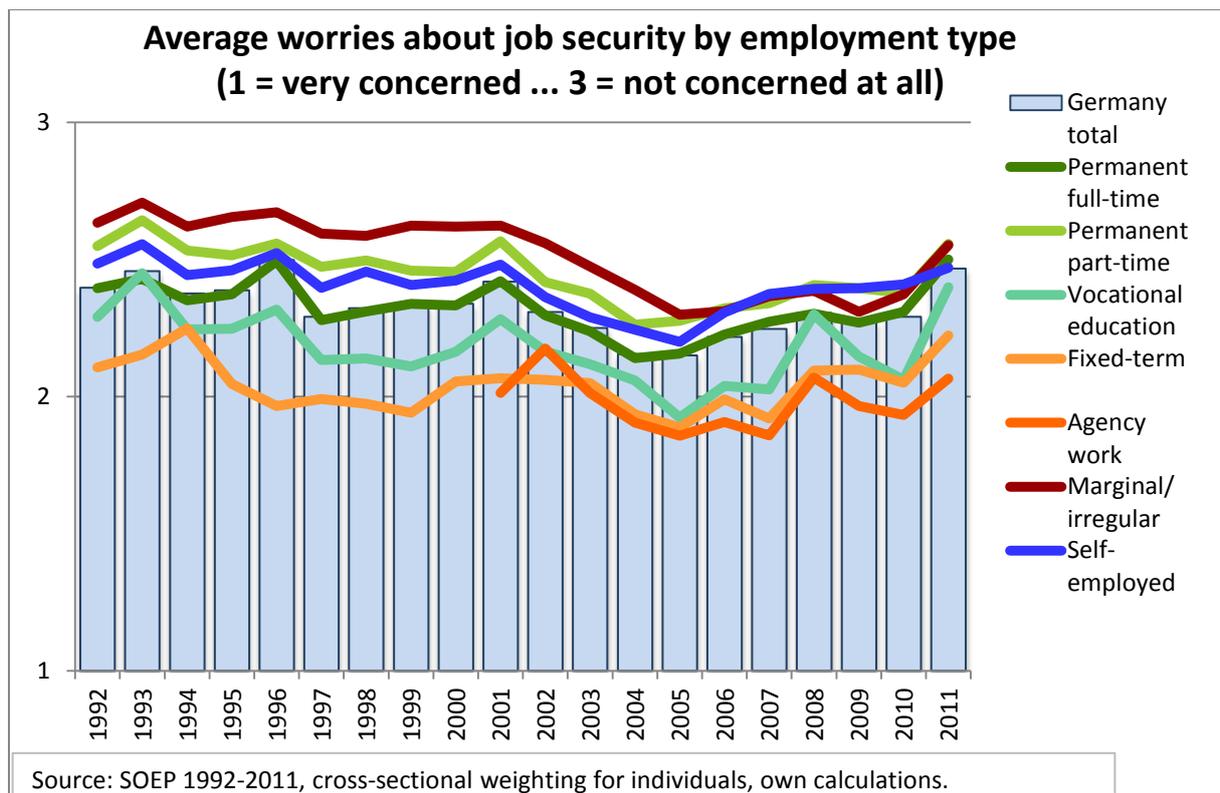
Regarding subjective indicators such as job satisfaction and perceived employment stability, data from surveys show a relatively persistent and fairly high level of average job satisfaction in Germany (figure 19). When comparing between employment types, satisfaction is particularly high among apprentices, permanent full-time and, most notably, part-time workers and the self-employed, however, fixed-term employees are not unhappy. Marginal part-time workers and temporary agency staff is less satisfied.

**Figure 19: Job satisfaction by job type**



A similar picture emerges with respect to job insecurity. We do see a cyclical pattern, but no long-term increase in job worries. The most recent period has rather led to higher perceived employment security. Self-employed, but also permanent dependent employees and marginal part-time workers, who are not totally reliant on income from work, are less worried than fixed-term and agency workers as shown in figure 20 (see also table A4).

**Figure 20: Perceived job insecurity**



Regarding informality of employment in Germany, there is no reliable and uncontested data on informal employment (defined as non-registered informal employment or shadow activity). Yet, there are some diverging estimates, highly depending on the methodology used, however (see, e.g. Schneider 2012).

As a general assessment of labor market segmentation in Germany, one can argue that the variety of employment types and pay dispersion increased significantly since the turn of the century. Most of the non-standard jobs, however, can be seen as additional employment opportunities created by institutional liberalization at the margin of the labor market and corresponding adaptive behavior of market actors. Hence, labor market segmentation and dualization have certainly grown in importance over time, moving Germany away from a situation of few, but quite equal jobs to a constellation characterized by more, but also more unequal jobs. Legislative changes are not the only factor, however, as sectoral change, the further development and relative shrinkage of the scope of collective bargaining and company-level practices have to be taken into account.

### 3 Institutional background and reforms

Besides structural change and strategic behavior of market actors, in particular employers, labor market institutions and reforms play a major role in shaping the functioning of the German labor market. While there is major stability around the institutional provisions governing standard employment contracts there have been major structural changes mainly affecting non-standard or 'atypical' jobs.

Regarding open-ended full-time contracts dismissal protection has remained more or less at the same level as it used to be in the 1990s. Reforms marginally liberalizing dismissal protection by lifting the company size threshold and narrowing the social selection criteria for fair dismissals introduced in the mid-1990s were undone in the late 1990s and partially restored in the early 2000s. Apart from that no major changes were implemented on the legislative side. Social protection of fully socially insured permanent employees has changed, however, in particular by shorter maximum duration of unemployment insurance benefit receipt for older workers which was cut from 32 to 18 month and later on extended to 24 months again. More important for the development of standard contracts was the restructuring of collective bargaining and company-level strategies, however. First, since the 1990s sectoral negotiations linking wages, working time and job stability were most characteristic for the core manufacturing sector in Germany, and this led to increased flexibility within collective agreements regarding pay and working time adjustment. In the medium and long run, these steps of restructuring contributed to regaining competitiveness in the export-oriented sector and the relative stabilization of standard employment contracts for the core labor force, albeit at condition which are less 'rigid' and more flexible than in the past. At the same time, however, manufacturing employers also promoted outsourcing and offshoring, thereby redrawing the borders of the core workforce more narrowly. One has to note further that major employment gains in standard employment contracts occurred in the private service sector, most notably in highly skilled occupations, which offset the stagnating and rather shrinking employment capacity of the manufacturing sector. However, collective bargaining coverage is much lower in many of the most dynamic private services, and this also contributes to the increase in wage dispersion and low pay (Dustmann/Ludsteck/Schönberg 2009).

As refers to non-standard contracts a number of changes have shown medium and long run consequences of some deregulation at the margin of the labor market. These changes were

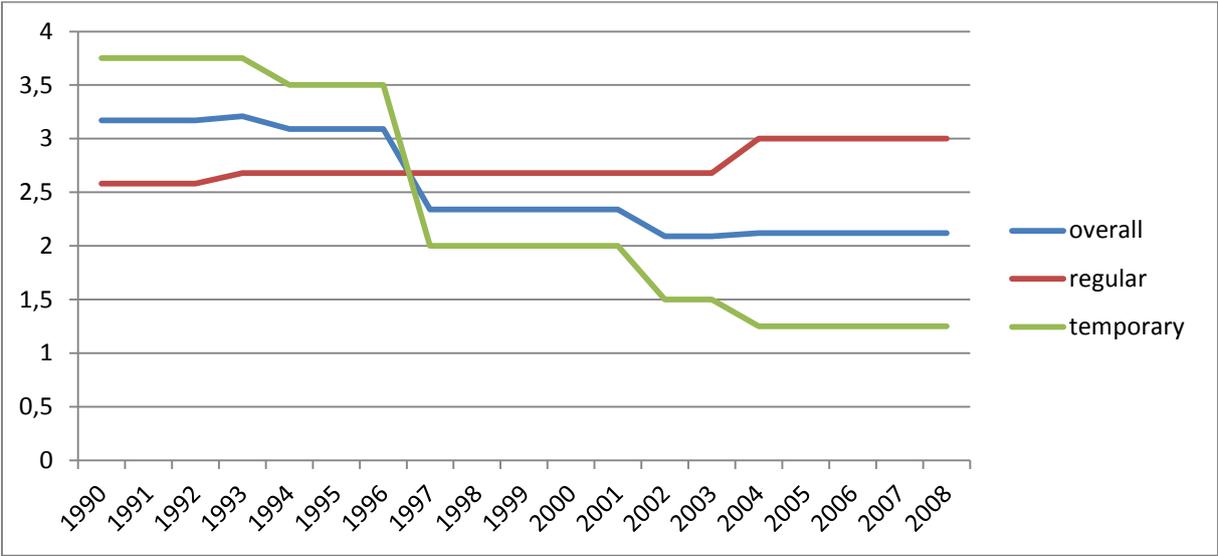
more significant that legislative modifications of the standard employment contract, i.e. dismissal protection. First, over the last three decades, starting in the mid-1980s, fixed-term contracts have been liberalized in a step-wise manner with only some smaller steps reversing parts of the deregulatory path. Currently, fixed-term contracts without having to provide a valid reason are legal in Germany for up to two years involving up to three renewals. Since 2000/01 it is not possible anymore to have a fixed-term contract with the same employer if fixed-term employment had already taken place in the past. Furthermore, since the mid-2000s fixed-term employment without having to provide a valid reason is basically unrestricted when hiring older unemployed and during the first years of a business start-up. Fixed-term contracts are also feasible in cases of a valid reason, of course. In the public sector project-related funding is often taken as a reason to employ workers only on a temporary basis, and in the academic sector, specific legal provisions allow for extended periods of fixed-term employment up to 12 years. One has to note, however, that dismissal protection for permanent staff is even stricter in the public sector than in the private one. It is virtually impossible to fire civil servants and public employees with certain tenure. This also explains the reluctance of public employers to convert temporary into permanent jobs.

As with fixed-term employment, temporary agency work has also been liberalized progressively over the last decades, with the most important deregulatory step being taken in 2003. Here, virtually all restrictions regarding agency work were lifted such as maximum duration of assignments, the ban on synchronicity between employment contract and individual assignments or the ban on rehiring. At the same time, equal pay and equal treatment were stipulated as a general principle. However, deviations were allowed for initial periods of employment after phases of unemployment and, most importantly, by way of collective agreements. This led to a virtually full coverage of the agency sector by collective agreements – however, the wages set are now significantly below those of major user sectors such as the metal working sector. Hence, while the original intention of promoting temporary work agencies was to strengthen the placement capacities for the unemployed, labor market reforms in Germany actually led to the creation of a peculiar wage gap between direct employees in manufacturing and temporary agency workers performing similar tasks as wage scales differ and assignments can be made for an indeterminate period of time. Finally, while ‘bogus’ self-employment was defined more strictly according to specific criteria in the late 1990s in order to avoid exit from social insurance and reclassify those workers as dependent

employees, policies to promote business creation have eased barriers to own account work since the early 2000s.

Figure 21 shows the asymmetric liberalization of employment protection with reduced levels of EPL for fixed-term contracts and temporary agency work while maintaining relatively strong dismissal protection for open-ended contracts.

**Figure 21: OECD Summary indicator on EPL (Version 1)**



Source: OECD. For details on the situation also refer to the OECD country file.

Most important, but outside employment protection legislation, was the change in the regulation of so-called marginal part-time work in 2003. In contrast to earlier, more restrictive regulation of those small part-time jobs, the 2003 reform both lifted the earnings threshold to 400 EUR per month (450 EUR as of 2013), abolished the weekly working hours ceiling of 15 hours and allowed for marginal part-time work as a second job. What is peculiar about marginal part-time work or Minijobs in Germany is the fact that employment in marginal part-time is not liable for income taxes and employee social insurance contributions while at same time not providing full social protection. Hence, earnings from Minijobs can be received without reduction of taxes and social insurance contributions. But when earning more than 450 EUR (or if combining more than one of these jobs) full taxation and a gradual phase-in into social insurance set in. Therefore, the 450 EUR threshold acts as a strong disincentive to earn or work more. This arrangement, however, is quite attractive and popular with secondary earners such as married women, with people with a fully social protected first job as well as

with students and pensioners. What happened since 2003 is not only the expansion of Minijobs but also the further restructuring of some private services such as retail trade or hotels and restaurants where most of these jobs are concentrated. There is some evidence that regular part-time and full-time jobs have been crowded out, and employers have reaped part of the benefits on the employee side by reducing gross hourly wages (Eichhorst et al. 2012, Hohendanner/Stegmaier 2012). In-work benefits also contribute to the more widespread appearance of low pay as since the Hartz IV reform access to social assistance to top up low earnings has been simplified due to earnings disregard clauses. This can induce employers to lower gross wages if there is no binding wage floor. Hartz IV, one has to note, was one of the core pillars of activation policies in Germany (Eichhorst/Grienberger-Zingerle/Konle-Seidl 2008, Ebbinghaus/Eichhorst 2009).

With the number of recipients of unemployment benefits and social assistance steeply rising, largely due to a continuous increase in long-term unemployment, reforming these systems became a priority on the agenda of labour market and social policy. The Hartz report formed the base for a package of reforms aiming at activating both short- and long-term unemployed, reforming the public employment service and the institutional repertoire of active schemes. Finally, with *Hartz IV* coming into force in January 2005, unemployment assistance and social assistance were replaced by a single means-tested replacement scheme for persons in need and able to work not entitled to unemployment insurance benefit or after expiry of this contribution-based benefit. Hartz IV radically changed the German system of wage-related welfare. The new scheme has a dual aim: on the one hand, it was designed to prevent poverty but not to secure previous living standards. Thus, for those having received social assistance before, the new legislation actually allows them to receive marginally more money and access to job employment services. For former recipients of a substantial amount of unemployment assistance, the level of transfer payment decreased. Apart from its social policy objective, the aim of this reform was to lower unemployment. The major lever to achieve this goal was the shortening of individual unemployment spells through accelerated job placement and more coherent activation of the beneficiaries of unemployment insurance benefits and unemployment or social assistance. Less generous benefits for long-term unemployed, stricter job suitability criteria and more effective job placement and active labour market schemes were the instruments to achieve this goal. Benefit recipients can be demanded to take up any job and follow obligations stemming from integration agreements. The practical enforcement of “rights and duties”, however, is the core element of the Hartz reforms. The activation

strategy is implemented in virtually every element of the labour market policy framework. The Hartz reforms shifts priority towards active measures that require proactive behaviour of the unemployed and promote their direct integration into regular employment. To this end, the reform re-designed integration subsidies, introduced new forms of wage subsidies, start-up subsidies and jobs with reduced social security contributions.

In general, all major steps of deregulation of non-standard work such as fixed-term employment, agency work, self-employment and marginal part-time work were intended to lower barriers for job creation, in particular in the service sector, and ease access to flexible jobs as stepping stones for unemployed or inactive persons, in particular for those with limited skills or work experience. Hence, one can argue that the Hartz reform package established a rather 'implicit' linkage between

1. activation-oriented active labor market and social policies aimed at reducing benefit dependency and increase labor supply and
2. labor market flexibilization aiming at more dynamic job creation in particular in the service sector (Eichhorst/Grienberger-Zingerle/Konle-Seidl 2008, Ebbinghaus/Eichhorst 2009).

The Hartz reforms, initiated by the Red-Green government after its re-election in 2002, aimed at both activating the unemployed (and social assistance claimants) and strengthening the reintegration capacities of active labor market policies as well as strengthening the job-creation potential of the economy through a partial deregulation of the labor market. The increase in labor supply (due to activation) was to be absorbed by a more flexible labor market, i.e. in "new" flexible segments such as start-ups, part-time and minor jobs, but also temporary agency work. While the shift towards activation means a break with the past, further steps in partial flexibilization fit in with the long-standing path of gradual reforms at the margin. Nevertheless, the Hartz reforms are a reform package addressing passive and active labor market policies, employment protection, and an organizational reform of both the employment office and communal responsibility.

However, during the discussion on labor market reforms in the early 2000s there was no general debate about linking activation policies with labor market deregulation in a systematic way in line with a more explicit 'flexicurity' agenda. The expectations that were related to the Hartz reforms such as reducing unemployment in Germany significantly and overcoming persistently high structural unemployment have partly been realized as the increase in total

employment and the related decline in inactivity and unemployment show. Yet, also employers could shift more and more employment risks onto the flexible part of the labor force and assign more tasks to flexible and low paid workers. The widespread perception is that the German labor market has become more flexible and more conducive to the creation of jobs, but that on average that this has come at the price of having more heterogeneity between jobs and an increasingly large share of non-standard, i.e. more fragile employment and low pay while long-term unemployment and benefit dependency are still high. The growth of the secondary segment has also contributed to some fears in the core segment regarding downward mobility in terms of pay and employment stability (although empirical data still show a remarkable stability of the middle class). This view has become more prominent since the mid-2000s when the medium-run effects of the Hartz reform package on the German labor market became apparent and triggered a debate about re-regulating the labor market.

In fact, Germany was the only country to show declining unemployment and increasing employment during the 2008-09 economic crisis. By now, it is most well-known for its short-time work arrangement which contributed to a remarkable stability of manufacturing employment during the crisis which had not been completely predictable by earlier experiences. Political action was of some importance, in particular the extension of the maximum duration of short-time work allowance from 6 to 24 months and an increase in the maximum support available to employers – in contrast to the situation until fall 2008, employers were entitled to a full compensation of social security contributions for hours not worked starting from the sixth month of short-time work and from the beginning if training was provided. But policy reforms regarding short-time work were only one element of internal adjustment. In fact, most of the flexible adjustment via working time reduction occurred at the company level via shorter working time, in particular reduced overtime work, and by eating up surpluses on working time accounts. This could be done without institutional changes. All in all, the smooth development of employment figures in German manufacturing was quite unexpected by many observers. Only a change in employers' behavior can explain that. German manufacturing employers acted very cautiously during the crisis. Past experience had taught them that dismissing skilled workers during a temporary downturn can lead to severe skill shortages when demand recovers. This is particularly true in situations of imminent demographic change which result in smaller cohorts of young workers entering the labor market. In fact, there is evidence that those sectors in which firms had experienced difficulties in recruiting before the crisis were most affected by the crisis and employers were

therefore very reluctant to dismiss workers at short notice (Möller 2010). Furthermore, as routine manual tasks had been allocated to temporary agency workers, manufacturing employers could terminate a substantial part of these contracts on short notice as well as not renew some fixed-term jobs (Hohendanner 2010). Hence, the secondary segment of manufacturing workers had to bear a major part of the external adjustment during the crisis – but with the subsequent recovery employment in agency work picked up again quickly as shown in Table 5. Later on, stimulated by external demand, also regular employment in manufacturing started to increase again.

Long-term restructuring in manufacturing obviously contributed to achieve a good fit with the economic environment that is currently working well. Reducing the depth of the value chain in core businesses, while focusing on the most innovative parts, more outsourcing and a longer supply chain, both national and global, can explain this together with the increased flexibility of employment relations both with the core labor force and the marginal segment. Hence, it is fair to say that the recent economic crisis showed a dualized pattern of adjustment in the German case with both internal and external flexibility. The general pattern of labor market segmentation was mirrored during the response to the crisis as the marginal labor force took a major part of the burden, thus easing pressure on the core workforce, which was also protected by channels of internal adjustment.

**Table 5: Crisis adjustment in Germany, 2007-2012**

	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012 (medium IAB scenario)</b>
Real GDP, %	+3.3	+1.1	-5.1	+3.7	+3,0	+1.1
Productivity change per hour worked, %	+1.7	-0.1	-2.5	+1.4	+1.3	+0.3
Hours worked, %	+1.6	+1.2	-2.7	+2.3	+1.7	+0.8
Total employment, %	+1.7	+1.2	+0.0	+0.5	+1.3	+1.1
Total employment, 1,000	39,857	40,345	40,362	40,553	41,100	41,551
Employees covered by social insurance, 1,000	26.943	27.510	27.493	27.756	28.431	28.942
Employees covered by social insurance, %	+2.2	+2.1	-0.1	+1.0	+2,4	+1.8
Unemployment, 1,000	3,760	3,258	3,415	3,238	2,976	2,843
Unemployment rate, %	9.0	7.8	8.2	7.7	7.1	6.8
Temporary agency workers in 1,000	614	612	560	742	n.a.	n.a.
Short-time workers, 1,000	68	101	1,144	503	152	140
Employment in manufacturing, 1,000	-	7,638	7,420	7,287	7,421	7,494

Source: Federal Statistical Office, Federal Employment Agency, Fuchs et al. 2012.

## 4 Policy Conclusions

In general, what can be taken as a lesson from the German way of dealing with the crisis is that Germany has performed well during the last years, but the model in place is not perfect – yet, it seems to work in economic terms. It entails an unequal distribution of risks (costs and benefits) of adjustment, though. More specifically, short-time work and working time accounts have proven to be very helpful and could be seen as good practices in order to deal with external shocks of a limited duration and to protect workers against unemployment – these instruments could be used again in similar situations, but they should not be overstretched in situations where there are structural problems with sectors or individual companies. Working time flexibility and internal reorganization works effectively for employers to be able to keep core staff on the job. More problematic, both with respect to the general development of the last years and with regard to the crisis response is the situation of agency workers and other non-standard employees, in particular labor market (re)entrants and people cycling between jobs of limited duration or prospects.

The issue of labor market segmentation has gained in public and political attention over the last years, with a major campaign of the trade unions pushing for minimum wage levels and some re-regulation of the labor market. The major issue here is to reduce the regulatory gap between standard and non-standard types of jobs without making the German labor market overly rigid again, thus paving the way to smooth the transition between jobs and realize the full potential of flexible jobs as stepping stones to permanent positions (or from low pay to medium pay) – still taking into account that a labor market dominated by service sector jobs will tend to have a stronger demand for external flexibility and non-standard types of jobs compared to the decades dominated by manufacturing employment. This is particularly relevant for

- fixed-term contracts (most importantly in public sector where transition probabilities are low),
- temporary agency work,
- marginal part-time work and
- self-employment and freelance work.

Regarding fixed-term contracts (mainly in the public sector) softening employment protection for permanent staff in public sector jobs to the level of dismissal protection in the private sector in exchange for easier access to open-ended contracts in this sector could be one solution. Furthermore, and even more fundamental, a general revision of dismissal protection for permanent workers in exchange for a legal entitlement to severance pay proportional to salaries and tenure combined with some limitations on fixed-term contracts could help ease segmentation along this line. Yet, as many examples from European countries show, all reforms questioning dismissal protection are difficult in politico-economic terms and therefore they do not rank high on the agenda. German employers have adjusted to the availability of different types of contracts, and trade unions (and works councils) implicitly also accept the segmentation of the labor force rather than question employment protection for permanent staff.

The situation is less deadlocked in the area of temporary agency work. Widespread uneasiness with the current working conditions of agency workers have fuelled a debate about introducing 'real' equal pay and equal treatment through legislative changes. Trade unions in particular have pushed for this, however, the legal situation has not yet been reformed substantially. What we can observe most recently is successful collective bargaining in the metal working sector to move towards stronger co-determination regarding the use of agency work and stronger equal pay in practice. From a trade union perspective, however, this issue can only be addressed via collective agreements in areas where they are strong enough and where employers are willing to compromise on this as part of a larger bargaining deal.

Marginal part-time could be reformed in order to promote more substantial part-time work – this would imply, however, removing the tax privilege of Minijobs and joint income taxation of married couples (see Eichhorst et al. 2012) which tend to benefit middle-class households' work arrangements and income situation. Hence, reforms in these areas will affect core constituencies of major political parties and the trade unions and are most likely unpopular.

Finally, regarding the regulation of self-employment, in particular 'dependent' self-employment and freelance the government, the situation is quite ambiguous. Here, effective tools to reclassify 'dependent' self-employed as dependent employees exist and can be enforced in practice in order to avoid evasion of social security contributions. Freelance work, which has become quite widespread in media and creative occupations is certainly different. Recently, the government has proposed to bring self-employed, in particular freelancers and other own-account workers, more in line with regular employment regarding social

protection, in particular by making savings for old-age pensions compulsory. This was met by strong resistance from the freelancers who are either unwilling or unable to save part of their earnings for old-age.

Regarding wage dispersion, the weakness of collective bargaining in the private service sector, in particular in medium- and low skill occupations, has raised attention to the issue of setting binding minimum wages since the mid-2000s. This was virtually a non-issue for many years as trade unions (and employers) always saw wage bargaining as their genuine competence, but faced with increasing low pay and limited capacities to establish collective agreements the trade unions started to push for a general statutory minimum wage in Germany first at 7.50 EUR per hour and now at 8.50 EUR per hour, a political project that is also popular with the majority of German voters. Yet, no political consensus has emerged around this topic so far. Over the last years and in different government constellations, however, in an increasing number of sectors collectively agreed minimum wages have been made generally binding via existing legislation on the posting of workers or, in the case of agency workers, on the regulation of temporary work agencies. Some of these sectoral minimum wages are significantly higher than the level proposed for a statutory general minimum wage, as table 6 shows. In addition, there are a few regional generally binding minimum wage agreements in further sectors, e.g. for hairdressers in Bavaria or hotels and restaurants in North-Rhine Westphalia. Altogether about four million employees (about 10 percent of total employment) work in sectors currently covered by binding minimum wages.

**Table 6: Sectoral minimum wages in Germany (2013, current levels)**

Sector	Gross hourly minimum wage	
	West Germany	East Germany
Waste removal	8.33	
Vocational and adult education	12.60	11.25
Construction	11.05 / 13.70	10.25
Specialized mining activities	11.53 / 12.81	
Roofing	11.20	
Electrical crafts	9.90	8.85
Cleaning	8.82 / 11.33	7.33 / 8.88
Painting	9.75 / 12.00	9.75
Old-age care	8.75	7.75
Security services	Regional variation between 7.50 and 8.90	
Laundry services	8.00	7.00
Temporary agency work	8.19	7.50

Note: if two minimum wages are mentioned, the lower one refers to simple tasks/unskilled workers, the higher one to more complex tasks/skilled workers. Source: German Ministry of Labor and Social Affairs.

From a labor market point of view a national minimum wage at a moderate level would be feasible without major negative effects on job creation, in particular if set by an independent committee of experts and accompanied by a regular evaluation of its effects. Introducing a general statutory minimum wage may be a topic for the electoral campaign in 2013.

In the medium perspective we can certainly expect further creative adjustment of social partners and collective bargaining as well as company-level practices to promote and safeguard employment of permanent skilled staff, in particular in a situation where skilled labor becomes a scarce resource due to demographic ageing but continues to be essential for the German production model. Social partners continue to be of major importance in the well-established core sectors of the German economy, including manufacturing and some service industries, – but the realm of collective bargaining will probably continue to shrink. In many dynamic service sectors market forces are of particular and growing importance – within a largely flexible institutional environment, and this gives a strong role to employers and employees to negotiate, according to the individual market position. For the increasingly large margin of the labor market government action is certainly crucial. Where the social partners are unable or unwilling to act and intervene, the state, i.e. political decisions, will become more important. This holds for institutional arrangements governing non-standard forms of employment and for the question regarding the establishment of minimum pay provisions.

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### 3.7. Data annexes

**Table A1: Flows into and out of employment**

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b><i>IN employment (total)</i></b>	<b>5,7%</b>	<b>5,0%</b>	<b>5,8%</b>	<b>5,7%</b>	<b>5,3%</b>	<b>5,3%</b>	<b>7,1%</b>	<b>5,7%</b>	<b>6,0%</b>	<b>5,6%</b>	<b>5,9%</b>	<b>6,2%</b>	<b>6,2%</b>	<b>6,4%</b>	<b>7,1%</b>	<b>6,8%</b>	<b>6,0%</b>	<b>6,2%</b>	<b>6,8%</b>
<i>thereof:</i>																			
male	4,3%	4,5%	5,4%	5,0%	5,1%	5,3%	6,6%	4,3%	4,6%	4,4%	5,1%	5,3%	5,9%	6,2%	5,9%	5,9%	4,2%	5,5%	6,7%
female	7,1%	5,5%	6,3%	6,4%	5,6%	5,4%	7,7%	7,1%	7,5%	6,8%	6,8%	7,0%	6,6%	6,7%	8,2%	7,6%	7,8%	6,8%	6,9%
15-24 years	12,2%	10,7%	13,1%	12,7%	13,5%	11,5%	15,0%	13,7%	14,6%	13,7%	13,6%	14,6%	13,7%	15,3%	15,1%	14,9%	13,4%	13,1%	15,0%
25-54 years	5,0%	4,4%	5,2%	5,2%	4,6%	5,1%	6,8%	5,1%	5,2%	4,4%	5,0%	5,2%	5,2%	5,5%	6,1%	5,7%	5,2%	5,1%	6,0%
55-64 years	X	X	X	X	X	X	2,5%	X	2,6%	3,4%	3,3%	2,9%	3,6%	1,8%	3,9%	3,3%	2,5%	4,0%	3,2%
pre-primary, primary and lower secondary education	7,1%	5,5%	6,6%	7,1%	6,3%	6,9%	9,7%	7,8%	9,9%	8,2%	8,1%	9,2%	8,5%	9,0%	10,2%	8,7%	8,8%	9,3%	9,0%
upper secondary and post-secondary non tertiary education	5,3%	5,1%	6,0%	5,9%	5,7%	5,5%	7,2%	5,7%	5,6%	5,3%	6,0%	6,1%	6,3%	5,9%	6,0%	6,8%	5,6%	6,1%	6,8%
first and second stage of tertiary education	4,9%	4,1%	4,6%	3,3%	3,4%	3,5%	4,7%	3,3%	4,1%	3,6%	3,5%	3,5%	3,8%	4,7%	4,6%	4,6%	4,4%	3,8%	5,2%
non-migrant	5,7%	5,0%	5,8%	5,3%	5,0%	5,1%	7,2%	5,2%	5,8%	5,3%	5,8%	6,0%	5,9%	6,2%	6,7%	6,2%	5,7%	6,0%	6,6%
migrant (direct)	5,3%	4,1%	5,1%	6,1%	5,6%	6,0%	5,5%	7,6%	6,3%	6,2%	5,8%	6,5%	7,3%	6,4%	6,8%	8,9%	6,5%	6,9%	6,4%
migrant (indirect)	9,5%	X	8,8%	12,6%	11,2%	8,2%	9,5%	9,7%	11,2%	9,7%	8,8%	8,7%	9,5%	10,1%	14,0%	6,7%	9,4%	6,9%	9,4%
<b><i>OUT of employment (total)</i></b>	<b>6,9%</b>	<b>7,0%</b>	<b>5,7%</b>	<b>6,3%</b>	<b>6,5%</b>	<b>5,8%</b>	<b>5,1%</b>	<b>5,8%</b>	<b>5,9%</b>	<b>6,1%</b>	<b>6,6%</b>	<b>6,3%</b>	<b>6,2%</b>	<b>6,1%</b>	<b>5,2%</b>	<b>5,2%</b>	<b>6,2%</b>	<b>5,9%</b>	<b>5,3%</b>
<i>thereof:</i>																			
male	6,5%	6,4%	5,0%	6,2%	6,3%	5,4%	5,3%	5,3%	5,6%	5,6%	6,2%	5,9%	5,7%	6,1%	4,5%	4,1%	5,7%	6,1%	4,5%
female	7,3%	7,6%	6,4%	6,4%	6,7%	6,2%	4,9%	6,3%	6,3%	6,5%	7,0%	6,7%	6,8%	6,1%	5,9%	6,3%	6,7%	5,7%	6,1%

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011		
15-24 years	9,1%	10,2%	7,9%	9,0%	7,8%	7,4%	6,7%	7,9%	8,2%	9,6%	10,1%	10,1%	8,7%	8,8%	9,3%	8,0%	9,9%	9,1%	8,1%		
25-54 years	6,0%	6,2%	5,0%	5,2%	5,5%	5,4%	4,4%	4,7%	5,0%	5,1%	5,6%	5,0%	5,4%	4,9%	3,7%	4,2%	5,3%	4,6%	4,4%		
55-64 years	8,3%	7,2%	6,6%	8,1%	9,2%	6,1%	6,5%	8,0%	7,5%	6,7%	7,1%	8,1%	7,5%	8,9%	7,6%	6,9%	6,4%	8,0%	6,5%		
pre-primary, primary and lower secondary education	6,2%	8,0%	6,4%	7,0%	6,3%	6,1%	4,7%	6,2%	6,8%	7,4%	8,3%	7,4%	7,1%	7,5%	7,5%	6,8%	7,4%	7,1%	7,4%		
upper secondary and post-secondary non tertiary education	7,3%	7,2%	6,0%	6,6%	7,3%	6,0%	5,8%	5,9%	6,0%	6,6%	6,6%	6,6%	6,5%	5,9%	4,9%	5,2%	5,9%	5,7%	5,5%		
first and second stage of tertiary education	6,7%	5,3%	4,2%	4,7%	4,5%	5,2%	4,0%	5,0%	4,7%	3,8%	4,8%	4,4%	4,8%	5,3%	3,8%	3,6%	5,2%	4,9%	3,7%		
non-migrant	6,9%	6,9%	5,6%	6,3%	6,6%	5,6%	5,1%	5,7%	5,7%	6,1%	6,3%	6,2%	6,0%	5,9%	4,7%	5,0%	6,1%	5,5%	4,9%		
migrant (direct)	6,1%	8,0%	5,8%	5,9%	6,1%	6,3%	5,3%	5,2%	7,3%	5,6%	7,4%	7,0%	5,9%	6,8%	7,7%	6,5%	6,6%	7,4%	7,6%		
migrant (indirect)	X	X	X	X	X	X	X	X	5,4%	6,6%	10,0%	7,3%	10,6%	8,5%	X	5,7%	6,6%	8,1%	X		
Source: SOEP 1992-2011, cross-sectional weighting for individuals, own calculations. For 1992 and 1993 only early immigrants to Germany.																					
X insufficient number of cases (<50)																					

**Table A2: Different forms of employment in Germany (without apprentices)**

Year	Total	Self-employment			Dependent employment							
		Total	With employees	Without employees	Total	Full-time open-ended contracts	Non-standard workers					
							Total	Fixed-term contracts	Part-time workers	Marginal part-time workers	Agency workers	
	<i>men</i>											
1991	19.892	2.130	1.244	886	17.715	16.674	1.041	861	154	100	–	
1992	19.752	2.175	1.295	880	17.526	16.463	1.063	886	167	90	–	
1993	19.448	2.223	1.326	897	17.185	16.199	986	808	179	95	–	
1994	19.266	2.297	1.370	927	16.919	15.891	1.027	838	195	93	–	
1995	19.204	2.322	1.362	960	16.830	15.691	1.138	911	239	124	–	
1996	18.820	2.341	1.316	1.025	16.438	15.257	1.181	908	267	168	–	
1997	18.594	2.406	1.326	1.080	16.143	14.895	1.249	928	325	224	–	
1998	18.502	2.443	1.340	1.103	16.013	14.689	1.324	980	357	246	–	
1999	18.589	2.445	1.344	1.101	16.105	14.666	1.439	1.092	373	248	–	
2000	18.648	2.465	1.326	1.139	16.140	14.702	1.438	1.070	390	254	–	
2001	18.610	2.459	1.330	1.129	16.092	14.663	1.430	1.050	411	254	–	
2002	18.350	2.463	1.315	1.148	15.832	14.465	1.367	967	433	275	–	
2003	17.966	2.501	1.302	1.199	15.416	13.970	1.446	999	500	311	–	
2004	17.709	2.560	1.290	1.270	15.094	13.635	1.459	1.000	518	321	–	
2005	17.989	2.646	1.276	1.370	15.289	13.548	1.741	1.218	597	452	–	
2006	18.346	2.654	1.288	1.366	15.642	13.494	2.148	1.337	650	572	376	
2007	18.655	2.645	1.314	1.331	15.963	13.735	2.228	1.336	659	595	409	
2008	18.841	2.622	1.302	1.320	16.178	13.918	2.260	1.352	647	568	425	
2009	18.618	2.659	1.313	1.346	15.933	13.794	2.139	1.253	648	589	375	
2010	18.755	2.669	1.312	1.357	16.060	13.750	2.310	1.322	669	575	503	
2011	19.157	2.732	1.331	1.402	16.397	14.060	2.338	1.352	706	595	517	
	<i>women</i>											
1991	14.486	729	331	398	13.368	10.158	3.210	921	2.401	552	–	
1992	14.274	742	338	404	13.145	9.809	3.336	927	2.521	579	–	
1993	14.035	781	358	423	12.899	9.623	3.276	812	2.588	553	–	
1994	14.125	816	388	428	12.954	9.559	3.395	878	2.660	551	–	

1995	14.160	837	376	461	12.973	9.402	3.571	931	2.787	625	–
1996	14.215	864	367	497	13.085	9.405	3.680	862	2.923	931	–
1997	14.119	908	371	537	12.973	9.123	3.850	894	3.067	1.086	–
1998	14.176	929	385	544	12.988	9.020	3.968	907	3.178	1.261	–
1999	14.483	934	386	548	13.347	8.972	4.374	1.073	3.461	1.496	–
2000	14.663	952	394	558	13.503	9.063	4.439	1.060	3.554	1.495	–
2001	14.889	952	400	552	13.633	9.077	4.556	1.034	3.716	1.560	–
2002	14.877	966	399	567	13.631	9.073	4.558	963	3.784	1.576	–
2003	14.806	1.005	393	612	13.547	8.861	4.686	970	3.918	1.638	–
2004	14.664	1.052	399	653	13.344	8.722	4.622	953	3.866	1.658	–
2005	14.973	1.156	411	745	13.543	8.536	5.007	1.176	4.082	1.973	–
2006	15.374	1.184	417	767	13.939	8.624	5.315	1.282	4.215	2.095	186
2007	15.667	1.198	413	785	14.212	8.758	5.454	1.323	4.287	2.177	205
2008	15.893	1.198	414	784	14.472	9.011	5.462	1.379	4.256	2.010	187
2009	16.012	1.218	427	791	14.650	9.197	5.453	1.387	4.253	1.985	185
2010	16.218	1.248	435	813	14.844	9.319	5.525	1.439	4.261	1.942	238
2011	16.606	1.286	433	853	15.195	9.614	5.581	1.453	4.318	2.078	258
<i>total</i>											
1991	34.377	2.859	1.575	1.284	31.083	26.832	4.251	1.782	2.555	652	–
1992	34.026	2.917	1.633	1.284	30.671	26.272	4.399	1.813	2.688	669	–
1993	33.482	3.003	1.683	1.320	30.084	25.822	4.262	1.620	2.767	648	–
1994	33.391	3.113	1.758	1.355	29.873	25.450	4.422	1.716	2.856	645	–
1995	33.364	3.159	1.737	1.422	29.803	25.093	4.710	1.842	3.026	749	–
1996	33.034	3.205	1.684	1.521	29.523	24.663	4.861	1.770	3.190	1.099	–
1997	32.713	3.314	1.697	1.617	29.116	24.018	5.098	1.822	3.392	1.310	–
1998	32.678	3.372	1.726	1.646	29.001	23.709	5.292	1.887	3.535	1.506	–
1999	33.071	3.379	1.730	1.649	29.451	23.638	5.814	2.165	3.834	1.743	–
2000	33.311	3.418	1.721	1.697	29.643	23.766	5.878	2.130	3.944	1.749	–
2001	33.498	3.411	1.729	1.682	29.726	23.740	5.986	2.085	4.127	1.815	–
2002	33.227	3.429	1.714	1.715	29.463	23.535	5.929	1.931	4.221	1.852	–
2003	32.772	3.506	1.696	1.810	28.963	22.828	6.135	1.969	4.421	1.949	–
2004	32.373	3.612	1.689	1.923	28.438	22.351	6.086	1.953	4.391	1.979	–
2005	32.962	3.802	1.687	2.115	28.831	22.084	6.747	2.394	4.679	2.425	–
2006	33.720	3.838	1.705	2.133	29.582	22.119	7.463	2.619	4.865	2.667	562
2007	34.321	3.843	1.727	2.116	30.175	22.493	7.682	2.659	4.946	2.772	614
2008	34.734	3.820	1.717	2.103	30.650	22.929	7.721	2.731	4.903	2.578	612
2009	34.629	3.877	1.740	2.137	30.582	22.990	7.592	2.640	4.901	2.574	560

2010	34.973	3.917	1.748	2.169	30.904	23.069	7.835	2.761	4.929	2.517	742
2011	35.762	4.018	1.763	2.255	31.592	23.674	7.918	2.805	5.025	2.673	775

Source: German Federal Statistical Office.

**Table A3: Shares of different types of employment by sector in %, 2010**

	self-employed without employees	self-employed with employees	standard employment relationship	fixed-term contract	part-time employment	marginal employment	Tempo-rary agency work
Private households	5.8	0.5	12.5	4.8	65.4	51.0	0.0
Other economic activities	6.9	4.5	42.6	14.1	21.6	14.7	10.6
Agriculture and forestry	21.0	13.3	30.1	4.7	6.0	4.9	0.0
Accommodation and food service activities	4.2	10.5	39.1	8.8	21.7	15.3	0.9
Arts, entertainment and recreation activities; other services	17.7	5.7	38.9	9.0	17.4	10.8	0.8
Professional, scientific and technical activities	16.8	10.6	45.3	4.9	10.3	3.8	0.6
Human health and social work activities	3.6	4.5	53.7	10.1	18.5	7.6	0.6
Wholesale and retail trade; repair of motor vehicles	5.0	5.7	54.3	6.2	17.6	9.6	1.1
Education	4.9	0.8	56.6	12.9	15.0	4.5	0.5
Information and communication activities	10.7	3.3	59.2	5.2	8.7	4.9	0.8
Construction	8.7	9.0	61.2	4.3	6.2	3.4	1.4
Financial and insurance activities; real estate activities	7.7	4.9	64.5	3.0	11.3	3.3	1.3
Real estate activities	2.0	2.2	49.2	4.9	7.2	3.9	1.2
Mining and quarrying	1.4	2.2	75.6	4.9	5.6	3.1	3.2
Energy, water, waste management	1.4	1.1	78.1	6.1	3.7	1.8	4.8
Public administration, defense, social security	0.0	0.0	73.3	5.9	8.3	2.2	0.5

Source: Federal Statistical Office.

**Table A4: Worries about job security by employment status and personal characteristics:  
expected probability of job loss within the next two years in %**

	<b>1999</b>	<b>2001</b>	<b>2003</b>	<b>2005</b>	<b>2007</b>	<b>2009</b>
<i>Germany total</i>	<i>21,7</i>	<i>18,4</i>	<i>22,5</i>	<i>24,2</i>	<i>21,7</i>	<i>25,0</i>
<i>therof:</i>						
Permanent full-time	20,1	16,6	21,4	22,3	18,8	23,7
Permanent part-time	19,0	15,0	20,0	21,9	19,1	20,9
Vocational education	30,7	27,3	28,9	34,9	32,1	31,6
Fixed-term	45,7	43,0	41,8	43,1	41,9	41,5
Agency work		29,3	39,0	44,4	40,0	44,0
Marginal/ irregular	22,4	20,6	22,0	25,2	27,5	24,6
Self-employed	13,1	11,2	12,9	14,8	12,8	17,0
male	21,3	18,3	22,2	23,7	20,6	24,9
female	22,3	18,5	22,8	24,8	23,0	25,1
pre-primary, primary and lower secondary education	21,1	19,8	21,9	24,2	23,1	26,3
upper secondary and post-secondary non tertiary education	22,6	18,3	23,7	25,2	22,8	26,5
first and second stage of tertiary education	20,5	17,4	20,1	22,0	18,5	21,7
Source: SOEP 1999-2011, cross-sectional weighting for individuals, own calculations.						