



European Employment Observatory

Ad hoc request

Collective wage agreement and minimum wage in Germany

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5 February 2013

1 Introduction

Collective wage bargaining autonomy has a long tradition in Germany and is enshrined in the constitution. However, less and less people are actually covered by a collective wage agreement. At the same time, wage inequalities have increased, the low wage sector expanded and atypical employment has risen. This is why the political debate on the necessity to introduce more minimum wages at industry or at national level came to the fore at several levels in Germany. In this context, it can also be asked whether the system of collective bargaining and the coverage of workers by collective wage agreements could be strengthened.

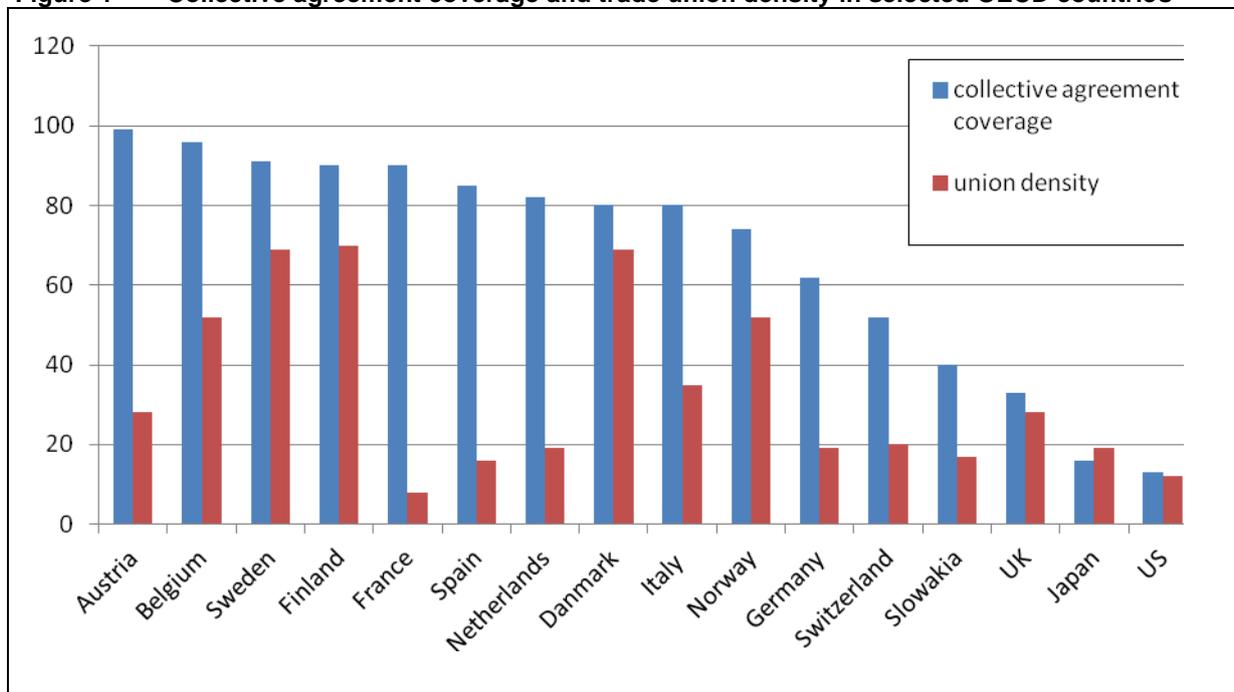
This paper departs from a short analysis of trends in collective bargaining coverage in Germany and describes the groups not covered by a collective agreement. It then analyses the link between the rise of the low wage sector and the increase in non-coverage by a collective agreement and asks about the impact of non-coverage by region, sector, company size and gender. In a third section the system of industry-level minimum wages under the Posted Workers Act will be briefly explained. Key results of evaluation studies on the employment impact of these minimum wages as well as assessments of the effect of the introduction of a nation-wide minimum wage will be reviewed and a short overview of evaluations carried out in selected countries that already have introduced minimum wages is given. Finally the paper addresses the question what lessons can be drawn for Germany from the Austrian system of industrial relations that leads to a high collective bargaining coverage and a comparatively small low wage sector.

2 Erosion of collective bargaining and its impact on the low wage sector

2.1 Changing nature of collective bargaining in Germany

As compared with 15 other OECD countries the level of collective bargaining coverage in Germany is situated in the lower half (Figure 1). Collective bargaining coverage of workers is at least 90% in Austria, Belgium, Sweden, Finland and France.

Figure 1 Collective agreement coverage and trade union density in selected OECD countries

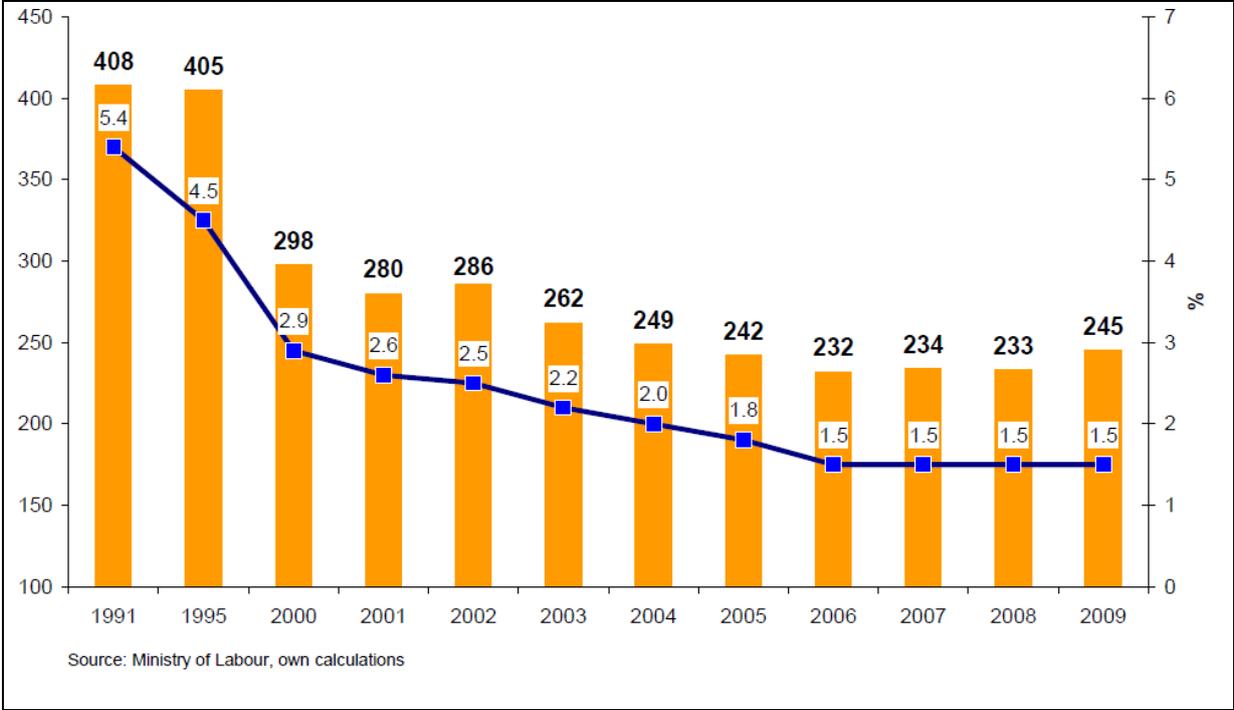


Source: Schulte (2011a)

The comparatively lower coverage in Germany is a consequence of the principle of “collective agreement autonomy” which limits State intervention in the wage-setting process including a limited use of the possible extension of collective agreements. As can be seen from the following figure, only few collective agreements are extended, their share has diminished over time (Figure 2). Although, the Posted Workers Act which came into force in 1996 has opened up the possibility for extending more easily collective agreements to workers who were working in Germany but were posted from foreign

companies (see section 3). Meanwhile these industry-related collectively agreed minimum wages have been concluded in 11 industries, including some parts of the construction industry and related sectors, waste disposal, industrial cleaning, industrial laundries, security services, nursing care services and postal services.

Figure 2 Extension of primary collective agreements 1991-2008, total number and in % of all primary agreements



Source: Bispinck et al 2010

The increasing share of workers not covered by a collective bargaining agreement in Germany has brought up the question whether an erosion of the collective bargaining system is shaping the German labour market and how this impacts on the wage distribution. The share of workers not covered by a collective agreement rose from 31% in 2000 to 40% in 2010 in West Germany and from 49% in 2000 to 57% in 2010 in East Germany (Addison et al. 2012). The share of workers covered by a collective agreement declined from 76% in 1998 to 63% in 2010 in West Germany and from 63% to 50% in East Germany (Hans-Böckler-Stiftung, 2012, on the basis of the IAB Establishment Panel).

However, the rise in the share of workers not covered by a collective agreement masks the fact that an important share of companies who are employing roughly half of the workers not covered by a collective agreement are orienting themselves towards collective agreements. The IAB establishment Panel contains a question asking companies not covered by collective agreements if they do orient themselves at the respective industry-level collective agreement when setting wage levels. In 2010, firms orienting themselves towards the industry-level collective agreement paid on average 10.5% less than firms covered by an industry-level collective agreement, while non-orienting firms paid 13% less than firms covered by an industry-level collective agreement (Addison et al. 2012). It can be argued that this “free-rider” behaviour does reduce the bargaining power of unions, but at the same time it alleviates somewhat the consequences of rising non-coverage. But, the wage difference between companies covered by a collective bargaining and non-covered companies is larger than between “orienting” and non-orienting companies. This might be related to the fact that in many companies covered by a collective agreement actually paid wages are above collectively agreed wages, the collectively wage representing a minimum floor for the wages. In 2006, about 43% of private sector companies covered by a collective agreement paid wages above the collectively agreed level, on average actually paid wages were 10% higher than collectively agreed wages. As also in firms stating that they pay collectively agreed wage levels a wage cushion of 4.4% can be observed. The wage cushion tends to be higher in larger firms and is lower in companies with a firm-level collective agreement; collectively agreed wages at company level tend to be higher than wages collectively

agreed at industry-level (Jung, Schnabel 2009 on the basis of the IAB Establishment Panel). Nevertheless, this development raises the question whether the German bargaining system should not adapt to this increasing free-rider behaviour and allow for more State intervention in the bargaining process.

The reasons for the trend towards an increasing share of non-coverage are manifold. One major reason is the decline in union density linked to the declining employment share in the manufacturing sector, where unions were traditionally well represented, and the rise of private service industries, the increased use of atypical employment and the changing structure of the workforce. Trade union density had fallen from a level of 36% in 1991 to 19% in 2009 (Bispinck et al. 2010). A further element is the increased competition on the basis of low wages in some industries, in particular in East Germany, leading companies to avoid collective agreement coverage (*Tarifflicht*).

The increasing share of workers and companies not covered by a collective agreement is also linked to a lower propensity of new established companies to be covered by a collective agreement (Kohaut, Ellguth 2008, on the basis of the IAB Establishment Panel).

In addition to rising non-coverage, a trend towards differentiation and decentralisation of collective bargaining has been observed in particular in the context of the so-called opening clauses. So-called "hardship-clauses" were introduced in the context of German reunification allowing companies in difficult economic situations to deviate from provisions agreed at the sector level. In 2005, about 29% of employees were covered by a collective bargaining agreement with scope for an opening clause (Bispinck, Schulten 2011b)¹. However, as data from the Works Council Survey shows, the use of pay-related opening clauses was less widespread.²

Differentiation has also taken place in the context of the increased use of variable profit-related pay (Bispinck et al. 2010). As will be shown below, this has contributed to the increase in wage disparities. Decentralisation and differentiation of collective bargaining is perceived as introducing necessary flexibilisation by employers, while works councils generally are more critical and perceive it as a shift of bargaining power towards the employer. Bispinck et al (2010) point to a loss of trade union's bargaining power over the past two decades. One major reason for this development has been a high level of unemployment for many years as well as a fear of workers and their representatives from delocalization in an environment of increased globalization.

Although, sector-based collective bargaining remains a key characteristic of German industrial relations (see below), decentralisation of collective bargaining in form of a rise of firm agreements has taken place over the past decade. Firm agreements play a more important role in East Germany as compared to West Germany.

2.2 Who are the workers not covered by collective agreements?

Divide between East and West Germany

In 2011, in West Germany about 54% of workers were covered by industry-level collective agreements, 7% by company-based collective agreements and 39% were not covered by a collective agreement. In contrast, in East Germany, only 37% of workers were covered by industry-level collective agreements, 12% by company-level agreements and 51% were not covered. In total 26% of workers were neither covered by a collective agreement nor did these serve as an orientation (information based on the IAB Establishment Panel 2011 in WSI Tarifarchiv 2012³). Between 1998 and 2010 collective bargaining coverage declined by 17% in West Germany and by 21% East Germany (Hans-Böckler-Stiftung 2012, on the basis of the IAB Establishment Panel).

¹ The authors are referring to the IAB Establishment Panel in Kohaut and Schnabel 2006

² In 2010, 16% of establishments provided lower pay rates for job starters, 14% reduced or suspended annual bonus payments, and 13% deferred agreed pay increases. Moreover, 9% of establishments introduced a cut in basic pay (Bispinck, Schulten 2011)

³ http://www.boeckler.de/pdf/ta_tarifbindung_2011_beschaefigte.pdf

In West Germany more than half of workers were covered by a sector-based collective agreement in 2010, while the corresponding share was less than a third in East Germany (Figure 3).

Figure 3 Collective Bargaining Coverage by Employment for Western and Eastern Germany, 2000-2010, weighted data*

Year	Western Germany				Eastern Germany			
	Sectoral agreement	Firm agreement	Not covered by a collective agreement but oriented toward one	Neither covered by a collective agreement nor oriented	Sectoral agreement	Firm agreement	Not covered by a collective agreement but oriented toward one	Neither covered by a collective agreement nor oriented
2000	62.5	6.9	16.3	14.3	40.7	10.3	26.1	22.8
2001	63.0	7.4	17.2	12.4	39.8	12.3	25.5	22.4
2002	62.3	7.1	17.1	13.5	36.8	12.7	26.3	24.2
2003	61.1	8.0	17.6	13.3	37.9	11.9	25.7	24.4
2004	60.2	7.4	17.0	15.5	37.3	11.0	24.2	27.5
2005	57.9	7.6	17.8	16.8	37.2	11.3	25.0	26.5
2006	54.9	8.5	19.8	16.8	37.2	12.1	24.1	26.6
2007	53.9	7.3	22.1	16.7	34.9	11.9	26.2	26.9
2008	53.0	8.0	21.8	17.2	34.6	12.2	26.3	26.8
2009	53.1	9.1	20.9	16.9	34.0	12.1	27.3	26.6
2010	52.8	7.5	21.4	18.3	31.2	11.5	27.7	29.6

*. The IAB establishment Panel contains a question asking companies not covered by collective agreements if they do orient themselves at the respective industry-level collective agreement.

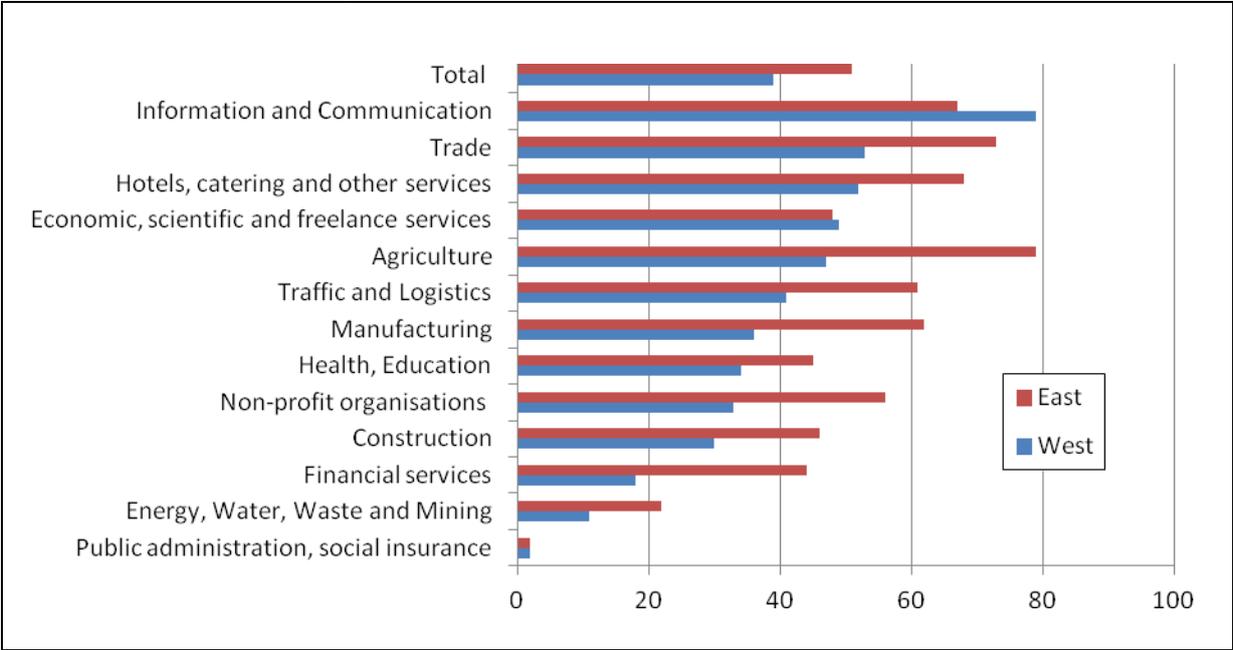
Source: Addison et al. 2012

The increasing share of workers and companies not covered by a collective agreement is linked to a lower propensity of new established companies to be covered by a collective agreement as well as by a trend of existing companies to exit collective agreements / cancel their membership in an employer organisation, although this latter trend seems to be less dominant ("Tariffucht") (Kohaut, Ellguth 2008, on the basis of the IAB establishment survey).

Differences by sectors

There are large differences in the extent to which sectors are bargaining-free. While in the public administration nearly full coverage can be recorded, the share of workers not covered in the private sector tends to be larger. It is generally lower in the construction sector and the manufacturing sector in particular in West Germany. Differences in collective bargaining coverage between East and West Germany might be not only linked to the industrial relations tradition but also to differences in the competitiveness of the manufacturing sector. Here, the gap between East and West Germany is particularly large. In the service sector non-coverage is more widespread, although there are large variations by service sector industries. Non-coverage is low in the financial services industry in West Germany, while it is high in the trade and hotel and restaurant sector, which are low pay sectors. Non-coverage is highest in the information and communication sector, and interestingly, in this industry non-coverage is higher in West than in East Germany. This is one of the sectors where young companies are set up which are rather distant from the collective bargaining culture. Note that differences between East and West are lowest in business related services. Non-coverage in this sector takes a middle-field position (Figure 4).

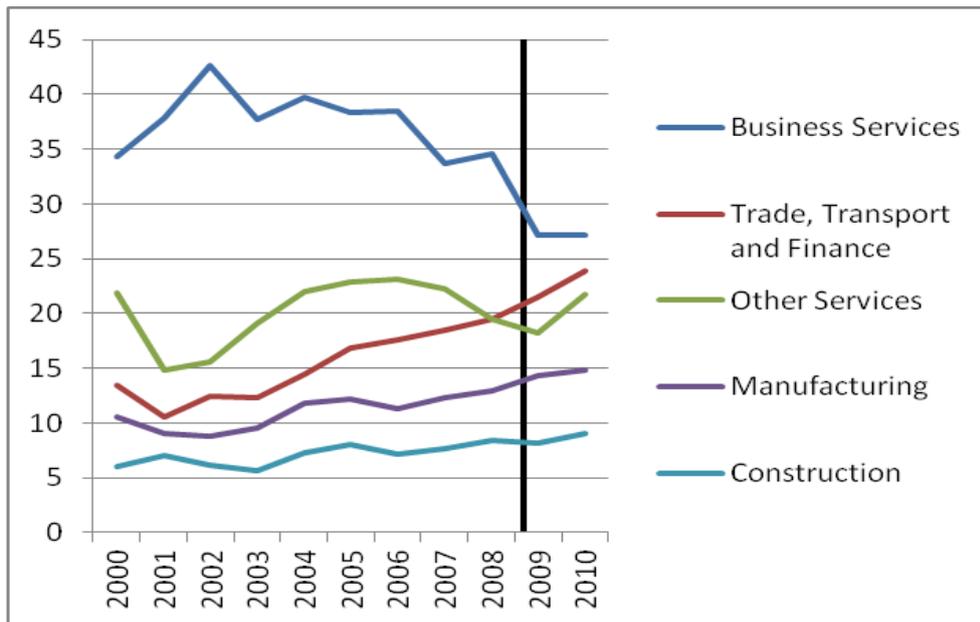
Figure 4 Share of workers not covered by a collective agreement by sectors in East and West Germany, in %



Source: on the basis of data of the WSI Tarifarchiv 2011

As explained above, companies not covered by a collective agreement can be divided in companies which orient themselves towards collectively agreed wages and companies without such an orientation. The share of workers who are outside any influence of collective agreements increased in Trade, Transport and Finance. An increase can also be recorded in manufacturing and construction, although levels are considerably lower. In private service industries, such as the business services, a reversed trend can be observed. Departing from a high level of non-coverage and non-orientation, the corresponding share had been falling (Figure 5).

Figure 5 Share of employees in establishments neither covered by a collective agreement nor oriented, by sector, 2000-2010*, weighted data

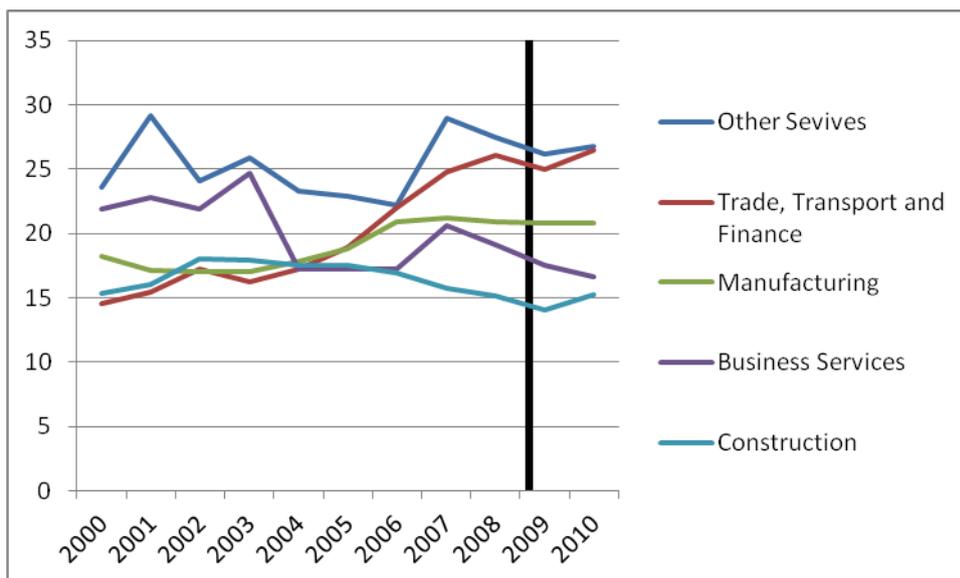


Source: Addison et al. 2012

*There was a change in the classification by sector in 2009.

More than a fourth of workers in private sector service industries (except business services) were not covered by a collective agreement, but collective agreements served as an orientation. The strongest rise can be recorded in the aggregate trade, transport and finance sectors (see Figure 6). In contrast, its importance declined in the business services over time. In this sector, the share of workers covered by a sector-based collective agreement had increased.

Figure 6 Share of employees in establishments not covered by a collective agreement but oriented, by sector, 2000-2010*, weighted data



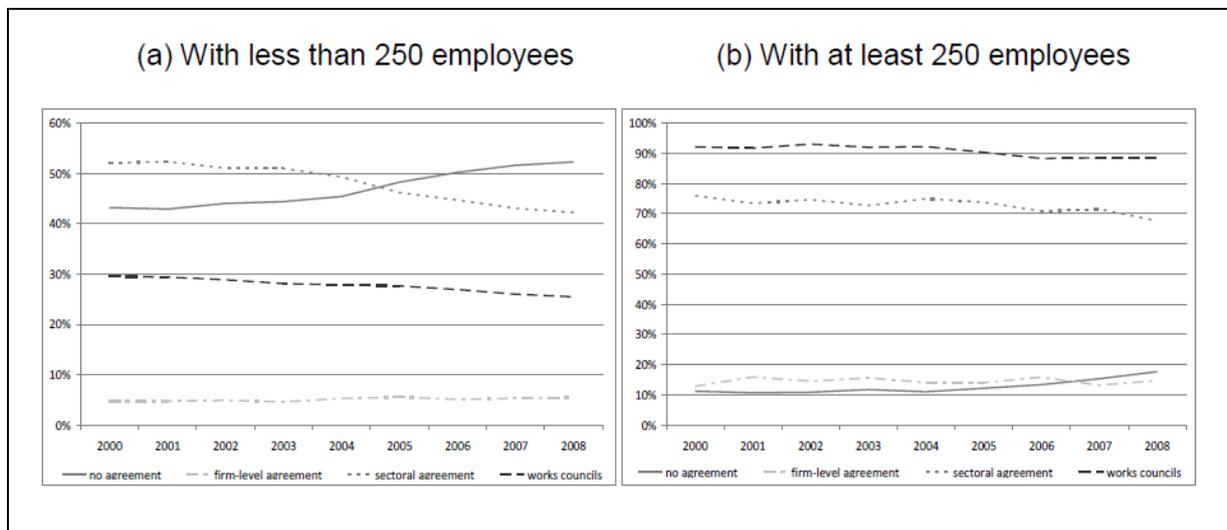
Source: Addison et al. 2012

*There was a change in the classification by sector in 2009.

Collective bargaining coverage by establishment size

As could be expected, non-coverage is particularly high among SMEs (Figure 7), and tends to increase with smaller enterprise size.

Figure 7 Collective bargaining and works council coverage by employment in establishments with at least 250 employees and in establishments with less than 250 employees, 2000-2008, cross-section weighted data



Source Addison et al. 2011, on the basis of the IAB Establishment Panel

Among, micro enterprises (up to 9 employees), 68% of companies in West Germany and 81% in East Germany were non covered, among companies employing 10 to 49 people non-coverage amounted respectively to 50% and 65% (Addison et al. 2012).

Non-coverage and works council

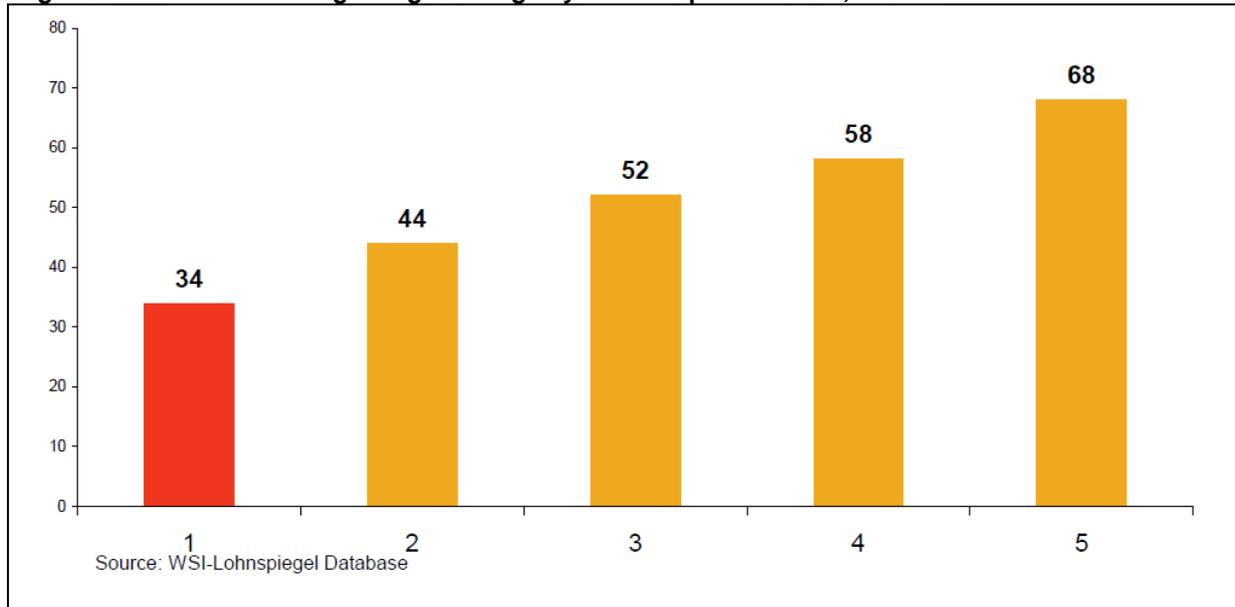
In 2007, about 31% of workers in West Germany and 42% in East Germany were employed by companies which were not covered by a collective agreement and had no works council. In West Germany about 46% (in East Germany about 39%) of employees worked in a company with a works council but were not covered by a collective agreement (Böckler Impuls 2008).

The presence of a works council largely depends on the size of the company. Over the past decade the share of workers in establishments where a works council is present has somewhat declined in smaller companies, while their representation in larger companies was nearly stable. In contrast, the share of workers not covered by a collective agreement increased sharply in smaller companies. In larger companies, the share of workers not covered by a collective agreement nearly doubled, but was below 20% in 2008 in larger companies, while it was above 50% in smaller companies (Addison et al. 2011).

Non-coverage by income groups

Non-coverage is highest at the bottom of the wage distribution. In 2010, more than two-thirds of low-wage earners (wages lower than two-thirds of median wage) were not covered by a collective agreement (Figure 8). Furthermore, nearly half of low-wage earners were employed in companies with no works councils (Bosch 2012).

Figure 8 Collective bargaining coverage by income quintiles in %, in 2008



Source: Bispinck et al 2010

Non-coverage of highly qualified workers by a collective agreement

Collective bargaining coverage of high-skilled is lower than on average. According to an earnings survey, only about 48% of workers with tertiary education were employed in companies covered a collective agreement.⁴ Furthermore, high-wage earners might be paid outside the collective agreement wage grid, as management wages and wages of some specialists may be not collectively regulated even in firms covered by a collective agreement (*außertarifliche Bezahlung*).

Non-coverage by gender

Women are more often working in non-covered companies than men. According to survey data, about 54% of women worked in companies not covered by collective agreements, while this share was 46% among men.⁵ Data of the wage structure survey (*Lohnstrukturerhebung*) indicate that the share of women not covered by a collective agreement grew at a higher rate than among men (19% vs. 16.6%).

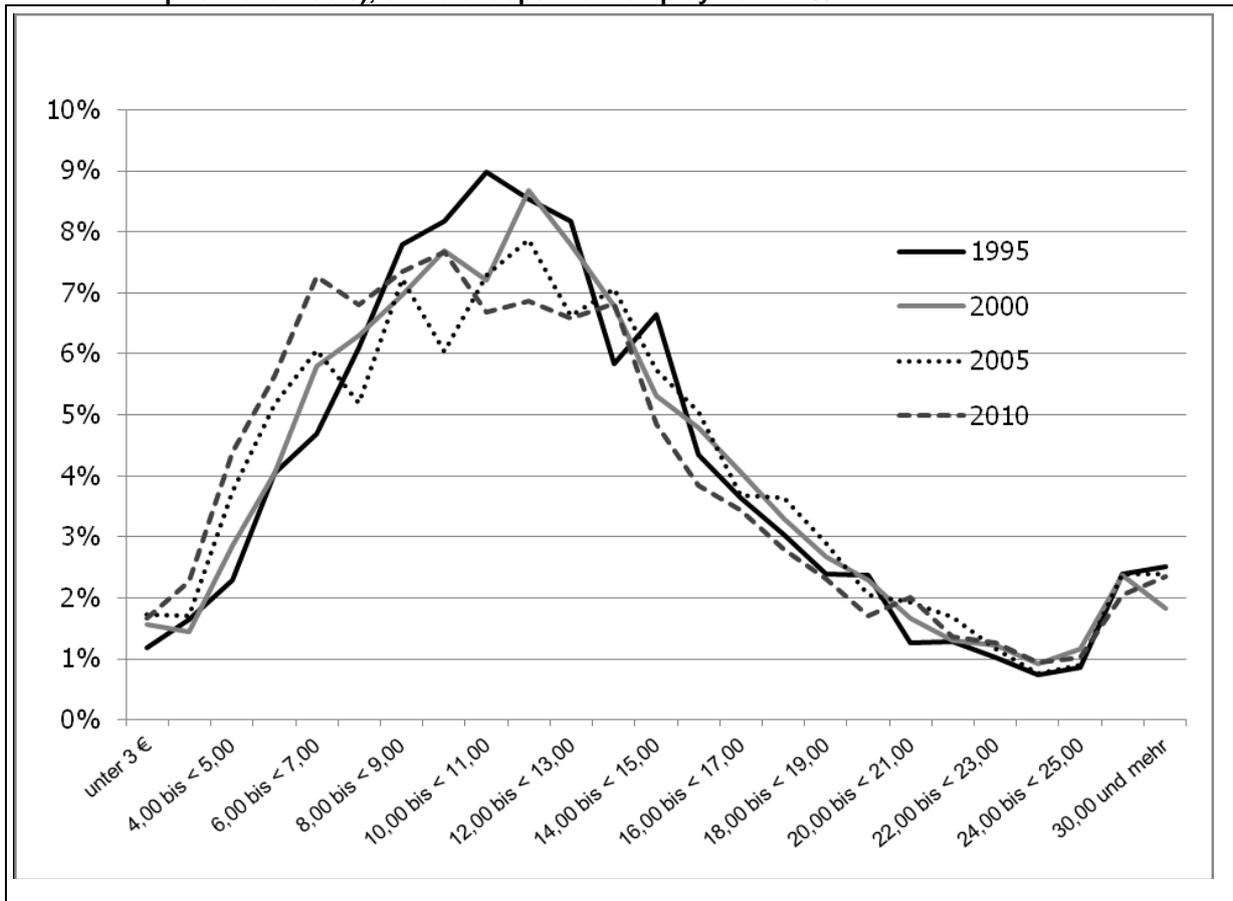
2.3 Impact of non-coverage on wages and income distribution

Wage inequalities have been on the rise in Germany. This trend can be observed since the early 1990s and has accelerated in the 2000s (Fitzenberger 2012). Figure 9 shows the shift in the distribution in real hourly wages over time.

⁴ <http://www.loohnspiegel.de/main/zusatzinformationen/junge-akademikerinnen/bachelor-master-und-co-2013-einstiegsgehaelter-und-arbeitsbedingungen-von-jungen-akademikerinnen-und-akademikern>

⁵ <http://www.loohnspiegel.de/main/frauenloohnspiegel/frauengehalter-niedriger>

Figure 9 Distribution of real hourly wages in Germany in 1995, 2000, 2005 and 2010 (on 1995 price level basis), share of dependent employment in %



Source: Bosch 2012, on the basis of the socio-economic panel SOEP, calculations of the IAQ

Real wages decreased on average by 2.3% between 2000 and 2010 and by 10.6% in the three lowest wage deciles, while they slightly increased by 1.5 and 1.8% in the two highest deciles (reported by Bosch 2012).⁶

One cause of increased wage disparities is the expansion of the low wage sector. The share of workers employed in the low wage sector (below two thirds of the median wage in East Germany and in West Germany, on the basis of the Socio-economic Panel) rose from 16.5% in 1995 to 22.9% in 2010 (Kalina, Weinkopf, 2012).

Increasing wage disparities in the higher wage segments can be explained by changes in qualifications and technological development, while rising wage inequalities at the lower end of the wage distribution can hardly be explained by increased disparities in qualifications and human capital rents or seniority wage effects (Fitzenberger 2012). The decline in collective agreement coverage does seem to play only a limited role for explaining increasing wage disparities, as wage disparities have also risen among companies covered by collective agreements. Dustmann et al. 2009⁷ find that about 28% of increased wage disparities at the lower end can be attributed to the decline in collective agreement coverage, while this effect accounted for only 11% of increased wage disparities at the upper end of the wage scale.

Antonczyk et al. 2010 control for personal and firm characteristics and find a lower influence of the decline in coverage on wage inequalities. Wage inequalities have increased between sectors as well

⁶ On the basis of prices in 2005. Data published in Brenke/Grabka 2011: 10

⁷ Dustmann, C., Ludsteck, J., Schönberg, U. (2009), Revisiting the German Wage Structure. *The Quarterly Journal of Economics*, 124(2), cited by Fitzenberger 2012

as within sectors. One reason might consist in the rise in performance-related and variable pay elements.

As has already been shown above, Addison et al (2012) report on the basis of an analysis of IAB Establishment Panel that the effect of orientation on wages is thus not very large. The analysis of wage data suggest that collective wage bargaining is more likely to reduce wage dispersion but has only a small effect on the average wage level.

Bosch (2012) argues in a study prepared for the trade union IG Metall that increased wage disparities at the lower end of the wage distribution is linked to a loss of bargaining power of trade unions in the low wage segment. Furthermore, some occupations that were previously well paid have fallen down the wage scale. It seems that prior to the 1990s trade unions were more successful in implementing a compressed wage structure at the low wage end (Fitzenberger 2012). In 2010, about 16% of the collective wage tariff groups were below 8.50 €. It was possible to reduce this share to 13% in 2011 (Bispinck 2011). In the context of the economic upswing and relatively low unemployment rates, the bargaining power of trade unions has been on the rise.

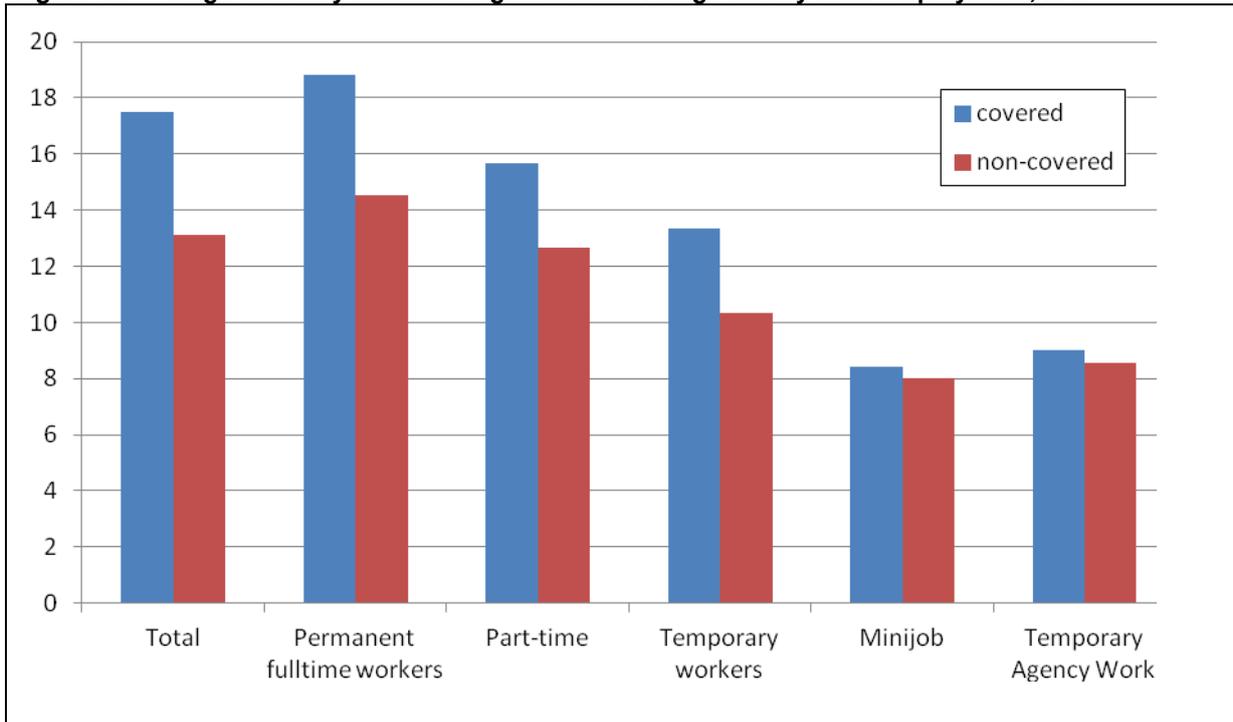
Another explanation for the increase in wage disparities at the lower wage end is linked to the rise in atypical employment. Among people employed on the basis of a „marginal employment“ contract, the so-called mini jobs⁸ (*geringfügige Beschäftigung*), as much as 86% were low wage earners (Bosch 2012). Half of them work in small companies, which are often not covered by a collective agreement and have no works councils. In case they work in larger companies with collective bargaining and works councils they often do not get extra pay elements such as company-wide wage premium, holiday pay and pay during sickness as do regular employees, although they are entitled to them according the equal treatment legislation (§ 4 Part-time and Temporary Work Law *Teilzeit- und Befristungsgesetz*). One reason for eventually lower wages paid for mini jobbers as compared to their regularly employed colleagues consists in the lack of knowledge of mini jobbers about their rights and their weak bargaining position *vis à vis* their employers. Hourly wages of mini-jobber in companies covered by a collective agreed amounted on average to 8.40€ and to 8€ in companies not covered (Bosch 2012).

From the following figure it can be seen that the difference between the wage level of workers not covered by a collective agreement and those covered was smallest for temporary agency workers as well as for the so-called “marginally employed” or “mini-jobbers”, indicating the lower bargaining power of trade unions for this type of occupations and tasks. Furthermore, in these two types of atypical employment wage levels were considerably lower than for other groups of workers.

Another, smaller group, of atypical employed are temporary agency workers. Their average wage amounted to 9€ in companies covered y a collective agreement and to 8.55€ in companies not covered (see Figure 10).

⁸ *Geringfügige Beschäftigung / Mini Jobs*: Jobs with monthly incomes up to EUR 400. These can be regular or occasional jobs and jobs in addition to regular employment. Employers pay 30 % of wages to social insurance

Figure 10 Wage levels by collective agreement coverage and by form employment, in €



Source: Bosch 2012, on the basis of the Federal Statistic (Bundesamt für Statistik, DESTATIS, Niedriglohn und Beschäftigung 2010: 19)

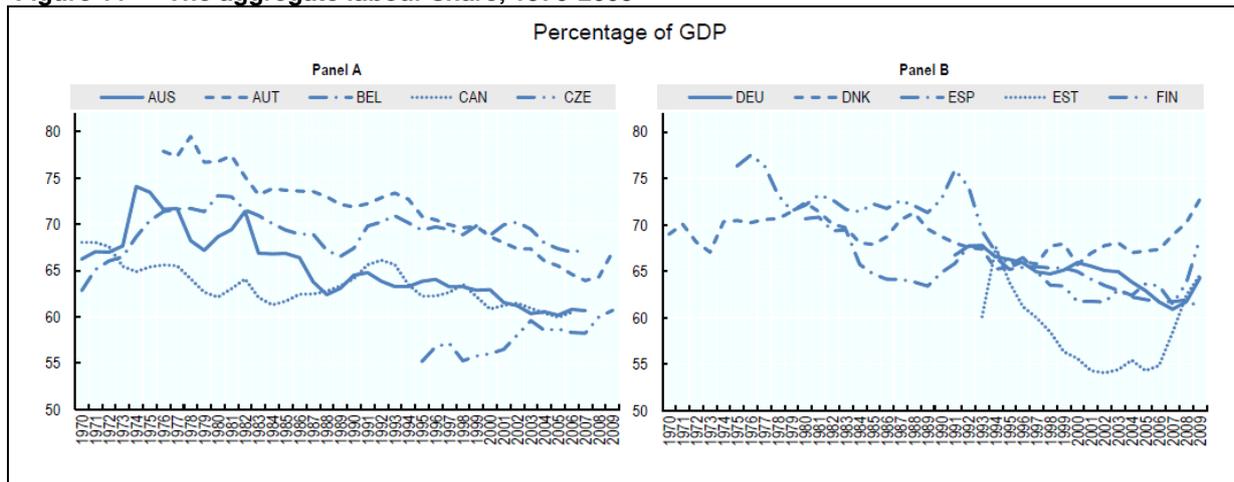
Workers with tertiary education and up to 1 year of work experience earn 17% more when they are employed in companies covered by a collective agreement.⁹ It can be assumed that much of the wage differential can be explained by company size and sector effects. Further investigations would be necessary to assess the net effect.

The wage drift (growth rate of effective wages as compared to growth rates of collectively agreed wages) was negative for 2 decades (Krämer 2011), but turned to be positive in 2010 and 2011 (Bispinck 2011), as the economy recovered from recession, working time grew, increased use of bonus payment scheme and unemployment had fallen as compared to its level before the recession.

As in many other OECD countries, the share of aggregate wages in GDP has declined. One reason lies in the German context in the negative wage drift, reflecting reduced pay supplements above the collectively agreed wages in a context of high unemployment. In Germany real effective wages were markedly lagging behind of what could have been achieved given productivity growth. In addition, between 1999 and 2010 productivity slowed down, narrowing the room to manoeuvre (Krämer 2011). Nevertheless, in Germany the room to manoeuvre was larger than in Austria, the Netherlands, the UK and the US (Böckler Impuls 11/2011). The following figure shows the trends in functional income distribution in selected OECD countries among which Austria (Panel A) and Germany (Panel B).

⁹ <http://www.lohnspiegel.de/main/zusatzinformationen/junge-akademiker-innen/bachelor-master-und-co-2013-einstiegsgehaelter-und-arbeitsbedingungen-von-jungen-akademikerinnen-und-akademikern>

Figure 11 The aggregate labour share, 1970-2009



Note: The earnings of the self-employed are imputed assuming that their annual earnings are the same as for the average employee in the whole economy.

Source: Bassanini, Manfredi 2012, based on EU-KLEMS except for Norway, OECD STAN database.

Characteristics of the low wage sector

In the low wage sector young people as well as older workers are overrepresented. In 2010, about 40% of workers who do not hold a formal vocational qualification degree and 22.5% of workers with and initial vocational qualification were represented in the low wage sector. This means that about 70% of all low-wage workers had a formal vocational qualification, 20% were unskilled and 9% hold a university degree

More women than men are working in the low wage sector; about 28% of all employed women and 15% of employed men worked there.

Furthermore, the low wage sector is characterized by a high share of part-time workers and mini-jobbers. The share of mini-jobber (or so-called workers in „marginal employment“, *geringfügige Beschäftigung*) working in the low wage sector amounted to 60% in 2010 (Brenke 2012, on the basis of the socio-economic panel). The other way round, about 30% of the workers in the low wage sector were “marginal employed”, 22% were part-time workers and 48% were full-time workers. Workers with a low qualification level are largely overrepresented, representing 48% all low-wage earners in 2010. Their share has significantly risen over the past decade. Two-thirds of temporary agency workers and nearly half of workers with a temporary contract were low-wage earners (Bosch 2012). The other way round more than a fifth of low wage earners hold a temporary contract and was thus above average.

According to the earning structure statistics, the share of low-wage earners amounted to 12% in companies covered by collective bargaining and to 31% in companies not covered in 2010 (Statistisches Bundesamt 2012). The share of low-wage earners was considerably higher in smaller companies (one third of employed in companies with 10 to 49 employees were low wage earners while they represented only 8% of staff in companies employing more than 1,000 employees). Thus, non-covered companies employ more often low wage earners and these show a higher flexibility at the labour market than other income groups (see above). Full-time workers in the low-wage sector tend to work longer hours than in the rest of the economy: on average they work nearly 45 hours a week, a fourth of them had working weeks with more than 50 hours.

One strand of literature and public debate assumes that falling unemployment in Germany was the result of the labour market reforms and the increased opening up of employment opportunities in the flexible low wage sector (e.g. The economic expert council). The interrelationship between growing employment figures and increasing risk at poverty in Germany is viewed critically by the trade unions and some researchers (see e.g. report by Seils, 2012).

Impact of export orientation on wages

Wages tend to be higher in export oriented companies. An analysis of the IAB Enterprise Panel shows that between 2000 and 2008 real wages in manufacturing grew by 15%, while they grew only by 5% in the whole economy. Between 2000 and 2008 wages in exporting companies were between 50 and nearly 70 per cent higher than in non-exporting companies. Furthermore, also within the manufacturing sector wages in exporting companies were higher than in not exporting companies – and this wage gap has grown. This can largely be explained by a higher capital intensity, a higher gross value-added per worker and the qualification structure in export oriented companies. But even when controlling for firm-specific and person-related characteristics as well as differences in productivity, a wage differential of 1 to 7% remains. One reason is that export oriented companies pay between 6 and 9% above collectively agreed wages, while not exporting companies pay on average 5% more. It seems that in particular high skilled workers are benefiting from higher wages in the export oriented companies (Hauptmann, Schmerer 2012).

The share of workers in export-oriented companies amounts to approximately 30% and has not changed for decades, however, within the manufacturing sector the employment share in export-oriented industries grew from roughly 60 to 70% between 1996 and 2008 (Hauptmann, Schmerer 2012). Thus, an increasing export orientation has contributed to the widening-up of the wage scale at least within the manufacturing sector.

Impact by gender

The impact of collective bargaining coverage is larger for women than for men. On average women employed in companies covered by collective agreements earn 23.7% more than their counterparts in non-covered companies, while the collective bargaining coverage effect among men was 21.9%.¹⁰ Women are more likely to profit from wage compression through collective agreements, as they more often work in low-paid jobs. Furthermore collective agreement coverage tends to limit discrimination. However, it can also be argued that women benefit less than men from collective bargaining, as they are underrepresented in trade unions (Teschner 2009). Overall, women tend to get less extra pay elements than men.¹¹

Wage gap differences between men and women can be largely explained by differences in educational level, productivity and sectors, but differences in bargaining may also play a role. Wage disparities by gender have widened as a result of the expansion of the low wage sector.

An analysis on the basis of the wage structure survey indicates the gender wage gap increased at the bottom of the distribution in covered companies. Over time Teschner (2009) finds that the gender wage gap decreases under sectoral bargaining, while it increases at the top of the wage distribution without bargaining coverage, and even more so under firm-level bargaining.

3 Impacts of minimum wages

In contrast to a number of other European and OECD countries, there is no legal minimum wage in Germany. As already mentioned, industry-specific minimum wages for certain groups of workers were introduced in 11 industries in the context of the Posted Workers Act. The minimum wages in the 11 industries varied between 7€ and 11.53€ (in June 2012). Not only did the level of the branch-specific minimum wages, but also the relative wages with regard to median wages vary quite significantly (Bosch, Weinkopf 2012): in East Germany the ratio between minimum wages and the median wage varied between 49% (temporary agency work) and 81% (specific tasks in the mining industry) in West Germany and between 66% (security services) and 109% (specific tasks in the mining industry) in

¹⁰ <http://www.lohnspiegel.de/main/frauenlohnspiegel/frauengehalter-niedriger>

¹¹ Frauenlohnspiegel des WSI-Tarifarchivs <http://www.lohnspiegel.de/main/frauenlohnspiegel/frauengehalter-niedriger>

West Germany. Furthermore, there are differences in the extent to which minimum wages were differentiated by regions.

The trade unions are claiming for the introduction of a nation-wide minimum wage of 8.50€. In 2010, about a fifth of workers earned below this potential minimum wage floor of 8.50€ claimed by the trade unions (Kalina, Weinkopf 2012).¹² The Chancellor, after having opposed for many years any attempt to introduce minimum wages, is now favouring the instalment of an independent commission in order to fix minimum wages by industries and regions. In September 2012, the Government of the *Land* Thuringia submitted a law proposal concerning the minimum wage. The proposal was presented in the *Bundesrat*. The minimum wage should be set by an independent commission and be in force nationwide in all sectors and regions.¹³ There were some controversies within the CDU between the Federal Government and governments of the *Länder* concerning the minimum wage law proposal of Thuringia.¹⁴

Key questions in the debate about the introduction of minimum wages in Germany encompass (i) the employment effects of nation-wide uniform minimum wage, (ii) the employment effects of minimum wages differentiated by industries and regions, (iii) the impact of minimum wages on reducing poverty, (iv) the role of the State and the social partners by fixing minimum wages. In the following, results of evaluation studies on minimum wages will be briefly reviewed, by making also reference to the bulk of evaluation literature that have been carried out in other countries.

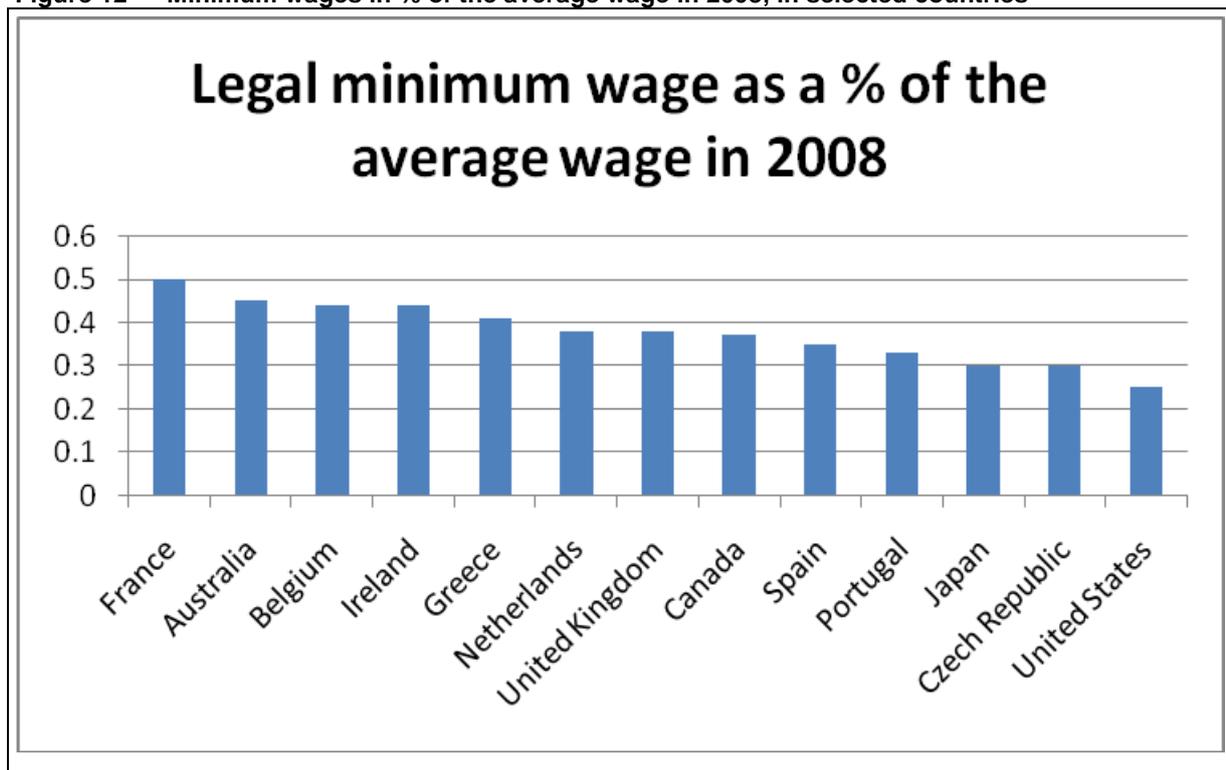
The absolute and relative level of minimum wages varied quite significantly across countries. In France, Belgium and the Netherlands, minimum wages ranged between 8.58€ and 9€, and 10.40€ in the case of Australia in 2011 (Schulten 2011b) However, in most other countries the minimum wage was below the 8.50€ threshold: e.g., it amounted to approximately 6.90€ in the UK and New Zealand, 5.99€ in Canada and to 5.47€ in the US and 4.28€ in Greece. Absolute wage levels, however, do not tell where minimum wages are situated in the wage scale. Figure 12 shows the relative minimum wages in selected OECD countries. The highest relative minimum wages can be observed in France, Australia, and Ireland, while they were low in the US.

¹² About 4% of all employed got an hourly wage below 5€, 12% below 7€ and 18% below 8€.

¹³ <http://dipbt.bundestag.de/dip21/brd/2012/0542-12.pdf>

¹⁴ <http://www.faz.net/aktuell/politik/inland/bundesrat-cdu-landesregierungen-verweigern-merkels-koalition-gefolgschaft-11898588.html>

Figure 12 Minimum wages in % of the average wage in 2008, in selected countries



Source: OECD, earnings statistics

On the grounds of the evaluation literature in other countries and in Germany, the impact of minimum wages is not clear cut. At first sight, one would expect more results indicating negative employment effects in countries with high relative minimum wages. Indeed, there is a sharp controversy about minimum wages in France in a context of high unemployment, and evaluation studies tend to show diverging results (Ragacs 2003, Meyer et al. 2007). The Economic Council for the economic development in Germany reports that evaluation in France shows negative employment impacts for women and young low-skilled workers (Sachverständigenrat 2006). The case of Australia, however, shows that a similarly high relative minimum wage can work in a context of low unemployment and high employment rates and a flexible labour market as is the case in Australia.¹⁵ In-work poverty in Australia is less pronounced as compared to other countries (OECD 2012). In the Netherlands, minimum wages seem to not have adverse employment effects (Meyer et al. 2007 referring to Schulten 2006).

Ragnacs (2003) gives the following overview on evaluation results about the employment impact of minimum wages (Table 1).

Table 1 Overview of evaluation studies on employment effects of minimum wages, by countries

	Traditional Result (negative employment effect)	Contradicting result	Unexpected result (positive or neutral effect)
France	1		3
Greece		1	
Canada	1	1	
Columbia	1		

¹⁵ However, in the case of Australia, involuntary part-time work is widespread and is keeping unemployment low.

Mexico			1
New Zealand	2	1	
Austria	1	1	1
UK			3
US	9	2	7

Source: Ragnacs 2003

More recent evaluation studies seem to show more often neutral results, in particular in the US. In this case the absence of negative effects could be explained by the relatively lower minimum wages and the environment of a flexible labour market (Sachverständigenrat 2006/07).

A recent study on the employment effects of minimum wages in the US shows robust findings about no significant employment effects (Dube et al. 2010). A particularity of this study consists in combining traditional national-level studies using cross state variations in minimum wages over time to estimate employment effects and qualitative studies, using regional case study methodologies. It seems that in the past the methodological choice led to contradicting findings: «On balance, case studies have tended to find small or no disemployment effects. Traditional national-level studies, however, have produced a more mixed verdict, with a greater propensity to find negative results.» (Dube et al., 2010). In contrast to case study results, nation-level studies generally estimate a labour demand elasticity close to -1. The new approach compared all contiguous county-pairs at state borders in order to generalize the case study approach. The study seeks to disentangle the influence of local economic conditions on employment effects and concludes that negative employment effects in national-level studies reflect spatial differences in economic and employment trends and are related to shortcomings in the construction of control groups.

Basically, limits in evaluating minimum wages consist in the construction of the reference situation, which is either rather hypothetical or – in case different regions with and without minimum wages (e.g. in the US) are compared - biased by a number of region-specific factors. The construction of a control group is thus extremely difficult when using a difference-by-difference approach (Bosch, Weinkopf 2012). The choice of the time horizon is also determinant for the evaluation results; the price and wage elasticity of demand may change over time as consumers and employers may change their behaviour and strategies as a reaction to changed wage and price structures. Deviation of demand and employment effects in other sectors should be considered (Brenke 2012). Limitations exist also in relation to the assumptions about the functioning of labour markets: are they more likely monopsonistic or competitive in nature and are actual wage levels at the lower end of the wage scale below above or equal to the equilibrium wage?

In Germany a series of evaluation of branch-specific minimum wages fixed under Posted Workers Act were recently carried out. Furthermore, a number of studies were conducted in the past with the aim to assess the potential impact of the introduction of a nation-wide uniform minimum wage. Results from these studies are far from being clear-cut and depend on a number of assumptions made and methodology used.

Some studies have confined their analysis on the employment effects within a specific sector. A number of studies have assessed the reactions of companies and consumers to increased wages within these sectors. Other studies include fiscal effects and multiplier effects in their policy evaluation. In the following, major results of these different studies are summarised.

A study carried out in 2007 on the effect of the hypothetical introduction of a minimum wage of 7.50€ on SMEs (Meyer 2007) shows that in many cases there would be no negative employment effects. However, results differ by type of occupation and sector. Negative employment effects would affect low-skilled in the first place, as in the security services, in hotel and catering, haircutters and low-skilled workers at florists. The potential employment effects depend on the labour-intensity of the sector, as well as on the possibility of companies to develop strategies to counteract the increased labour costs. In this respect, the cost structure of haircutters would be more negatively affected by rising wage costs than in retail trade or travel agencies. In five of the seven analysed branches

companies would most likely increase prices as a reaction of increased costs. Furthermore, company interviews reveal other possible reactions, such as reducing other costs (e.g. communication costs, rents, cleaning), accepting lower profits, skipping boni and extra pay elements, reorganising pooled purchasing in order to reduce input prices, increase the share of apprentices and use of so-called mini-jobbers ("marginal employment"). Possible reactions could also include increased informality, such as extending working time without compensation (as named by hairdressers and in retail trade), not paying over-time rates, increasing informal employment, increasing share of family workers in particular in the area of catering and hotels. Companies in the low-wage sector already try to avoid typical employment conditions and prefer to pay piece-rate wages (e.g. numbers of cleaned rooms in hotels) which helps to reduce hourly costs and the use of subcontracting to self-employed.

But, it can also be observed that there was a rise in atypical employment at the same time as the low wage sector expanded. Following the above argument it could have been expected that the expansion of the low wage sector would have acted as a substitute for atypical employment – which was not the case.

Furthermore, company and expert interviews indicated that negative employment effects are more likely in East Germany than in West Germany and in North rather than South Germany. In dynamic cities like Munich, paid wages are often already above the minimum wage threshold. It is argued that competitiveness of East Germany, in particular North-East, border regions would suffer and the regional context would not allow for increasing the prices of products and services. The study concludes that the introduction of minimum wages on the basis of the Posted Workers Act would allow for more regional and sector differentiation. In addition, the introduction of a living cost indicator clause is recommended. It is expected that minimum wages in dynamic regions in South Germany, e.g. in Munich, would need to be at least at a level 9€, while it could be largely below 7€ in some of the East German regions. It is further recommended to control and avoid extension of informal employment and atypical employment as a consequence of minimum wages (Meyer 2007). The recent evaluations of 8 industry-related minimum wages are showing that workers in East Germany benefit more than West German workers from minimum wages, however, overall, no negative employment effect could be observed (Bosch, Weinkopf 2012).

The introduction of a minimum wage is likely to induce structural change: e.g. companies would try to specialise in high-price product segments and would try to diversify their supply, in order to benefit from a lower price elasticity of demand (Meyer 2007).

The assessment of the price elasticity and wage elasticity of demand is the key for the assessment of employment effects. The Economic Council for the assessment of the economic development in Germany (*Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung*) concluded in 2006/07 that the introduction of a generally binding minimum wage was likely to have negative employment impacts. One argument put forward is that unemployment grew in Germany in times when wage compression increased up to the mid-1990s. Accordingly, the fall in unemployment is perceived as a result of increased wage dispersion at the lower wage end. A higher employment wage elasticity is assumed for the low qualification segment. Also Ragnitz, Thum (2007), assume a wage elasticity of labour demand of -0.75 referring to empirical studies which estimate the wage elasticity of labour in the 1990s between -0.6 and -0.85 (for low-skilled), leading to negative employment effects (in: ifo-Schnelldienst 10/2007).

The Ministry of Labour and Social Affairs has contracted the evaluation of 8 branch-specific minimum wages agreed under the Posted Workers Act to 6 independent research institutions.¹⁶ Although the industry-related minimum wages are implemented in the context of the Posted Workers Act, it seems that they are increasingly used in a context of competition between East and West Germany and the use of temporary agency workers (Bosch, Weinkopf 2012).

Bosch and Weinkopf (2012) give an overview of the evaluation results. The studies, mostly based on a difference-by-difference approach and expert interviews, showed no significant employment effect of

¹⁶ <http://www.bmas.de/DE/Themen/Arbeitsrecht/Meldungen/evaluation-mindestloehne.html>

industry related minimum wages or concluded that no firm statement on employment effects can be made on the grounds of available data and methodological shortcomings. These results might be a surprise in the German minimum wage debate as differences in employment by branches could have been expected as the share of workers newly covered by the minimum wages varied quite significantly as did the average minimum wage levels. Although no significant employment effects on industry-level could be recorded, the introduction of industry related minimum wages had various effects on the employment structure and the wage structure. Interestingly, these effects differed quite significantly between industries: In the building cleaning industry wages were compressed at the bottom of the wage scale after the introduction of the minimum wage. In contrast, in industries with a higher share of skilled workers such wage compression cannot be observed, at least in West Germany. In some industries there was a second round of minimum wages in order to set minimum wage levels for skilled workers (in the industry building cleaning industry, construction, painter and varnisher), although this proved to be difficult and little sustainable.

The introduction of minimum wages was more harmful for some labour-intensive subsectors, sometimes characterized by the dominance of small companies. Consequently, restructuring occurred, and basically those companies could improve their relative competitive position which already paid higher wages before the introduction of the minimum wage (Bosch, Weinkopf, 2012). As a reaction to the introduction of minimum wages, the employment of skilled roofers increased as wage gaps between skilled and unskilled roofers probably did not reflect productivity differences. Furthermore, in this sector competition through quality plays a more important role. In contrast, in the waste industry more unskilled were employed. Among painters and varnishers as well as in the construction industry tenures increased, as companies became more attractive, while fluctuation increased in the electrician trade (Bosch, Weinkopf 2012).

The evaluation study carried out in the care sector concludes that there was no significant impact on employment, however, the results are not robust and the authors conclude that on the basis of available data and without a long-term assessment no valid statement on the employment effect can be made. It is argued that a positive employment effect would be possible, because there is an increasing need for care services and there are already labour shortages. A minimum wage could increase the attractiveness of the sector, however, experts stress that this effect could be negligible as the minimum wage would still be too low if a nation-wide uniform minimum wage was introduced. Due to legal regulations, substitution effects seem to be low, but self-employment has increased. Informal employment by private households is not perceived as resulting from the introduction of a minimum wage. The introduction of a minimum wage has more likely a negative impact on small companies, while it improved the competitive situation of companies which already paid above-average wages. The authors state that it is difficult to assess whether in this sector monopsonistic market structures exist (Brookmann et al. 2011).

The different evaluation studies also analyzed to what extent the implementation of minimum wages was controlled. Controls carried out by the customs seemed to be more effective than those carried out by the statutory social security insurance institution or by the social partners. All evaluations reported that non-compliance with the minimum wage regulations played a role, but its extent could not be quantified (Bosch, Weinkopf 2012). Expert interviews pointed out that the absence of works councils in small enterprises add to the problem of controlling compliance through the social partners. Bosch and Weinkopf (2012) point out one weakness of industry-related minimum wage in their view: minimum wage agreements have often not been renewed in time.

A study carried out by Prognos (2011) analyzed the fiscal effects of the introduction of a nation-wide uniform hourly minimum wage of 8.50€. The study departs from the assumption that aggregate employment effects of minimum wages are neutral. On the basis of the Socio-economic Panel, the effects of the introduction of a minimum wage is assessed for tax revenues, revenues in terms social security contributions, expenditures for means-tested unemployment benefit II (in this case relating to in-work benefits), social assistance and related means-tested expenditures. At the bottom line, there would be a positive fiscal effect of 7 059 million €. In addition the study is estimating the effect of increased income of private households on aggregate demand on goods and services; effects of increased income of the state is not considered. Increased income is deflated by 0.267% and a shift in

the consumption structure and the impact on the saving rate is taken into account. Both private consumption and savings would increase. This would leave to additional revenues in form of value added taxes and would engender a positive employment effect and thus additional revenues from income taxes. This fiscal effect of this “second-round” is estimated to 686 million €.

One in eight low wage workers received means-tested unemployment benefit II (*Aufstocker*; entitlement depends from the household income) (Brenke 2012). In-work poverty is measured on a household basis which renders the analysis of the wage impact more difficult. There is some evidence that in-work poverty has increased because of the rise of precarious employment forms, including fixed-term contracts, part-time work, and minijobs, but this is by far not the only explanatory factor. The percentage point increase in in-work poverty was equally high for fulltime employees than for all employed and low wages for full-time employees seem to play a role (Seils 2012).

Most in-work benefit recipients worked part-time or only a few hours (on average 17.7 hours per week, Dietz et al. 2009). Low number of weekly working hours could be in particular recorded among singles as well as single parents. However, about a fifth of in-work benefit-recipients worked full-time in 2006/2007 and it is estimated that even more persons working full-time do not claim means-tested unemployment benefit II although they were entitled to (about half a million people, Böckler Impuls 4/2010). According to a study of the trade union confederation DGB, about three-quarters of full-time in-work benefit recipients earned less than 8.15€ per hour; on average their wages amounted to 7€ among men and were below 6€ among women (Kalina, Weinkopf 2012). Therefore, it is argued that the introduction of a minimum wage could reduce in-work benefit receipt. However, it seems that the effect would not be large.

Overall, the introduction of a minimum wage would level up wages for a fifth of workers (for 25% of women, and 15% of men) (Kalina, Weinkopf, 2012).

4 Collective bargaining coverage and the low wage sector in Austria

As can be seen from Figure 1, collective bargaining coverage in Austria is near 100%, although union density is not tremendously higher than in Germany. The reason for the high collective wage bargaining coverage lies in institutional factors and the high degree of corporatist structure.

Centralisation of wage bargaining at sector level is a key characteristic of the Austrian collective bargaining system and results from the fact that collective agreements can only be concluded by employer and employee representatives, and thus in general not by a single employer (Bispinck, Schulten 2011a). At company level only agreements between the employer and the works council can be concluded, and concerning wages only wages above the collectively agreed industry-related wage can be determined. Most agreements are concluded at the national level, and a few agreements are concluded at the level of the Federal State. In this respect comparison with Germany is not meaningful, as Austria is a small country.

A further very specific feature in Austria is compulsory membership of companies in many industries in the Chamber of the Economy WKÖ (*Wirtschaftskammer Österreich*). Sectors not organised by the WKÖ include health and social services, independent professions. About two-thirds of collective agreements are signed on the employer-side by the WKÖ. On the trade union side nearly all collective agreements are signed by the Trade Union Confederation ÖGB. Collective agreements are valid for all employees in the respective sector. About 6% of collective agreements are concluded with other Chambers, such as the Chamber of Agriculture or the Chamber of liberal professions. About 22% of collectively bargaining wage agreements were concluded by employer association with voluntary membership. In this case, the Federal Arbitration Board usually extends the collective agreement to the whole sector. In the few private sector industries and professions not covered by a collective agreement this board regularly determines minimum wages (Bispinck, Schulten 2011a).

The result of the system is an extremely high collective bargaining coverage in all sectors (Table 2):

Table 2: *Adjusted collective bargaining coverage in Austria, 2005*

Sectors	Bargaining coverage
Sectors which are organised by WKÖ	
Craft and trade	98%
Manufacturing	99%
Retail and wholesale trade	99%
Banking and insurance	95%
Transport and traffic	95%
Tourism and leisure industry	90%
Information and consulting	85%
Sectors not organised by the WKÖ (such as health and social services and independent professions such as lawyers, architects)	82%
Agriculture and forestry	95%
Total	94%

Note: Employees covered by a collective agreement as a percentage of all employees equipped with the right to bargain.
 Source: *Statistics Austria (Bönisch, 2008, p. 209)*

Source: Bispinck, Schulten, 2011a

Due to the extraordinarily high collective wage bargaining coverage, the Austrian model can be regarded as having collectively agreed sector based minimum wages, which can be topped up at company level. The effective company-level wage may in some cases be collectively agreed. Most of the sectoral wages are agreed by the social partners, however, in the absence of bargaining parties the State is intervening.

A further particularity in the Austrian case consists in a so-called agreement in principle which was signed by the social partners WKÖ and ÖGB on the introduction of a nationwide minimum wage of 1,000 € a month for a full-time employee. Social partners asked their sectoral organisations to adopt their wage bargaining accordingly. This agreement has been fulfilled in most cases (Hofbauer, Adam 2009).

As compared to Germany, the share of workers in the low wage sector in Austria was smaller. Furthermore this share did not rise, although atypical employment tended to increase (at least between 2002 and 2006 (Geisberger, Knittler 2010). However, also in Austria a shift in the functional income distribution can be recorded as the aggregate wage share in GDP decreased (Mayrhuber et al. 2010).

There are indications that actually paid wages in the manufacturing sector are about 17 to 20% higher than collectively agreed wages. During the first half of the years 2000s the wage drift was negative but in contrast to Germany was positive between 2005 and 2008 (Bispinck, Schulten, 2011a). One reason for the different development in Austria and Germany may be linked to the comparatively low unemployment rate in Austria.

Wage differentials by sectors depend on differences in productivity, but also on differences in the bargaining power of trade unions and the availability of specific skills at the regional labour market (Mayrhuber et al. 2010). Although, wage dispersion increased, the change in wage dispersion was lower than in Germany. One explanation is that the exposure to international trade increased less than in the case of Germany (OECD 2012b). A further explanation could consist in the stability of the Austrian industrial relations system.

5 Conclusions

The rising share of workers not covered by collective agreement has certainly contributed to the widening-up of the wage distribution at the lower end of the wage scale. However, this effect should not be overestimated as wage dispersion has also increased in companies covered by collective agreements and as the social partners have concluded quite low collectively agreed wages in some industries. Furthermore, it seems that a free-rider behaviour among companies has become more frequent. As a matter of fact the low wage sector has expanded. This was accompanied by an increase in atypical employment.

The introduction of minimum wages is seen as one option to counteract the “erosion” of the collective bargaining system. But fears have been expressed that minimum wages would have negative employment effects.

The review of evaluation studies shows contradicting results, but most recent studies in Germany and the US are showing no significant employment effect, even though there are still a number of methodological shortcomings.

The international comparison shows that a compressed wage structure at the bottom end does not necessarily have negative effects on aggregate employment. Much seems to depend on the economic situation and the structure of labour supply.

The case of Austria gives the example of a *de facto* minimum wage. Nearly full collective bargaining coverage seems not to have harmed the Austrian economy nor engendered severe labour market problems.

A regional differentiation of minimum wages between East and West Germany seems to make sense. However, regional wage disparities seem to be large in particular within some of the West German regions reflecting the differences between highly dynamic urban areas and rural areas or areas with structural problems. In this respect the recommendation of introducing a living cost clause is interesting. Also differences in productivity between sectors seem to justify sector based differentiated minimum wages.

The introduction of a nation-wide minimum wage would have a levelling effect on the bargaining power by sector: it would have a strong effect on those sectors and regions paying largely below the minimum wage of 8.50€ but at the same time would have no real effect in some, mainly West-German regions, and would be irrelevant in some of the sectors which are now ruled by industry-related minimum wages.

It is not clear to what extent the introduction of a minimum wage could alleviate poverty. The reduction of underemployment (and thus the reduction of involuntary part-time work) would be more effective, although there is no contradiction in following both options.

The economic expert council (*Sachverständigenrat*) argues that it is not the role of the company to combat poverty but the role of the state. In their view wage differentiation at the lower end of the wage scale helps to reduce unemployment and the social consequences should be alleviated through in-work benefit schemes. However, in-work benefit schemes may act as a disguised subsidy to the low wage sector, allowing wages to be fixed by the employers below the potential equilibrium wage.

The question about the introduction of minimum wages is closely related to choices of the welfare state model, the distribution of work opportunities and the distribution of income, rather than a question of economic efficiency and competitiveness of a highly developed economy. Germany's comparative advantage lies in the high-value added production of goods and services. In these sectors, the share of skilled or highly-skilled workers is usually high and wages tend to be higher than in other sectors. It is quite likely that negative effects on aggregate demand caused by increased prices for related goods and services are compensated, at least to some extent, by multiplier effects. The consumption rate of lower income groups can be assumed to be above average.

Minimum wages can have a positive impact on the efficiency of the whole industry as they force companies to reduce other types of costs and to improve their work organisation and restructure

employment. As in all restructuring processes, there are winners and losers. Losers are more likely to be smaller companies and more labour intensive companies.

The expansion of the low wage sector as well as the increases in mini-jobs and part-time work quite likely helped to reduce structural unemployment. Oversupply of low-skilled workers or workers with skills which were not sufficiently in demand was partly absorbed by wage differentiation at the lower wage scale and by redistributing work resulting in short working hours. Another option would have been to keep more people on the unemployment records. It is not clear how large the negative wage impact was for workers in the sector who would not have been unemployed.

It is also the role of the State to combat the causes of underemployment and unemployment. In this respect the oversupply of low-skilled workers and people with skills which are not sufficiently in demand is a serious concern and would need to be more intensely addressed by training and education policies.

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