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# BARCOM REPORT 3: BARGAINING SYSTEMS AND COLLECTIVE BARGAINING AGREEMENTS IN THE COMMERCE SECTOR

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## 1 Introduction

Collective bargaining is an important instrument in wage-setting processes but lacks underpinning with empirical data. Little is known about what exactly is agreed upon in collective bargaining. Few countries maintain databases with coded collective agreements; and agreements are coded for different topics and levels of detail across these databases. Attempts to discuss bargaining results at EU level are hampered by a lack of systematic data-collection of agreements. Social partners perceive an increasing need for cross-country comparisons, due to the growing importance of foreign direct investment in EU member states amongst other things. Therefore, EU-level social partners in commerce, UNI Europa and EuroCommerce, have expressed their interest in a study of content of collective agreements negotiated by their members at the national level. In the BARCOM project the research institutes University of Amsterdam/AIAS, CELSI and EUBA joined forces to collect, code and analyse collective agreements in commerce across the 28 EU countries.

The first BARCOM report provided a description of how, and how many collective agreements have been collected and how they were coded, using an online coding form of associate partner WageIndicator Foundation (WIF). The coding form and the related database is called the CBA database. The report described the main findings for nine coding topics. The second BARCOM report provided insights into sector-level bargaining settings. The report at hand, BARCOM report 3, aims to analyse the relationship between agreements' content and sector-level characteristics, more specifically how bargaining outcomes of collective agreements are related to the sectoral bargaining systems in the 28 countries.

The report is organised in seven sections, including this introduction. Section 2 discusses the measurement of the contents of collective bargaining agreements and of the quality of industrial relations. Section 3 discusses the prevailing bargaining systems in relation to collective bargaining agreements. Section 4 details topics concerning employment security, whereas Section 5 does so for pay scales and inequality. Section 6 reports the findings regarding working hours and leave duration. Conclusions are presented in Section 7.

## 2 Measuring the quality of industrial relations and the agreements

In this report, we explore how the bargaining outcomes in collective bargaining agreements in the commerce sector throughout Europe, as analysed in the first BARCOM report, are related to bargaining systems in the commerce sectors of the EU member states, as described in the second BARCOM report. In order to do so, we combined the WageIndicator CBA database with several additional sources of information. Before turning to our results, this section discusses these sources of information and the methods we use to draw conclusions about the relation between bargaining outcomes and bargaining systems.

### The WageIndicator Collective Agreements Database (CBA Database)

The main dataset used in this report is the WageIndicator Collective Bargaining Agreements Database (CBA Database). This database is a data collection effort started by the WageIndicator Foundation and the Amsterdam Institute for Advanced Labour Studies (AIAS) in 2013, with the aim of increasing access to and knowledge of the contents of collective bargaining for both researchers and stakeholders. The CBA database contains a large number of collective bargaining agreements that are made available online in the original language and coded in a comprehensive and uniform way using the custom-made COBRA system, as described in the CBA Database Manual (Ceccon et al 2016). The reader is referred to the first BARCOM report for an in-depth description of the CBA Database, as well as an overview of countries' and subsectors' performance in terms of bargaining outcomes in 116 CBAs on nine topics, ranging from core bargaining topics like wages, contracts, and working hours, to equality bargaining on issues like work-family balance and gender equality.

In this report, we build on the results from the first report by asking what can explain the between-country differences. We therefore pay relatively little attention to the basic inclusion or exclusion of specific clauses in the CBAs, mentioning them only when this provides a useful context for the analysis, and focus on more quantifiable bargaining outcomes, like the level at which overtime premiums are agreed, the level of inequality between the lowest and highest pay scales, or the number of days a trial period may last. The analyses presented here provide an indication of the level of working conditions agreed in CBAs across countries. We explicitly point out here that this is not the same as an overview of actual working conditions in the commerce sector, since we neither cover all collective agreements nor do all CBAs together cover all workers in commerce. This is particularly true for the analyses involving pay scales, where the CBA texts do not include any data on the number of workers per scale, and wages in non-covered firms or occupations could diverge from collectively bargained wages. Any conclusions presented in this report refer to the outcomes of collective bargaining rather than the workplace practices or earned incomes.

Furthermore, we stress that our results here are primarily descriptive. The number of CBAs analysed (116 CBAs were collected) is low for some of the statistical analyses used, especially in countries where fewer than five CBAs were found, nor does the dataset currently track specific CBAs over a longer period of time. As a result, we refrain from drawing causal conclusions and avoid claims that an increase on one variable will lead to a result in another; instead, we use the data gathered to provide a descriptive picture of bargaining outcomes in the commerce sector, pinpointing interesting issues where they show

up and revealing country patterns where we find them. Finally, we stress that all CBAs in this report are from the commerce sector; results, therefore, cannot be used to draw conclusions outside that sector, nor can we compare the results in the commerce sector to bargaining outcomes in other sectors.

### Sector level bargaining systems

In order to explain the differences in bargaining outcomes across countries, we use three country level indicators of industrial relations that were collected for the commerce sector in the second BARCOM report: (1) the dominant bargaining level, (2) collective bargaining coverage and (3) trade union density in commerce. The country scores on the the industrial relations variables, which are described in-depth in the second BARCOM report, are shown in Table 2-1.

**Table 2-1** *Constructive industrial relations index in commerce*

	<b>Collective bargaining coverage</b>	<b>Trade union density</b>	<b>Dominant bargaining level</b>
Austria	100	9	sector
Belgium	100	25	sector
Bulgaria	3	1	mixed
Croatia	7	6	mixed
Czech Republic	11	2	company
Denmark	60	38	sector
Estonia	6	3	company
Finland	100	38	sector
France	96	6	sector
Germany	25	8	sector
Greece	10	6	mixed
Hungary	26	5	company
Italy	100	25	sector
Lithuania	3	3	company
Netherlands	76	11	sector
Portugal	92	5	sector
Romania	2	1	company
Slovakia	15	6	mixed
Slovenia	48	16	sector
Spain	74	11	sector
Sweden	75	28	sector
UK	16	13	company

*Source: WageIndicator CBA Database, own calculations*

The industrial relations indicators are used as explanatory variables, which is to say, we look at the extent to which stronger and more centralised industrial relations can help us understand country differences in bargaining outcomes. We do not test here, whether constructive relations are the *only* way to explain country differences, nor do we strictly test whether changes in countries' scores are the



root cause of better or worse bargaining outcomes. We rather use the industrial relations variables to make sense of the country patterns descriptively, and point out where country patterns or sub-groups of countries exist.

### **Supplementary datasets**

Next to the two core concepts of outcomes of collective bargaining (from the CBA database) and sector-level bargaining systems, we draw on a number of supplementary databases for the sections on employment protection (section 4), remuneration and inequality (section 5) and working time regulation (section 6). A list of these datasets and a description of the data used for these purposes is included in appendix I.

### 3 Bargaining systems and collective bargaining agreements

Much of the literature on collective bargaining assumes that collective bargaining systems are related to de-facto bargaining practices of social partners in both form and outcomes. In this section, we explore empirically whether more constructive industrial relations are associated with specific patterns of collective bargaining, notably how they relate to practices of company versus multi-employer bargaining (form), how broad or narrow the bargaining agenda was, as well as the homogeneity and the level of bargaining outcomes (outcomes). This section sets the stage for the next three sections, which contain more substantive analyses of collective bargaining outcomes across countries. In this section, we limit ourselves to the description of the shape that collective bargaining in the commerce sector takes in the 22 countries for which both sectoral industrial relations data and collective bargaining agreements were available.

We studied whether higher collective bargaining coverage, trade union density and more centralised bargaining levels are associated with multi-employer bargaining, the scope of the bargaining agenda, the inclusion of pay rises, the length of trial periods and leaves, and the inclusion of premiums and allowances. Due to the small sample size we tested the effects of the three industrial relations separately. Thus, coefficients for collective bargaining coverage, for example, are not controlled for countries' trade union density and centralisation of bargaining. Each cell of table 3-1 displays the results of a separate regression, where the independent variable shown in the top row (CBC, TUD, Level) is regression on the outcome variable from the first column. The exception is the column called "squared", which contains the squared term of collective bargaining coverage from the regression in the cell above.

**Table 3-1** *Effect of CIR index on bargaining outcomes*

Outcome	Effect of CBC	Effect of TUD	Effect of Level	Countries	CBAs
<b>Multi vs single employer bargaining</b>	.023*	0.034	1.724***	22	116
<b>Number of topics covered</b>	.004 <sup>+</sup>	-0.0003	.264**	22	111
<b>Structural pay rise vs no pay hike</b>	0.003	0.012	0.25	22	93
<b>Once-only pay rise vs no pay hike</b>	0.006	-0.0162	-0.137	22	93
<b>Structural AND once-only vs no pay hike</b>	0.003	-0.034	0.25	22	93
<b>Length of trial period (days)</b>	-0.083	1.8	8.99	15	53
<b>Number of premiums and allowances</b>	-0.006*	-0.004	0.035	22	89
<b>(squared)</b>	-0.0002**				
<b>Length of annual leave (days)</b>	0.001	0.001	.138***	17	58

*Models used: Logistic HLM for multi- versus single employer bargaining, Poisson regressions with clustered standard errors for number of topics covered, premiums and days of annual leave, multinomial logit with clustered standard errors for the pay rise equations and Linear HLM for length of trial period.*

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ , <sup>+</sup>  $p < .1$

First, we studied whether the three industrial relations indicators could explain how fragmented or centralised collective bargaining in the commerce sector is in a country. We show the results in the first

row of table 3-1. Higher collective bargaining coverage is associated with more multi-employer collective bargaining agreements, as is shown by the positive coefficient (.023, sig  $p < .05$ ). This suggests that a one per cent increase in a sector's level of collective bargaining coverage is associated with a 2 per cent increase in the probability that a CBA was signed by multiple employers or an employers' association rather than a single firm. For trade union density we find a similar association, but it is not significant. While the association between the probability of CBAs being signed by multiple employers and the dominant level of collective bargaining (firm level, mixed, or sector level) may be self-understood, we do show the positive association in the table.

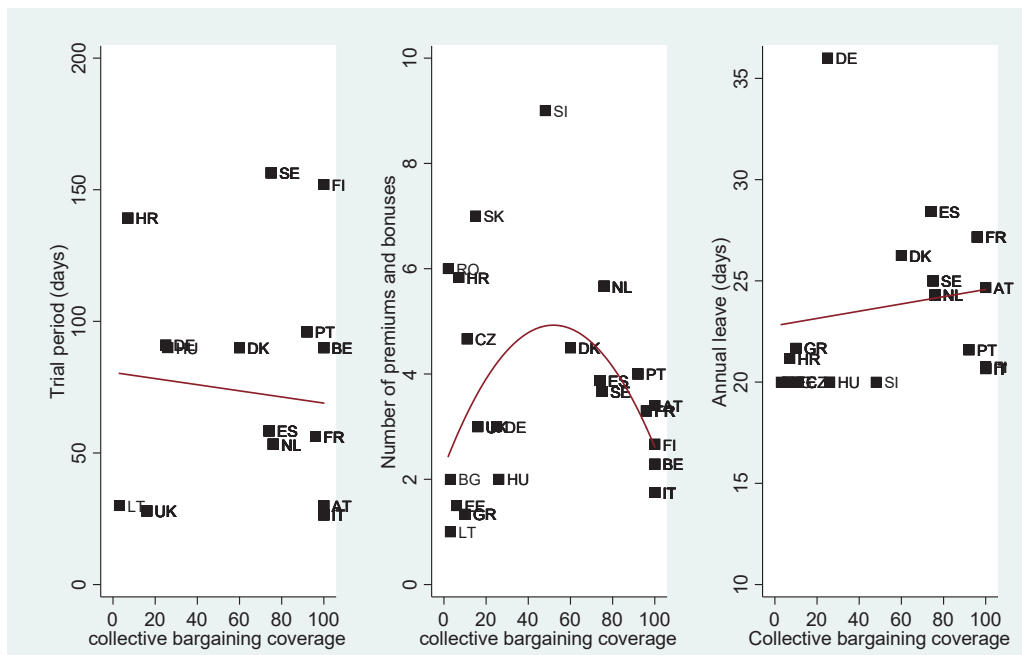
We thus find, unsurprisingly, that higher collective bargaining coverage and more centralised bargaining are associated with higher probabilities of CBAs being agreed with employers' associations or groups of employers. Our BARCOM study, however, did not include all agreements in a country and thus one cannot conclude from these results that there are fewer company-level agreements in countries with stronger and more centralised industrial relations. On the other hand, our sampling strategy did prioritise agreements covering larger numbers of employees, as is often the case in sectoral or industry-level agreements, and we concluded we were more likely to find those agreements in countries with stronger and more centralised industrial relations.

Secondly, we compared countries with regard to the number of topics on which CBAs included clauses, to measure how broad or narrow the bargaining agenda was. In order to do so, we used the CBA database substantive topics, which are (1) employment contracts, (2) health and medical assistance, (3) training, (4) sickness and disability, (5) social security and pensions, (6) working hours, (7) gender equality, (8) work-family balance and (9) wages. Countries that scored higher on this outcome variable were those whose CBAs on average included clauses on more topics. We found a positive relation between the number of topics covered in agreements (table 3-1, row 2) and both collective bargaining coverage and the level of centralisation; the association with trade union density is negligible and non-significant. The effect of collective bargaining coverage (.004, sig  $p < .1$ ) is very small too (a ten percent increase in the CBC rate being associated with one fifth of an additional topic), whereas the coefficient of the bargaining level indicator (.264, sig  $p < .01$ ) suggests that a CBA in a country where sector level bargaining is the standard will contain half a topic more than one from a country where firm level bargaining is the standard. This outcome suggests that countries with more constructive industrial relations tend to have a broader bargaining agenda.

Thirdly, stronger and more centralised industrial relations could lead to higher standards through social partners' greater willingness to find common solutions, or might lead to moderation of union claims through a greater willingness to compromise. Thus, we explored whether the standards agreed in collective bargaining agreements are higher in countries with higher collective bargaining coverage, trade union density and more centralised levels of bargaining. In order to do so, we selected four easily quantifiable outcomes of collective bargaining that were available for the majority of agreements in the sample: the length of the agreed trial period; whether a wage increase was agreed; the number of premiums and bonuses that were agreed, and the length of annual leave measured in days. As table 3-1 (row 3-9) shows, the results were mixed: only the length of annual leave was significantly related to the centralisation of bargaining, indicating that longer annual leaves exist in countries with where sector or

industry level bargaining was the norm. The question of how this relates to national legislation on the respective topics is addressed in section 6. Collective bargaining coverage was negatively related to the number of premiums and allowance included in the CBA texts, but as the middle pane of figure 3-1 shows (discussed underneath), this appears to be mainly due to country groupings. While results remained non-significant, we found agreements from countries with higher collective bargaining coverage to be more likely to contain wage increases and countries with more centralised bargaining more likely to contain *structural* wage increases, but not to contain once-only pay rises.

**Figure 3-1** Effect of collective bargaining coverage on bargaining outcomes



Source: WageIndicator CBA Database and CIR index

Figure 3-1 shows how countries scored on the length of the trial period, number of agreed premiums and the length of annual leave (y-axis), set off against the level of collective bargaining coverage in the commerce sector (x-axis). There are no clearly discernible regional patterns with regard to the length of trial period (left pane), a topic that we will explore in more depth in the next section. In the middle pane, a generally positive relation can be noticed between collective bargaining coverage and the number of premiums that are included in collective bargaining agreements, with a non-conforming group of four countries (Slovakia, Romania, Croatia and the Czech Republic) that did include clauses on a larger number of premiums despite scoring low on collective bargaining coverage. The right pane shows the positive relation between collective bargaining coverage and the average days of annual leave specified in agreements by country. This last issue is the only issue that showed evidence of a sharp divide between the Western and Southern European member states compared to Central and Eastern European countries (CEE), except for Greece, which is much closer to the CEE countries than the rest of the Mediterranean.

**Table 2-2 Effects of industrial relations on the homogeneity of bargaining outcomes**

Standard deviation of	CBC	TUD	LVL
Length of trial period (days)	-0.164	0.137	-19.95*
Number of premiums and allowances	0.003	.021+	0.15
Length of annual leave (days)	.046+	-0.005	1.57

Note: countries included here were Austria, Belgium, Finland, Italy, Netherlands, Sweden, Spain, Denmark, Germany, Slovakia, Greece, Croatia and Estonia.

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ , +  $p < .1$

Finally, it is conceivable that stronger industrial relations do not lift standards agreed in CBAs so much as harmonize outcomes: reducing polarization between *bad* and *good* firms and thus reducing bargaining opportunities for individual firms or sub-sectors. Therefore, we explored whether the outcomes of collective bargaining show more homogeneity in countries with higher collective bargaining coverage, trade union density and more centralised bargaining. We tested whether agreements within countries with higher scores on the three industrial relations variables were more homogenous or heterogeneous with regard to the agreed trial periods, number of premiums and days of annual leave by regressing the industrial relations indicators on the standard deviations around the three outcome indicators. Table 3-2 shows that sector level collective bargaining is associated with more homogeneity in the length of trial periods set in collective bargaining agreements (-19.95, sig  $p < .05$ ), whereas trade union density was associated with *more* differences in the number of premiums and allowances set in CBAs from the same country (.021, sig  $p < .1$ ) and collective bargaining coverage with greater differences in the length of annual leave (.046, sig  $p < .1$ ); although the latter two were only marginally significant.

**Table 3-3 Agreed type of pay rise by country scores on the constructive industrial relations index**

country	CBC	TUD	Level	Pay rise agreed			Total	
				None	Structural	Once-only		
Austria	100	9	sector	1	0	1	3	5
Belgium	100	25	sector	0	2	1	4	7
Finland	100	38	sector	1	2	0	0	3
Italy	100	25	sector	1	0	6	1	8
Netherlands	76	11	sector	0	4	1	4	9
Sweden	75	28	sector	5	2	0	0	7
Spain	74	11	sector	1	2	1	4	8
Denmark	60	38	sector	1	3	1	0	5
Germany	25	8	sector	1	2	0	0	3
Slovakia	15	6	mixed	1	0	0	1	2
Greece	10	6	mixed	1	0	2	4	7
Croatia	7	6	mixed	0	2	1	3	6
Estonia	6	3	firm	2	1	0	0	3
<b>Total</b>				15	20	14	24	73

Source: WageIndicator CBA Database

For countries where wage clauses were included in more than one agreement, we also show in table 3-3 which kind of pay rises were agreed, if any. Here, we found no evidence that higher scores on the industrial relations variables reduced or increased the variability in negotiated outcomes. Belgium and Croatia, for example, share a similar pattern of agreed pay rises, while their industrial relations differ significantly.

## 4 Employment protection in agreements in relation to national labour law

An analysis of the Labour Law Database categories concerning trial periods and severance payments and the related indicators provided for in individual agreements has been carried out. The results are presented in this chapter.

### Severance pay

Out of 116 agreements, 15 included *severance payments* expressed in a wage percentage, and 16 agreements contained clauses on severance payment with respect to the amount expressed in daily wage for a worker with at least five years of service. The latter indicator allows a direct comparison with Wage Indicator data. Data was available in agreements with the following breakdown by country: Austria: 2, Czech Republic: 1, France: 3, Hungary: 1, Netherlands: 3, Romania: 1, Sweden: 4 and UK: 1.

When compared to data from the Labour Law Database, it can be seen that for the severance payments analysed the agreements were mostly in the lower half of the daily wage scale indicated in the CBA database, with the exception of Austria and Hungary where the maximum number of days was given in agreements: 90 and 60 days respectively. One reason of this phenomenon can be that countries where agreements do not indicate severance payment provisions were more likely to have stronger and more centralised industrial relations, suggesting more encompassing and strict labour laws, setting this issue lower on the bargaining agenda. Only for France we observed a higher number of days paid out as severance payment than the value provided for in the national legislation: 60 days instead of 30 days. France is on the positive side of the industrial relationship index, hinting at a more constructive relationship explaining such bonuses within individual agreements.

The CBA database also fills in the gaps within the Labour Law Database since in the case of Romania and Sweden (no clear provision in the country-level database) the outcomes suggest higher bargaining power in the upper range of severance payments: three out of the four Swedish agreements contained a 90-day pay provision whereas the Romanian CBA seems to be an outlier with 180 days. This higher protection level is in line with our findings of a better constructive industrial relationship in Sweden, while the Romanian case would require involvement of more agreements into the analysis.

These findings are valid for employees with at least five years of service however in case of workers employed for a shorter period, exceptions may be used in certain CBAs specifying a lower severance payment amount than the statutory one. For instance, a severance payment equivalent of 7 days of wage is minimally guaranteed for an employee working for 1 year in a UK-based CBA instead of the statutory 35 days.

### Trial periods

With regard to trial periods, such a period has been agreed in 67 of 123 agreements when commencing an employment relationship, with large variation in median values. The Labour Law Database contains four categories of statutory probation periods: (1) less than 3 months; (2) 3 months; (3) 4 months; (4) 6 months and longer.

In the first category, a median probation period is 30 days. The countries in this category (Austria, Italy, Netherlands, Spain) specify generally 30–40–60 day-long (1–1.5–2 month-long) trial periods, and generally have more constructive industrial relations which translates into a lower probation period in individual CBAs than the nationally allowed maximum level. In the second category, the CBAs in Denmark, Hungary, Portugal stipulate a 3-month probation period according to the Labour Law Database, with a few exceptions, e.g. Lithuanian CBA providing only a 1-month trial period).

Only France belongs to the third category with a statutory 4-month trial period: the evaluation of CBAs shows that each collective agreement foresees a shorter probation, which signals more constructive industrial relations enabling a certain flexibility embedded in French CBAs. In the fourth category (6-month probation) Belgian, Croatian, Finnish and German CBAs all offered a probation period of less than 6 months in individual CBAs.

### **Regulating atypical work**

Finally, the European Commission released three directives since 1997 on regulation of atypical work with the aim to guarantee a minimum level of equal treatment. In this section we analyze specific cases where we found exemptions or exclusion of atypical work from collective agreements and put them in context, using commerce sector information from Eurofound (2017) and the OECD Regulation of temporary work index (2013-2015). The latter index is useful for the analysis of exemptions.

Out of 121 agreements in commerce, only twelve (2 in Denmark, 8 in Netherlands and 2 in UK) refer to temporary agency workers with two excluding them from the agreements (Besamusca et al, 2018).

Part-time workers are excluded on calculation of hours in one Austrian agreement, while in two other agreements they are not excluded. Two Danish agreements exclude part time workers from severance pay, while four agreements do not. Apprentices are excluded in the same agreement in Austria (in 2 not excluded), from four agreements in Denmark (in two not excluded) and three agreements in the Netherlands (in 7 not). Mini-jobs or student jobs are excluded only in two agreements in Denmark.

Exclusions and exemptions seem to occur in particular among countries with the highest proportion of part-time workers in the commerce sector, such as Denmark (37%), Netherlands (53%) and United Kingdom (34%), Austria (32%) – the highest ranked 4 countries in this regard. This indicates that while these countries overall provide a higher flexibility to employees, some types of provisions still do not cover the atypical employment forms, such as part-time and temporary workers, students and apprentices, which may have a negative influence on the security of such jobs.



## 5 Pay scales and inequality

In the first BARCOM report, we found that wage increases were a common element of collective bargaining agreements, but that agreements differed in the extent to which pay rises were structural or once-only and whether negotiated pay rises decreased inequality or not. Agreeing wage increases favouring the lowest paid workers over the highest paid were relatively common in Belgium, the Czech Republic, the UK and the Nordic countries; they rather rarely showed up in the Netherlands, Spain and Portugal. We also found that the lowest pay scales in the commerce sector were often close to the national minimum wage. In the Netherlands, Portugal and Spain the difference between the minimum wage and the bottom step of the lowest pay scale was often no more than a couple of Euros. Occasionally, pay scales in multi-annual agreements needed to be upwardly adjusted to prevent them being outpaced by the statutory minimum wage. German, Belgian and Greek agreements had set the lowest pay scales at higher levels. We also compared the pay scales across countries by converting the local currencies to purchasing power parity, showing that workers in the lowest pay scales were best off in Denmark and Finland, whereas workers in the highest pay scales had negotiated higher earnings in the Netherlands and Germany.

In this section, we analyse the inequality in pay scales in more depth and explore the relation between inequality in collectively bargained pay scales and bargaining systems. Given the sample size, we explored the bivariate associations between the industrial relations indicators and bargaining outcomes. We do note, firstly, that we cannot make any causal claims. Secondly, there are other country-level inequality indicators that are related to countries' scores on the industrial relations indicators. Trade union density and collective bargaining coverage are positively correlated with per capita GDP and negatively with income inequality, indicating it results presented here should be seen in the context of broader economic development.

### Negotiated pay increases

We firstly explore the relation between the industrial relations indicators and the kind of pay increases agreed through collective bargaining. We can observe several patterns. As indicated in section 3, in countries with more centralised bargaining, we found more agreements containing structural wage increases and fewer with once-only increases; we found more CBAs that included pay increases in countries with higher collective bargaining coverage. These results, however, were not significant.

Following the analysis in the first BARCOM report, we explored whether any of the negotiated wage increases also reduced inequality. Social partners can choose to reduce inequalities by not simply increasing all wages by a percentage but by an absolute amount of money (lump sum). For example, a €2 wage increase implies a 20% pay increase for a worker earning €10 and a 10% pay increase for her colleague earning €20, thus reducing inequalities. Here, we found only one significant effect: in countries with higher trade union densities (.055, sig  $p < .05$ ), CBAs were more likely to contain a lump sum increase compared to a percentage increase in wages (table 5-1, row 5). While non-significant, the direction of effects suggests that in countries with more sector level bargaining, on the contrary, more CBAs granted pay hikes as a combination of a percentage pay increase and a lump sum payment compared to a simple percentage increase, but fewer agreements containing only a lump sum increase.

**Table 5-1 Association between the CIR index and wage bargaining outcomes**

Bargaining Outcome	Effect of CBC	Effect of TUD	Effect of level	Countries	CBAs
structural pay rise vs no pay hike	0.003	0.012	0.25	22	93
once-only pay rise vs no pay hike	0.006	-0.0162	-0.137	22	93
structural AND once-only vs no pay hike	0.003	-0.034	0.250	22	93
Percentage and lump sum increase vs percentage only	0.011	-0.049	0.683	21	92
Lump sum only increase vs percentage only	-0.006	.055*	-0.406	21	92

Source: WageIndicator CBA Database. Multinomial logistic regression with clustered standard errors

### Levels of negotiated wages

Studying collectively agreed wages, we return to the 35 agreements from the 12 countries that included pay scales (Austria, Belgium, Croatia, Denmark, Estonia, Finland, Germany, Greece, Italy, the Netherlands, Portugal and Spain). First, we compare the level at which the bottom pay scales are set across countries. As table 5-2 shows, we find a positive and significant relation between the level of the lowest pay scale in the country in purchasing power parity, and its trade union density in the commerce sector. The positive coefficient (45.712, sig  $p < .001$ ) indicates that a one per cent increase in trade union density is associated with a 45 international dollar increase in the lowest pay scale.

**Table 2 -2 Effect of industrial relations on agreed levels and inequality in CBA pay scales**

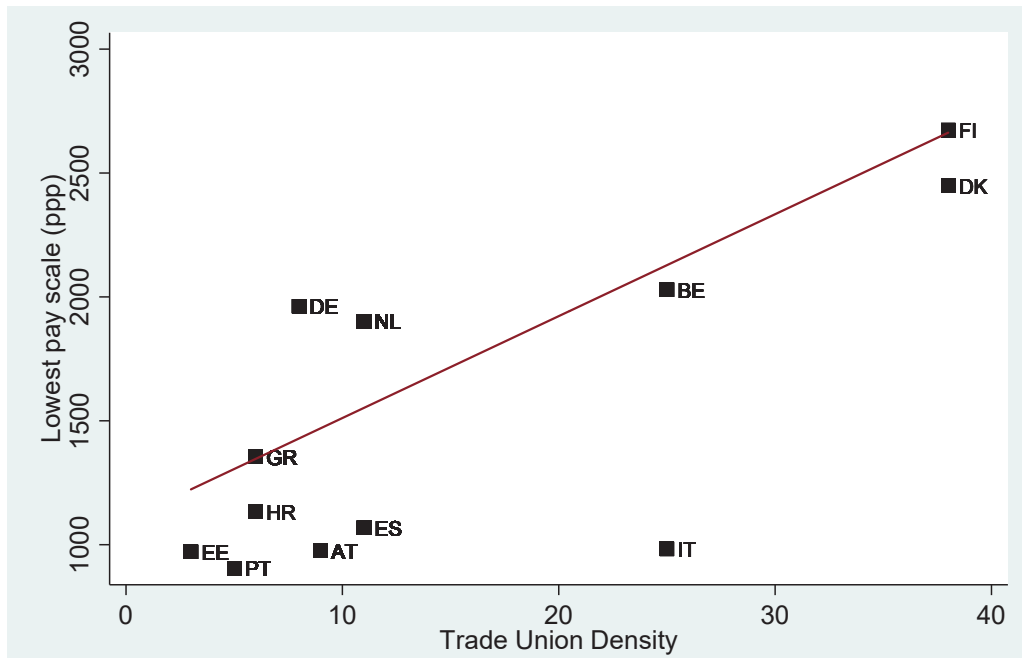
	Collective bargaining coverage	CBC squared	Trade union density	Dominant level of bargaining
Bottom of the lowest pay scale (ppp)	-2.2		41.13***	283.65+
Ratio lowest scale to MW	-.002*	.0001*	-0.012	-0.182
Ratio highest scale to MW	0.001		-.084+	0.182
Ratio bottom low to ARP single	-0.13*		0.007	-0.57
Ratio bottom low to ARP family	-0.006*		0.003	-0.271
Ratio top high to ARP single	-0.025		-0.058	-0.333
Ratio top high to ARP family	-0.012		-0.027	-0.159
Ratio bottom low to bottom high	0.003	.0001*	0.011*	-0.07
Ratio bottom low to top high	0.002	.0001*	0.007	-0.109*

Source: WageIndicator CBA Database. Linear HLM models. 12 countries included in the analyses for pay scale levels, at-risk-of-poverty thresholds and within-pay scale inequality; 8 countries included in the analyses into minimum wages.

Figure 5-1 shows the bottom step of the lowest pay scale from the last available year set off against countries' trade union density. While these results are purely descriptive and the levels of collectively bargained wages could be related to many other factors, like per capita GDP, we do show the Nordic countries in the upper right corner, where both the purchasing power of workers in the lowest pay scales and the trade union densities in the commerce sector are relatively high. In the opposite, lower left corner is a group of countries like Greece and Estonia that combine low scores on both dimensions.

Italy is an outlier, presenting much lower purchasing power in the bottom pay scales than it trade union density would have us expect.

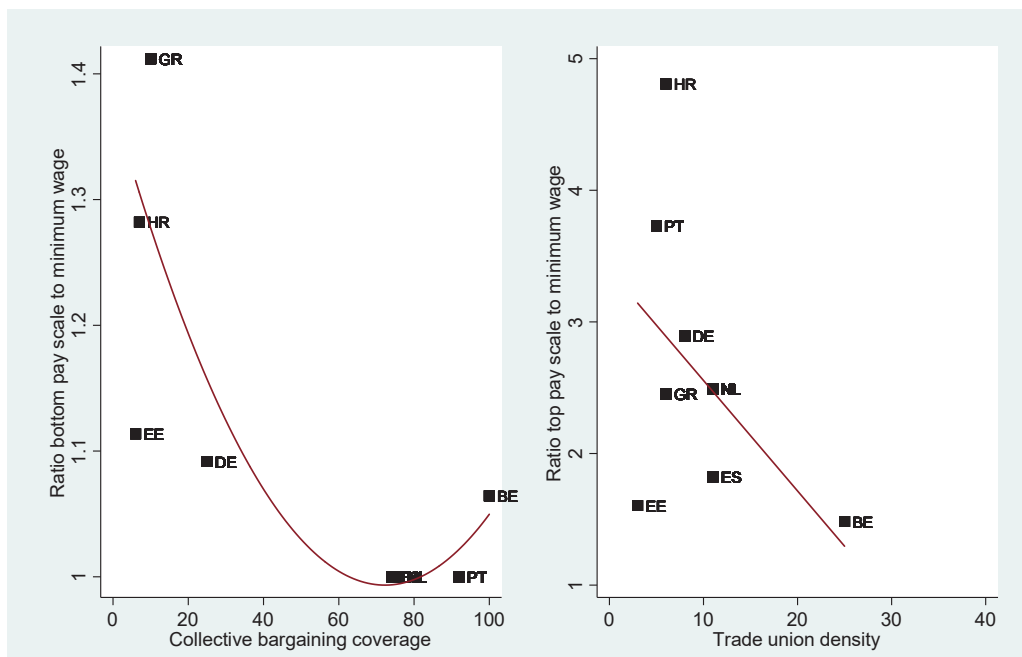
**Figure 5-1** Bottom step of the lowest pay scale in PPP by country score on trade union density



Source: WageIndicator CBA Database and trade union density

Second, we compared the distance between the lowest wage scales and the national statutory minimum wage for the last available year. Austria, Denmark, Finland and Italy do not have statutory minimum wages and are therefore excluded from the figure. For the remaining eight countries, we show the ratio of the bottom of lowest pay scale on the y-axis (left pane). As table 5-2 and the left pane of Figure 5-2 show, the ratio between the lowest pay scale and the minimum wage shows a curvilinear relationship with collective bargaining coverage. The highest ratio we find is at 1.4 times the minimum wage in the Greek company CBAs. We stress, however, that this does not reflect the pay levels of Greek commerce workers more broadly, as the collective bargaining coverage is low and no sector level agreement exists. The same applies to Croatia, which is a high performer in the last available year due to a company CBA. In the Netherlands, Spain and Portugal, on the contrary, the bottom pay scale in the last available year is equal to the minimum wage. In the Netherlands and Spain, the bottom pay scales of the lowest paid CBAs were originally set a little above the minimum wage in the year that the CBAs were agreed (5% and 3% respectively), but the pay hikes negotiated for later years of the agreement were outpaced by increases in the minimum wage. The upward turn in the u-shaped association between collective bargaining coverage and the ratio of the lowest pay scale to the minimum wage is caused by Belgium, which sets its lowest pay scales at similar levels to Germany, but at much higher collective bargaining coverage.

**Figure 5-2** *Lowest wage scales and local minimum wage by industrial relations indicators*



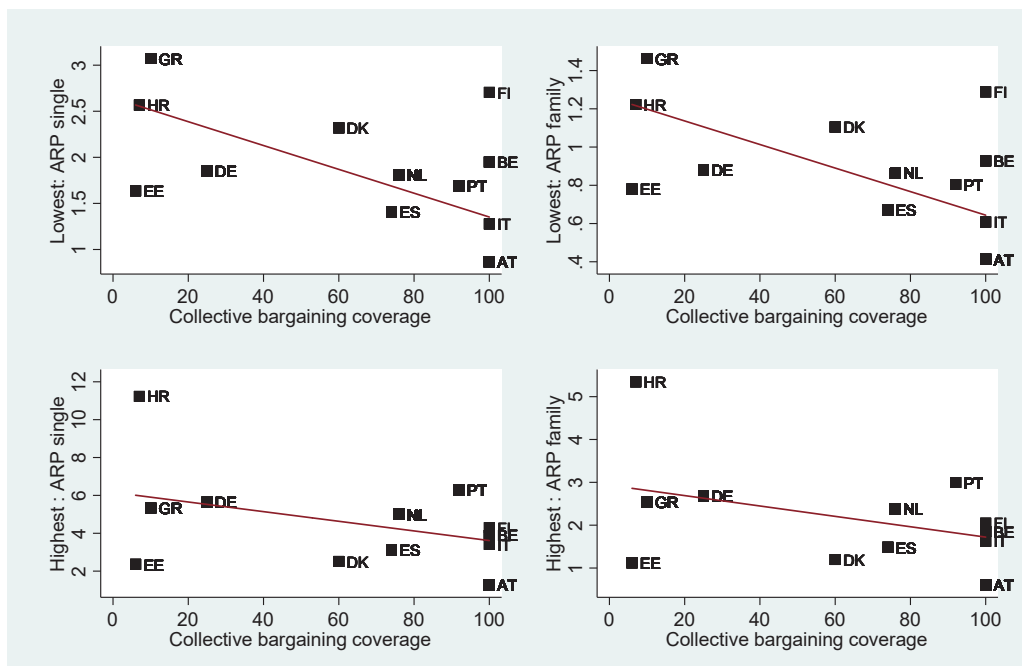
Source: WageIndicator CBA Database

The right pane of Figure 5-2 and Table 5-2, display the ratio of the bottom step of the highest pay scale for the most recent year to the statutory minimum wage. Table 5-2 shows that the ratio of the highest pay scale is not significantly related to the centralisation of bargaining and collective bargaining coverage, but that there is a marginally significant negative association with trade union density. This suggests that in countries where trade union density in the commerce sector is higher, the highest pay scales are closer to the minimum wage. Figure 5-2 shows that commerce workers in the highest pay scale earn more than twice the statutory minimum wage in Croatia, Portugal, Germany, Greece and the Netherlands, but not in Spain, Belgium and Estonia. Thus, of the three countries with lowest ratio between the bottom pay scales and the minimum wage level in the lowest pay scale (Portugal, Spain and the Netherlands), Spain does not offer much wage growth as workers move into higher pay scales either. Belgium and Estonia, where the lowest pay scales exceeded the minimum wage level by a more comfortable margin, also keep the highest pay scales at less than twice the minimum wage, suggesting the earnings distributions in those pay scales is more compressed.

Next, we compare the bottom of the lowest pay scale and the top of the highest pay scale to the at risk of poverty thresholds of Eurostat for the latest available year. That is to say, we explore to what extent workers in the lowest and highest pay scales of the commerce sector are able to maintain themselves and their families. The at risk of poverty thresholds, calculated by Eurostat using their EU SILC survey, mark the wages workers need to earn to reach at least 60% of the median income in the country. We calculate the ratio of the lowest and highest pay scales from the commerce CBAs to the thresholds for single workers (ARP single) and for households with two adults and two children under the age of 14 (ARP family) in purchasing power parity.

As displayed in Table 5-2, we explore the existence of an association between the ratio of the lowest and highest pay scales to at risk of poverty thresholds with the industrial relations variables. However, no clear relation is found. Subsequently, we plot the results in Figure 5-3 with the at poverty thresholds on the y axes and collective bargaining coverage on the x axes. In the top left corner, we see that single workers in the lowest scale found in the commerce sectors earn enough to stay out of poverty if they work full time in all countries, except Austria. However, as the top right pane shows, only in Croatia, Denmark, Greece and Finland does the bottom of the lowest pay scale allow workers to maintain a family. These results are most convincing in the case of Finland and Denmark, where the CBAs in the sample are sector level agreements, as opposed to the Greek and Croatian company CBAs. Still, the results suggests that, in most countries, workers with children who earn a wage in the bottom pay scale of their CBA will need an additional income to remain above the at risk of poverty threshold for a family of two adults and two children.

**Figure 3-3 Ratio of lowest and highest pay scales to at risk of poverty thresholds (ppp)**



Source: WageIndicator CBA Database and CIR index

The bottom two panes of figure 5-3 show the ratio of the top step of the highest pay scale, i.e. the highest wages that can be earned within the context of the collectively bargained wages, compared to the same at risk of poverty thresholds for single workers and families. Here, the bottom left pane shows that workers in the top step of the highest pay scale earn at least twice the threshold for single workers in all countries except Austria. In a large group of countries (e.g. Greece, Germany, Portugal, the Netherlands), workers in the highest pay scales appear able to earn a comfortable living. However, as the bottom right pane shows, in Austria, Estonia and Denmark even workers in the highest pay scale barely earn enough to keep a family above the at risk of poverty threshold.

### Inequality in negotiated wages

Finally, we explore the association between the industrial relations indicators and inequality within pay scales in a country. We start by comparing the ratio of the bottom step of the lowest pay scale in the country to the bottom and the top steps of the highest scale. In order to do so, we divide the lowest negotiated scale by the highest scale (for the bottom and top steps respectively), resulting in a ratio between 0 and 1, where higher values denote more equal outcomes. For example, a ratio of .2 means the lowest scale amounts to 20% of the wages earned in the highest scale. As table 5-3 shows, the workers in the bottom step of the lowest scale earn between 27% (Croatia 2016) and 95% (Finland 2016) of wages in the bottom step of the highest scale and between 27% (Croatia and Portugal, 2016) and 92% (Denmark, 2016) of wages in the top step of the highest scale.

**Table 5-3** *Ratio of the bottom step of the lowest pay scale in the country compared to the bottom and top steps of the highest pay scale*

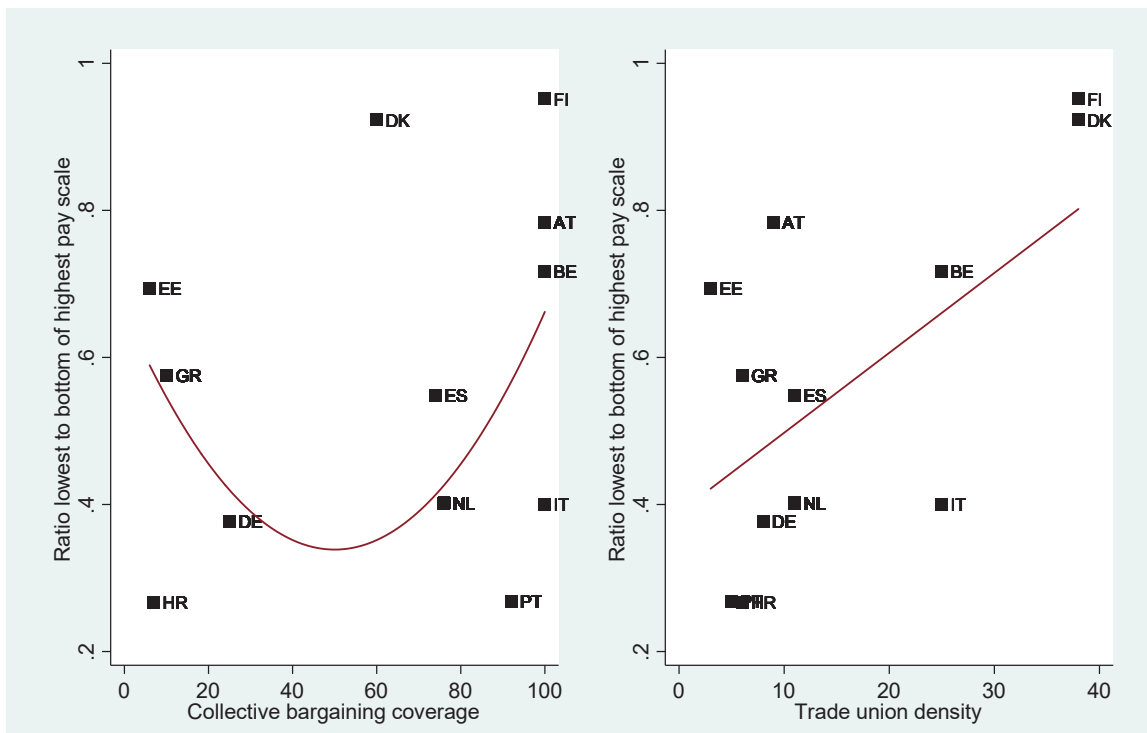
		<b>Bottom lowest scale : bottom highest scale</b>	<b>Bottom lowest scale : top highest scale</b>
<b>Austria</b>	2016	0.434	0.314
<b>Austria</b>	2017	0.784	0.684
<b>Belgium</b>	2017	0.717	0.501
<b>Croatia</b>	2015	0.730	0.730
<b>Croatia</b>	2016	0.267	0.229
<b>Denmark</b>	2014	0.921	0.921
<b>Denmark</b>	2015	0.922	0.922
<b>Denmark</b>	2016	0.923	0.923
<b>Estonia</b>	2016	0.709	0.709
<b>Estonia</b>	2017	0.694	0.694
<b>Finland</b>	2014	0.951	0.628
<b>Finland</b>	2015	0.951	0.628
<b>Finland</b>	2016	0.952	0.629
<b>Germany</b>	2013	0.496	0.359
<b>Germany</b>	2014	0.496	0.359
<b>Germany</b>	2015	0.377	0.328
<b>Germany</b>	2016	0.377	0.328
<b>Greece</b>	2016	0.576	0.576
<b>Italy</b>	2015	0.400	0.374
<b>Netherlands</b>	2013	0.750	0.502
<b>Netherlands</b>	2014	0.422	0.380
<b>Netherlands</b>	2015	0.392	0.251
<b>Netherlands</b>	2016	0.398	0.344
<b>Netherlands</b>	2017	0.402	0.362
<b>Portugal</b>	2010	0.414	0.414

<b>Portugal</b>	2014	0.641	0.417
<b>Portugal</b>	2016	0.268	0.268
<b>Spain</b>	2014	0.760	0.662
<b>Spain</b>	2015	0.527	0.434
<b>Spain</b>	2016	0.408	0.408
<b>Spain</b>	2017	0.548	0.452

Source: WageIndicator CBA Database

We aim to measure the inequality between pay scales from all commerce CBAs in the sample for each country. We calculate the ratio of the lowest to the highest pay scales by dividing the amount of the bottom step of the lowest pay scale in the country by the amount of the bottom of the highest pay scale in the country. As table 5-2 shows, the ratio of the lowest to highest pay scale is positively related to trade union density, whereas the association with collective bargaining coverage is u-shaped. When we adjust the measurement to take the top of the highest pay scale instead of the bottom, the results are similar. In Figure 5-4, we select for the last available year with pay scale data for each country and plot the ratio of earnings in the bottom step of the lowest scale in the country to the bottom step of the highest scale (y-axis) against country scores on collective bargaining coverage (left pane) and trade union density (right pane) in the commerce sector.

**Figure 5-4** Ratio lowest to bottom of highest pay scale by collective bargaining coverage and trade union density



Source: WageIndicator CBA Database and CIR index

The left pane shows that in four countries with high collective bargaining coverage in the commerce sector (Finland, Denmark, Austria and Belgium), workers in the lowest pay scales earned at least 75% of their counterparts in the highest pay scales. Despite similar collective bargaining coverage, however, we find much larger gaps between commerce workers in the lowest pay scales and those in the highest scales in Spain, the Netherlands, Italy and Portugal. The right pane shows a more linear relation between trade union density and the ratio of lowest to highest pay scales (running from Greece and Estonia with low TUD and lowest pay scales at about 50% of the highest, via Belgium, to the high trade union density and low inequalities of Finland and Denmark in the upper right corner).



## 6 Leaves and working hours

A third essential part of the bargaining agenda is the regulation of working time. For the purpose of this report, we interpret the regulation of working time in the broadest possible way, including both working hours as well as the associated premiums and leave arrangements. As described in detail in the first BARCOM report, most commerce agreements contain clauses on working hours, most commonly *weekly* working hours. About 90% of the agreements collected agreed on working times between 36 and 40 hours per week; 30% of agreements limited the number of hours above the regular working time that can be worked, and 70% included premiums for overtime whereas two thirds granted workers paid annual leave. Agreements also commonly included clauses on paid maternity leave, sick leave and flexible hours.

Firstly, we explored whether these topics are more commonly included on the bargaining agenda in countries with higher collective bargaining coverage, trade union density and more centralised bargaining levels. We then studied the outcomes of bargaining with regard to working time, taking into account both the actually agreed levels found in the CBA texts, as well as comparing those outcomes of collective bargaining to the legal standards, using the labour law database described in appendix I.

**Table 6-1** *Effect of CIR index on the probability that clauses about working time are included in agreements*

	CBC	CBC squared	TUD	TUD squared	Levels	Levels squared
<b>Working hours</b>	0.008	-0.001	-0.162	0.030	1.630	1.210
<b>Limits on overtime</b>	-0.010	0.000	-0.076	0.004	0.110	-0.565
<b>Over time premium</b>	-.044**	-.001*	-.125 <sup>+</sup>	0.006	-0.950	-0.127
<b>Annual leave</b>	-0.004	-.001*	0.037	-0.001	0.870	1.643
<b>Premium Sunday work</b>	-0.017	-.001**	0.060	-0.003	0.557	0.724
<b>Premium night work</b>	-0.021	-.001 <sup>+</sup>	-0.040	0.000	0.358	-0.673

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ , <sup>+</sup>  $p < .1$

As table 6-1 shows, we found few to no significant effects of trade union density and the centralisation of collective bargaining on the inclusion of different working time clauses in CBAs. However, we did find that the inclusion of these clauses and collective bargaining coverage in the commerce sector are linked. The dominant pattern with regard to the inclusion of clauses on the regulation of working time in countries with higher collective bargaining coverage, is curvilinear. In other words, we found a different association between collective bargaining coverage and the probability that these clauses were included, at lower and higher values of collective bargaining coverage (as measured by the squared term). In particular, we found small negative associations in the square terms, indicating collective bargaining is negatively associated with the inclusion of clauses on working time regulations with the group of countries scoring highest on the CBC variable. A possible explanation of this pattern may be that issues are included on the bargaining agenda by means of collective agreements as the relation between and the power of social partners become stronger, resulting in the positive association at lower values of CBC. Secondly, that these regulations are transposed into national law as the agreement reached by social partners through collective bargaining becomes more accepted across sectors and firms, thus removing it from the scope of CBAs again, resulting in the negative association at higher

values of CBC. The limited sample, the one-sector design and lack of longitudinal data, however, prevented us from testing this relation more strictly.

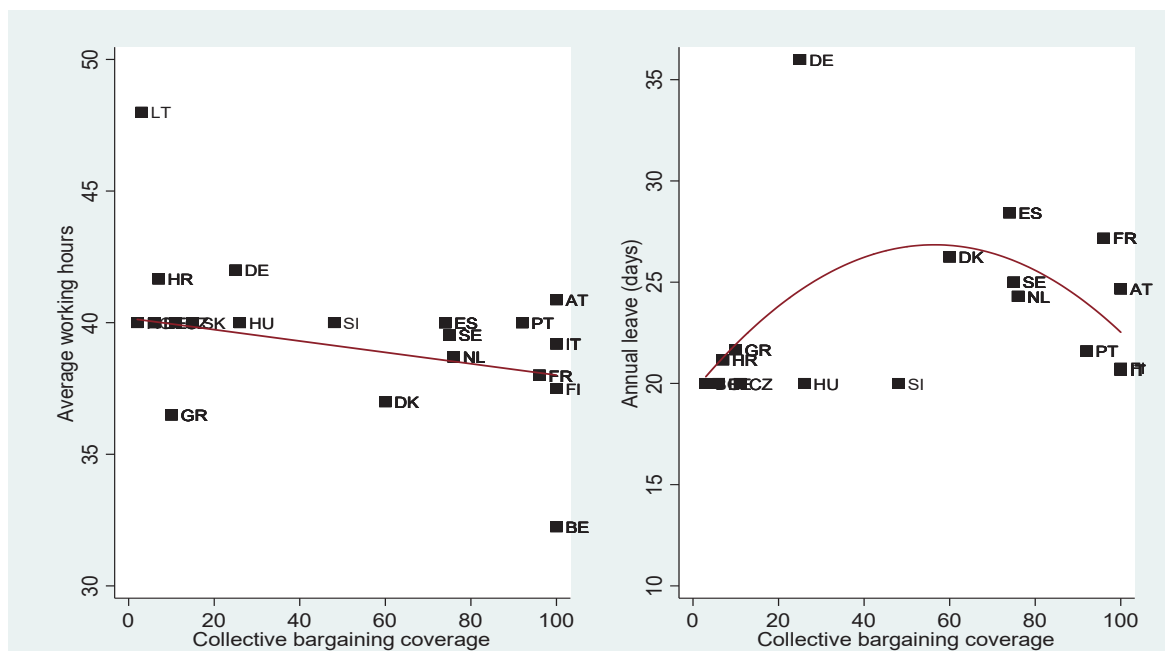
**Table 6-2** Effect of the CIR index on bargaining outcomes regarding working time regulation

Outcome	CBC	CBC squared	TUD	Levels	Countries	CBA's
Hours per week	-.027 <sup>+</sup>		-.101*	-0.159	20	81
Days of annual leave	-0.024	-.002*	0.007	2.957*	17	58
Weeks of maternity leave	-.004 <sup>+</sup>		0.001	-0.131	13	37

Note: hierarchical linear models

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ , <sup>+</sup>  $p < .1$

**Figure 6-1** Effect of the CIR index on the agreed number of days of annual leave



Source: WageIndicator CBA Database and industrial relations variables

Next, we explored the outcomes of collective bargaining on working time regulation across countries with lower and higher scores on the industrial relations variables for a number of quantifiable variables. Table 6-2 shows the results. We found a marginally significant negative effect of collective bargaining coverage on the weekly working hours agreed in the agreements and a stronger negative effect of trade union density (-.101, sig  $p < .05$ ), indicating that working hours are an important bargaining issue for trade unions. The effect of collective bargaining coverage on the agreed number of days of annual leave is curvilinear, which is shown more clearly in figure 6-1, indicating that the effect of constructive industrial relations is positive in countries with relatively low collective bargaining coverage, but negative at higher coverage levels. CBAs were also found to grant longer paid annual leaves in countries where sector level collective bargaining was more common. With regard to the number of weeks of paid

maternity leave, we found that most countries grant similar leaves (around 20 weeks) and we could not draw any conclusion regarding the relation between the industrial relations variables and agreed levels of paid maternity leave.

Finally, we tested the relationship between the industrial relations variables and the extent to which the bargaining outcomes regarding working time regulation exceeded legal standards (table 6-3). As above, we find indications that weekly working hours are an important issue to trade unions in commerce, as the average working hours are about one hour shorter than the legal standard for each nine per cent increase in trade union density (-.114, sig p<.000). Annual leaves, on the contrary, less likely to exceed legal standards in countries with more extensive collective bargaining coverage. However, as shown in figure 6-2, these results are driven by France, Finland and Austria. We did not find any relation between bargaining systems and the extent to which maternity leave exceeds legal standards, suggesting most CBAs stick close to the statutory levels independently of industrial relations.

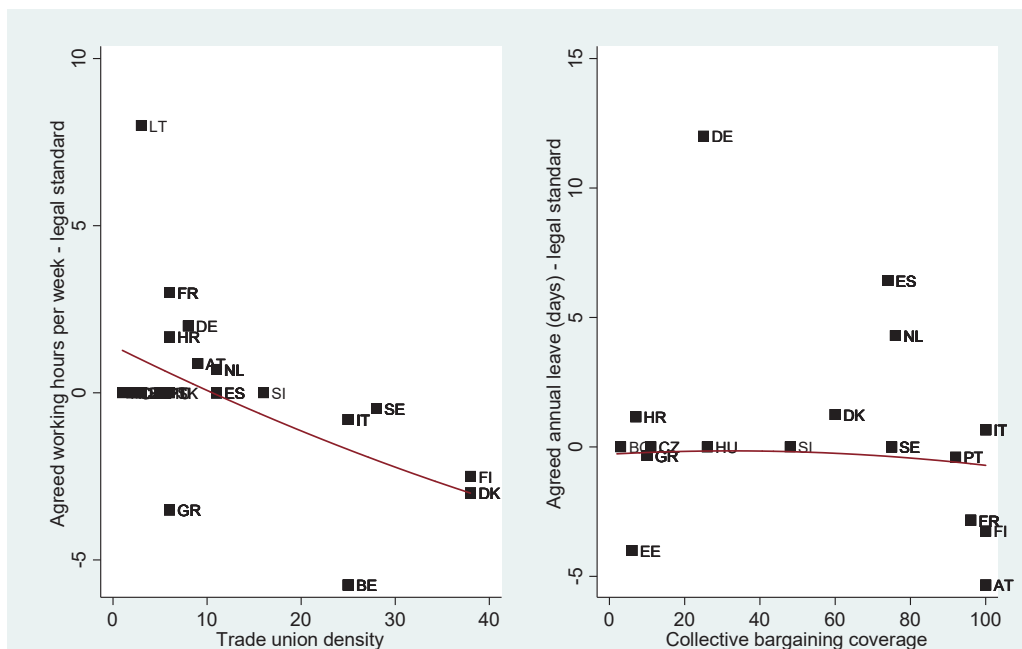
**Table 6-3** Effect of the CIR index on bargaining outcomes exceeding legal standards

Outcome	CBC	CBC squared	TUD	Levels	Countries	CBAs
hours - legal standard	-0.013		-.114***	-0.663	20	81
annual leave - legal standard	-.090***	-.004***	-0.026	1.265	17	58
maternity leave - legal standard	-0.031		-0.054	-0.966	13	37

Note: hierarchical linear models

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<.1

**Figure 6-2** Effect of industrial relations on bargaining bonuses in working hours and annual leave



Source: WageIndicator CBA Database and industrial relations variables

In summary, we did not find any evidence that bargaining systems are systematically related to the inclusion of clauses on working time regulation in CBAs. We did, however, find indications that working time is shorter in countries with higher trade union density. This result holds both when regarding the agreed number of working hours and when considering the difference between agreed working hours and national working time legislation.

## 7 Conclusion

Collective bargaining is an important instrument in wage-setting processes, but lacks underpinning with empirical data. Little is known about what exactly is agreed upon in collective bargaining, specifically in a cross-European perspective. By collecting and coding collective agreements from a range of European countries, the BARCOM project contributed to the body of knowledge in the area of industrial relations and wage setting.

In Section 2 of this report we provided an overview of several data sources, in addition to the data provided by the WageIndicator CBA database. We described how the CBA data, collected and coded consistently across countries for the BARCOM project, can be related to these publicly available data sources and can be used to explore cross-country differences in the quality of bargaining outcomes. We remind the reader at this point, that we refer to the outcomes of collective bargaining, as found in the texts of collective bargaining agreements. The outcomes presented in this report and the conclusions underneath all refer to standards set through collective bargaining, and cannot be used to draw conclusions regarding actual working conditions of commerce sector workers or regarding their wages.

Section 3 explored whether stronger and more centralised industrial relations are associated with specific patterns of collective bargaining, notably company versus multi-employer bargaining (form), as well as the homogeneity and the level of bargaining outcomes (outcomes). Concerning the former, more centralised bargaining and a higher collective bargaining coverage was associated with more multi-employer collective bargaining agreements. Analyses suggest that a one per cent increase in a sector's level of collective bargaining coverage is associated with a 2 per cent increase in the probability that a CBA was signed by multiple employers or an employers' association rather than a single firm. We found a positive relation between the number of topics covered in agreements and both collective bargaining coverage and the level of centralisation; a CBA in a country where sector level bargaining is the standard on average contained half a topic more than one from a country where firm level bargaining is the standard. Concerning the outcomes of bargaining, a generally positive relation was noticed between collective bargaining coverage and the number of premiums that were included in collective bargaining agreements, with a non-conforming group of four countries (Slovakia, Romania, Croatia and the Czech Republic) that did include clauses on a larger number of premiums despite scoring low on collective bargaining coverage. A positive relation between collective bargaining coverage and the average days of annual leave specified in agreements by country was found. Sector level collective bargaining was associated with more homogeneity in the length of trial periods set in collective bargaining agreements, whereas trade union density was associated with *more* differences in the number of premiums and allowances set in CBAs from the same country and collective bargaining coverage with greater differences in the length of annual leave.

Section 4 explored whether employment protection measures included in CBAs, such as trial periods and severance payments, are in line with the national statutory provisions. We find that this is indeed the case. Remarkable is the case of France offering a higher than statutory severance payments (which also corresponds with the findings of a generally more constructive industrial relationship in the country). However, such bonuses concerning trial periods and severance payments rather constitute an

exception, not a rule. Provisions on exclusion of part-time and temporary workers, students and apprentices are found only in a small number of CBAs in Austria, Denmark, Netherlands and the United Kingdom. These countries share some common characteristics, possessing a high share of atypical forms of employment, in addition to looser employment regulation of temporary work (resulting in a high share of workforce in atypical employment with potentially less favourable working conditions than labour in typical employment forms).

Section 5 studied the relationship between inequality in collectively bargained wages and bargaining systems. Approximately 90% of agreements contained clauses on wages and about one third of the collected agreements included pay scales. In countries with more centralised bargaining, we found more agreements containing structural wage increases and fewer with once-only increases; we found more CBAs that included pay increases in countries with higher collective bargaining coverage. In countries with higher trade union densities, CBAs were more likely to contain a lump sum increase compared to a percentage increase in wages; in countries with more sector level bargaining, on the contrary, more CBAs granted pay hikes as a combination of a percentage pay increase and a lump sum payment compared to a simple percentage increase, but fewer agreements contained only a lump sum increase. Regarding the level of collectively agreed wages, we found a positive and significant relation between the level of the lowest pay scale in the country in purchasing power parity, and its trade union density in the commerce sector. We found the lowest pay scales in the commerce sector in firm level agreements in Greece and Croatia were much higher than the minimum wage, where firm and sector level agreements from Estonia, Belgium and Germany were about 10% higher; the lowest pay scales of CBA from the Netherlands, Portugal and Spain were very close to the minimum wage level. Commerce workers in the highest pay scale earn more than twice the statutory minimum wage in Croatia, Portugal, Germany, Greece and the Netherlands, but not in Spain, Belgium and Estonia. Single workers in the lowest pay scale found in the commerce sectors earned enough to stay out of poverty if they work full time in all countries, except Austria. However, only in the firm level agreements in Croatia and Greece and the sector level agreements in Denmark and Finland, did the bottom of the lowest pay scale allow workers to maintain a family. In a large group of countries (e.g. Greece, Germany, Portugal, the Netherlands), workers in the highest pay scales appeared to be able to earn a comfortable living. However, in Austria, Estonia and Denmark even workers in the highest pay scale barely earned enough to keep a family above the at risk of poverty threshold. Regarding inequality within pay scales, in four countries with high collective bargaining coverage in the commerce sector (Finland, Denmark, Austria and Belgium), workers in the lowest pay scales earned at least 75% of their counterparts in the highest pay scales. Despite similar collective bargaining coverage, however, we found much larger gaps between commerce workers in the lowest pay scales and those in the highest scales in Spain, the Netherlands, Italy and Portugal.

Section 6 explored the relationship between bargaining regimes and the regulation of working time, which included working hours as well as leave arrangements. The dominant pattern with regard to the inclusion of clauses on the regulation of working time in countries with higher collective bargaining coverage, was curvilinear. In other words, we found a different association between collective bargaining coverage and the probability that these clauses were included, at lower and higher values of

collective bargaining coverage. With regard to the outcomes of bargaining on working time regulation, we found a marginally significant negative effect of collective bargaining coverage on the weekly working hours agreed in the agreements and a stronger negative effect of trade union density, indicating that working hours are an important bargaining issue for trade unions. CBAs were also found to grant longer paid annual leaves in countries where sector level collective bargaining was more common. With regard to the number of weeks of paid maternity leave, we found that most countries grant similar leaves (around 20 weeks) and we could not draw any conclusion regarding the relation between the industrial relations variables and agreed levels of paid maternity leave. When comparing bargaining outcomes to legal standards in the 22 countries, we found average working hours were about one hour shorter than the legal standard for each nine per cent increase in trade union density. Annual leaves, on the contrary, were less likely to exceed legal standards in countries with more extensive collective bargaining coverage.

The BARCOM study thus leads to the conclusion that collecting and coding collective agreements provides a better understanding of the outcomes of collective bargaining. The detailed coding allows us to disentangle the effects of industrial relations indicators on specific outcomes of collective bargaining in the European commerce sector in much more depth.

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## Appendix I – Supplementary data and datasets on the country level

### The OECD indicators of employment protection legislation index

For section 4 we used the OECD indicators of employment protection legislation index in combination with the CIR index. The [OECD indicators of employment protection legislation](#) measure the procedures and costs involved in dismissing individuals or groups of workers and the procedures involved in hiring workers on fixed-term or temporary work agency contracts. Indicators for Latin American and Caribbean (LAC) countries have been constructed in cooperation with the [Inter-American Development Bank](#) (IDB), with higher values representing stricter regulation.

### The WageIndicator Labour Law database

The WageIndicator Labour Law Database codes de-jure labour market institutions around 48 themes in 152 countries of the world maps (Ahmad, 2017). The themes range from minimum wages and working time to employment contracts to occupational safety and health legislation to fair treatment at work laws. The database highlights employment protection legislation (probation periods, notice periods, severance payments) as well as work and family legislation (different kinds of leave and protection from dismissals and nursing breaks). It also brings forward legislative data on prohibition of child labour, forced labour, sexual harassment at work and equal pay for equal work. This data is updated every year and is the most up to date country level data with text referring to the primary legal resources (Constitutions, Labour Codes, Penal Codes, etc.). For more than 70 countries changes over the last five years could be monitored.

In section 4, we used the Labour Law Database to construct country level indicators regarding dismissal protection, probation periods, contract termination notice, severance pay and regulation of temporary contracts. In section 6, we drew on the database for national standards regarding working hours, premiums for overtime pay, the length of maternity leaves and annual leaves.

### The WSI Minimum Wage Database

The WSI Minimum Wage Database collects data on minimum wages over time, providing break downs of the minimum wage by hour and month in both the local currency and purchasing power parity. We used the minimum wages in section 5 to compare the collectively agreed wages to the relevant minimum wage.

### At risk of poverty thresholds

We use information from Eurostat on at-risk-of-poverty thresholds. Through its EU-SILC survey, Eurostat collects income data for all EU member states. From the income data, at risk of poverty thresholds are calculated as earning 60% of the median income after social transfers and provided for both 1-person households and for households of two adults and two children. In section 5, we used the thresholds to compare them to collectively agreed pay scales. Eurostat provides data on annual incomes, we divided the national earnings by 12 in order to compare them to monthly wages agreed in the pay scales.

## EU directives

*Part-time Work Directive 97/81/EC* is one of three [EU Directives](#) that regulate atypical work alongside the [Fixed-term Work Directive](#) and the [Agency Work Directive](#). Its aim is to ensure that people who have not contracted for permanent jobs are nevertheless guaranteed a minimum level of equal treatment compared to full-time permanent staff.

The *Temporary Agency Work Directive 2008/104/EC* is an [EU Directive](#) agreed in November 2008 which seeks to guarantee those working through [employment agencies](#) equal pay and conditions with employees in the same business who do the same work.<sup>[1]</sup> It is the third piece of legislation in the EU's employment law package to protect atypical working (the others being for part-time workers and fixed-term workers). Though the Directive was proposed in 2002, the British, German, Danish and Irish governments blocked its enactment until 2008.

*Article 4* sets clear limits to prohibitions and restrictions that may be imposed on the use of temporary agency work. These are only justified on grounds related to the protection of temporary agency workers, to ensure that the labour market functions properly and that abuses are prevented. EU member states are obliged to review prohibitions and restrictions on temporary agency work until and to report to the European Commission.

*Article 5* establishes the principle of equal treatment for temporary agency workers. The basic employment and working conditions shall be - for the duration of the assignment at the user company - equal to those of a worker employed directly by that company to occupy the same position. Article 5 allows for derogations from this principle for open-ended contracts providing pay between assignments (*Article 5, paragraph 2*), to uphold collective labour agreements (*Article 5, paragraph 3*) or based on agreements of social partners (*Article 5, paragraph 4*).

## Appendix II – Labour Law Database

Country	Probation Period	Contract Termination Notice Period	Severance Pay (after five years of service)
<b>Austria</b>	A: Less Than 3 Months	A: >4 weeks	C: 61-90 Days
<b>Belgium</b>	A: Less Than 3 Months	B: 3-4 Weeks	E: No Clear Provision
<b>Bulgaria</b>	C: 6 Months	A: >4 weeks	Z: Insufficient Data
<b>Croatia</b>	C: 6 Months	A: >4 weeks	B: 31-60 Days
<b>Cyprus</b>	D: More Than 6 Months	B: 3-4 Weeks	C: 61-90 Days
<b>Czech Republic</b>	B: 3-5.9 Months	A: >4 weeks	C: 61-90 Days
<b>Denmark</b>	B: 3-5.9 Months	A: >4 weeks	C: 61-90 Days
<b>Estonia</b>	B: 3-5.9 Months	A: >4 weeks	E: No Clear Provision
<b>Finland</b>	C: 6 Months	A: >4 weeks	E: No Clear Provision
<b>France</b>	B: 3-5.9 Months	A: >4 weeks	A: 1-30 Days
<b>Germany</b>	C: 6 Months	A: >4 weeks	C: 61-90 Days
<b>Greece</b>	D: More Than 6 Months	A: >4 weeks	C: 61-90 Days
<b>Hungary</b>	B: 3-5.9 Months	A: >4 weeks	B: 31-60 Days
<b>Ireland</b>	D: More Than 6 Months	B: 3-4 Weeks	C: 61-90 Days
<b>Italy</b>	A: Less Than 3 Months	C: 1-2.9 Weeks	E: No Clear Provision
<b>Latvia</b>	B: 3-5.9 Months	C: 1-2.9 Weeks	B: 31-60 Days
<b>Lithuania</b>	B: 3-5.9 Months	A: >4 weeks	D: 91 Days Or More
<b>Luxembourg</b>	C: 6 Months	A: >4 weeks	A: 1-30 Days
<b>Malta</b>	C: 6 Months	A: >4 weeks	E: No Clear Provision
<b>Netherlands</b>	A: Less Than 3 Months	A: >4 weeks	B: 31-60 Days
<b>Poland</b>	B: 3-5.9 Months	A: >4 weeks	B: 31-60 Days
<b>Portugal</b>	B: 3-5.9 Months	A: >4 weeks	B: 31-60 Days
<b>Romania</b>	B: 3-5.9 Months	B: 3-4 Weeks	E: No Clear Provision
<b>Slovakia</b>	B: 3-5.9 Months	A: >4 weeks	B: 31-60 Days
<b>Slovenia</b>	C: 6 Months	A: >4 weeks	A: 1-30 Days
<b>Spain</b>	A: Less Than 3 Months	B: 3-4 Weeks	D: 91 Days Or More
<b>Sweden</b>	C: 6 Months	A: >4 weeks	E: No Clear Provision
<b>United Kingdom</b>	C: 6 Months	A: >4 weeks	B: 31-60 Days

### Appendix III – Minimum wages and at risk of poverty thresholds by country

Country	Year	Min wage (local currency)	At risk of poverty threshold for a single worker (ppp per month)	At risk of poverty threshold for a family (2 adults, 2 children) (ppp per month)
Austria	2016	n/a	1126.17	2365.00
Austria	2017	n/a	1126.17	2365.00
Belgium	2017	1531.93	1041.00	2186.08
Croatia	2015	3030.00	412.67	866.50
Croatia	2016	3120.00	441.42	927.08
Denmark	2014	n/a	999.33	2098.58
Denmark	2015	n/a	1019.25	2140.33
Denmark	2016	n/a	1056.00	2217.58
Estonia	2016	430.00	593.00	1245.33
Estonia	2017	470.00	593.00	1245.33
Finland	2014	n/a	962.50	2021.17
Finland	2015	n/a	971.50	2040.17
Finland	2016	n/a	988.25	2075.42
Germany	2013	n/a	973.92	2045.17
Germany	2014	n/a	960.83	2017.67
Germany	2015	1402.50	1018.25	2138.33
Germany	2016	1402.50	1060.50	2227.08
Greece	2016	580.00	441.42	926.92
Italy	2015	n/a	769.75	1616.42
Netherlands	2013	1469.00	961.33	2018.75
Netherlands	2014	1485.60	940.25	1974.58
Netherlands	2015	1502.00	969.33	2035.67
Netherlands	2016	1525.00	1049.67	2204.33
Netherlands	2017	1552.00	1049.67	2204.33
Portugal	2010	475.00	486.42	1021.50
Portugal	2014	485.00	506.25	1063.17
Portugal	2016	530.00	535.75	1125.00
Spain	2014	645.00	709.75	1490.50
Spain	2015	649.00	723.17	1518.67
Spain	2016	655.20	758.75	1593.33
Spain	2017	708.00	758.75	1593.33

Source: WSI Minimum Wage Database, Eurostat



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