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Book

Restoring multi-employer bargaining in Europe: prospects and challenges

Provided in Cooperation with:
ETUI European Trade Union Institute, Brussels

Reference: Klaveren, Maarten van/Gregory, Denis (2019). Restoring multi-employer bargaining in Europe: prospects and challenges. Brussels : European Trade Union Institute (ETUI). https://www.etui.org/sites/default/files/Wibar-book-WEB.pdf.

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Acknowledgements

This book is the result of the hard work and cooperation of a large team made up from the main and associate WIBAR-3 project partners and comprising, in alphabetical order: Janna Besamusca; Reinhard Bispinck; Peter Bizik; Erina Costantini; Jan Drahokoupil; Bela Galgóczi; Ad Gielen; Denis Gregory; Anüska Griffith; Miriama Hviščová; Magdalena Janeckova; Casper Kaandorp; Tomas Kabina; Marta Kahancová; Angelique Lieberton; Ian Manborde; Tibor Meszmann; Sona Mikulikova; José Perfeito; Maria Sedlakova; Kea Tijdens; Maarten van Klaveren; Tracy Walsh; and Alejandro Zerain. Additionally, we would like to acknowledge here that the inputs of the presenters and other trade union participants in the three project seminars, in all totalling 60 people, were indispensable to the shaping of our conclusions, considerations and recommendations. We are very grateful to all these contributors. Of course, we remain solely responsible for any errors or omissions in the text and data presented in this book.

As in all projects using *WageIndicator* data, we are indebted to colleagues in the *WageIndicator* organisation, especially to Paulien Osse, Director of the WageIndicator Foundation. Finally, we would like to thank the grant providers for the funding and the ETUI for publishing our research findings.

Amsterdam and Oxford, September 2018
Maarten van Klaveren and Denis Gregory

The transnational 'WageIndicator Support for BARgaining' (WIBAR-3) project received funding from the European Commission as part of the Industrial Relations and Social Dialogue programme (VS/2014/0533). The project ran from December 2014 to November 2016. Sole responsibility lies with the University of Amsterdam/AIAS. The European Commission is not responsible for any use that may be made of the information in this particular publication or in any other publication or communication.

Print: ETUI Printshop, Brussels

D/2019/10.574/13
ISBN 978-2-87452-528-5 (print version)
ISBN 978-2-87452-529-2 (electronic version)

The ETUI is financially supported by the European Union. The European Union is not responsible for any use made of the information contained in this publication.

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1. Introduction

1.1 Aims and objectives

The central aim of this book is to shed light on how collective bargaining as a process has been changing across the European Union over the last two decades. We are particularly concerned to show the degree to which shifts in the levels at which bargaining takes place have had an impact on pay and conditions as well as on trade union power and influence. A critical factor here is the tendency for collective bargaining to have moved away from industry or sector level – what we call multi-employer bargaining (MEB) – to company-level bargaining – to which we refer hereafter as single-employer bargaining (SEB). It appears that this trend has been widespread and has served both to undermine the coverage of collective labour agreements (CLAs) and to contribute to the decline in trade union membership observable in most EU countries after the turn of the century.

It must of course be said that, although there are strong indicators pointing to the dominance of such decentralising tendencies, in some industries and in some countries multi-employer or industry-wide bargained CLAs are still very much in evidence. This raises the obvious question for the workers involved as to which type of bargaining and resultant collective agreement has proved more effective in terms of preserving both living standards and job security. The social partners and governments, too; all have a strategic interest in this question.

For the trade union movement, a possible link between decentralised bargaining and the decline in union membership is a major cause for concern. Naturally, unions right across the EU have given priority to maintaining recognition for bargaining purposes and have negotiated robustly for their members at every level where the opportunity has arisen. At the same time, this has left them with little real influence in restraining the shift towards company-level bargaining or in curbing the more individual forms of pay determination that have frequently accompanied the adoption of neoliberal economic policies.

Employers have, for the most part, willingly embraced decentralised bargaining since it has enabled them to control labour costs as well as to balance effort and reward in bespoke ways that multi-employer, or industry-wide, bargained agreements would struggle to achieve. Moreover, collective bargaining at company level has continued to flourish in a range of private-sector industries throughout the EU and has been buttressed by the bargaining strategies of large multinational enterprises (MNEs) (cf. Van Klaveren *et al.* 2013), providing an indication of vitality. However, outside of the realm of the large MNE, decentralisation has also often led to the eventual disappearance of collective

bargaining and a decline in the presence and influence of employers' organisations. The growth of the so-called 'gig economy', with bogus self-employment and low pay to the fore, has been one response to the space left behind when collective agreements have been abandoned in favour of employer-imposed terms and conditions. One of our purposes here is to examine the advantages that could accrue with a return to more centralised forms of wage determination and the benefits that multi-employer CLAs might confer.

Governments have an obvious interest in collective bargaining since the need to control costs in the public sector is inevitably a priority. Looking across the EU, it is generally the case that trade union density is strongest in the public sector and that collective bargaining coverage here is also at its highest level. CLAs agreed between governments and unions in the public sphere are frequently sectoral in nature covering, for instance, health, education, and central and local government services. However, these well-established bargaining arrangements have come under pressure throughout the 2000s, firstly from privatisation and outsourcing; and latterly from the austerity measures and budgetary restrictions that most EU governments have adopted in response to the continuing Great Depression. The result has been that zero, or very low, wage growth can be seen in many parts of the public sector. One, perhaps unforeseen, consequence of these downward forces has been to undermine the ability of governments to use public sector pay bargaining as a macro-economic tool to boost demand. It should be noted that, despite the gradual turn away from austerity dogma in recent years, at least at EU level, and the publication of joint statements calling for a 'new start for social dialogue', precious little difference in terms of wage growth can be observed.

As the evidence on rising income inequality piles up all across the EU and the share of wages in overall GDP continues to fall (cf. Van Klaveren and Schulten 2015), the need for a radical rethink on collective bargaining is compelling. There are signs that such a debate has begun to emerge. One of the main objectives of this book is to provide statistical evidence and industry case studies that will help take this discourse forward, focusing in particular on opportunities to strengthen multi-employer bargaining throughout the European Union. The specific angle we chose when starting the project in late 2014, after consultation with the European Trade Union Confederation (ETUC) and the European Trade Union Institute (ETUI), was to enhance knowledge of the interaction between bargaining structures and practices with the market and employment structures predominant in the EU.

1.2 The formal setting

This book represents one of the outcomes from the WIBAR-3 research project. This project was coordinated by Maarten van Klaveren and Kea Tijdens, both research staff members of the Amsterdam Institute for Advanced Labour Studies (AIAS). AIAS worked together with research teams from its partners at CELSI (Central European Labour Studies Institute) in Bratislava, Slovakia, and at Ruskin College in Oxford, United Kingdom; led respectively by Marta Kahancová and Denis Gregory. Moreover, WIBAR-3 had three associate partners, namely: ETUC in Brussels; the WageIndicator

Foundation in Amsterdam; and the Wirtschafts- und Sozialwissenschaftliches Institut (WSI) at the Hans Böckler Foundation in Düsseldorf. The project was granted funding by the European Commission as part of its Industrial Relations and Social Dialogue programme (No. VS/2014/0533).

The WIBAR-3 project covered 23 EU member states, namely: Austria; Belgium; Bulgaria; Czech Republic; Denmark; Estonia; Finland; France; Germany; Hungary; Ireland; Italy; Latvia; Lithuania; Netherlands; Poland; Portugal; Romania; Slovakia; Slovenia; Spain; Sweden; and United Kingdom. Five EU member states (Cyprus, Croatia, Greece, Luxembourg and Malta) were excluded for several reasons, the most important being the absence of sufficient comparative data from Eurostat's *Structural Business Statistics*. In addition, the limited size of Cyprus, Luxembourg and Malta (all with fewer than 1.5 million inhabitants) was also a factor. WIBAR-3 partly builds on the previous WIBAR and WIBAR-2 projects (Van Klaveren and Tijdens 2008; Van Klaveren *et al*. 2013).

Five industries were selected: Metal and electronics manufacturing; Wholesale; Retail; Information and communication technology (ICT); and Transport and telecommunications (telecoms). This selection differed from that of the WIBAR-2 project in one important respect: in WIBAR-3, Wholesale industry replaced the finance and call centre industry. Due to considerable structural changes following the financial crisis, particularly bailouts and demergers, recent employment data for the finance industry have lacked comparability over time and across countries. In contrast, data have been available in greater detail for wholesale; moreover, that industry, because of its many links with retail and transport, had already been partly covered by the WIBAR-2 research.

The WIBAR-3 project team applied statistical analyses to data from the following sources:

— to map industrial relations at national level in the 23 countries: the ICTWSS database 5.1 (Visser 2016a); Eurofound's ERM and EIRO databases (since 2014 combined in EurWORK); national sources (in particular derived from the CAWIE-1 and CAWIE-2 research projects); and the WIBAR-3 Industrial Relations survey (see below);
— to establish prevailing bargaining structures and practices by country and industry, in conjunction with collecting data on the five largest companies (by employment) in each country/industry cell (thus, on 23 x 5 x 5 = 575 companies), the team built the WIBAR-3 Industrial Relations (IR) survey. This made use of data from the ICTWSS database 5.1; the AIAS-WageIndicator *Trade Union Database*; Eurofound's databases and publications; the monthly *Collective Bargaining Newsletter* of AIAS and ETUI; newspaper reports and other sources attained through desk research; and information gathered through interviewing experts/trade union negotiators using a web-based questionnaire schedule for each country/industry;
— to map the market and employment structures at industry level in the 23 countries, we used Eurostat data; Eurofound's EurWORK databases and its

EMCC (European Monitoring Centre on Change) factsheets; *Forbes* and *Fortune* overviews; company annual reports; and investment agency and various pieces of press information, thereby partly updating the AIAS MNE database of 2008;

— to refine and augment the data on the 575 largest companies, the research team added a number of features to the Industrial Relations survey, namely: rating the relationship between management and trade unions; appending information on the ownership category and country of origin of the parent firm and any coverage by Transnational Company Agreements (based on the ILO/EC database on TCAs); listing employment numbers at company/subsidiary and parent firm levels in 2012 and 2014; and describing the type of collective labour agreement covering the company/subsidiary in question;
— to analyse the content of collective agreements, the team collected and coded 181 CLAs covering the five industries in the 23 countries;
— to establish collective bargaining coverage, the team used data from the continuous, multi-country, multi-lingual *WageIndicator* web survey on the bargaining preferences of individual employees. Also added were indications of trade union density and bargaining coverage including those taken per quintile of the wage distribution in 13 countries.

In 2016, the preliminary results of our analysis based on these sources were discussed in three seminars. These seminars took place on 1 July in Oxford (for Transport and telecoms and ICT, run by Ruskin College); 23 September in Bratislava (for Metal and electronics manufacturing, run by CELSI); and on 7 October in Amsterdam (for Wholesale and Retail, run by AIAS). Overall, the seminars attracted 60 participants including representatives and full-time officers of trade unions all of whom had current, or recent, bargaining experience in the sectors studied. Our objective here was to enable the trade union practitioner presentations and discussions to act as a reality check on our findings. Indeed, our final conclusions are based on a merger of the data from our analyses and the feedback received at these seminars as well as by subsequent comments from a number of participants. The participants were also very helpful in completing the last remaining gaps in information on the 575 selected companies.

1.3 Organisation of the book

The book is organised as follows.

Chapter 2 outlines the case for (the restoration of) multi-employer bargaining (MEB) from a historical perspective. The chapter documents the vicissitudes of MEB evident after the turn of this century (that is, before, during and after the Great Recession) against the backdrop of the political and institutional changes as well as shifts in market structures. We elaborate this further with statistical evidence concerning (changes in) collective bargaining regimes in the 23 countries we scrutinised, including the numbers of trade union and employers' organisations. Finally, the chapter contrasts data on the bargaining preferences of individual employees with the actual coverage of collective bargaining.

Chapter 3 details developments in employment for the period 2008-2014 in the five industries and 23 countries studied. Besides preparing for Chapter 4, this provides the reader with immediate insights into the linkages and dynamics between market structures, industrial relations and employment patterns in the five industries. The chapter sets out employment figures for these industries, including the numbers of employees covered by recent restructuring plans; data on the level of economic concentration; and concludes with an overview of the major companies in each industry. We then link this information with the outcomes of the three seminars.

The analysis in Chapter 4 uses our rather unique Industrial Relations survey to the full. This permits an exploration of the relationship between a range of industrial relations indicators and the characteristics of the 575 companies and, wherever possible, extends the focus to the country/industry level. Finally in this chapter, we link our company data with collective bargaining practice.

Chapter 5 contains conclusions and strategic considerations. It also sets out recommendations aimed at restoring and enhancing trade union bargaining practices.

Appendix 1 discusses the relationship between income and wage inequality, and trade union density and collective bargaining, based on data for 2013/14, 2007/08 and 2000/02 and focusing on, respectively, 23 and 12 EU countries. Appendix 2 offers estimates of the employment shares of all foreign-owned affiliates of multinational enterprises (MNEs) for the 23 countries and five industries studied, as well as for all MNEs for ten countries and four industries (excluding Wholesale).

A Statistical appendix includes the detailed tables (numbered SA…) to which the text refers.

2. The case for multi-employer bargaining

This chapter examines the case for (the restoration of) multi-employer bargaining from a historical perspective. Section 2.1 emphasises that sector, or industry, level is the main locus of our analysis. We acknowledge here that common frameworks and concepts for the study of industrial relations at industry level are, as yet, weakly developed. The section continues with the definitions of multi- and single-employer bargaining used throughout our research. Section 2.2 introduces the potential advantages of multi-employer bargaining that may accrue to labour in particular and explores which kind of sectoral agreements may be most appropriate for further consideration by the trade union movement. We go on in section 2.3 to contrast the initial support of 'Europe' for coordinated collective bargaining with the declining power of labour and the growing constraints on collective bargaining at national level that were apparent even before the 2007-08 crisis and that had prompted the further erosion of collective bargaining. Section 2.4 covers the vicissitudes of multi-employer bargaining evident during the Great Recession and beyond (2007-2015), and also provides an assessment of the political and institutional conditions at European and national levels. Both sections also cover the relevant changes in market structures and the implications of these for industrial relations.

In section 2.5 we analyse statistical evidence concerning the changes in collective bargaining regimes from 2001/02 to 2013/14 in the 23 countries we scrutinised, for four key indicators, namely: the union density rate (TUD); employers' organisation density (EOD); collective bargaining coverage (CBC); and the articulation and coverage of multi-employer bargaining (MEB). We devote special attention to their mutual relations and interactions. Section 2.6 examines the main instruments of state policies supportive of collective bargaining; that is, mandatory or (administrative) procedures for the extension of collective agreements to those not formally covered by them. We also return to our statistical evidence in section 2.7 when considering the industry level, exploring the number of trade unions and employers' organisations as possibly relevant factors at that level. Finally, in section 2.8, we use *WageIndicator* data for ten countries to contrast the bargaining preferences of individual employees with data on actual collective bargaining coverage in these countries.

2.1 Introduction

In the WIBAR-3 project, the sector, or industry, is the main locus of our analysis although often in combination with national or country level. The development after 1945 of industrial relations (IR) institutions at national level has been extensively analysed.

However, since the 1990s, this range of studies has frequently been widened to allow comparisons across countries and to take a wider range of issues and developments in the field, notably the coordination of vocational training and education, and changes in corporate governance and inter-firm relations. After contributions like that of Whitley (1999), laying out a six-fold typology of national business systems, the varieties of capitalism approach has become particularly influential. This line of enquiry initially drew a distinction between liberal market economies in which firms coordinated their activities primarily via hierarchies and competitive market arrangements, and coordinated market economies in which firms depended more heavily on non-market relationships (Hall and Soskice 2001). More recent contributions to the varieties of capitalism debate have nuanced this distinction, refining the role of the state whilst pointing to the existence of mixed-market economies and the degree of interaction with national welfare and labour market regimes and policies, taking into account segmentation and outsourcing trends in particular. Some of these contributions have also shed light on the degree of variation within countries (cf. Hancké *et al.* 2007; Morgan 2007; Thelen 2014; Agostini *et al.* 2016).

The issue of convergence/divergence across EU member states has been discussed widely, including in policy-making circles, although mostly in economic terms (see, for example, European Commission 2015: Chapter 4). However, the convergence or divergence question is also relevant in the context of industrial relations systems and business models. In particular, internationalisation and the growing importance of Foreign Direct Investment (FDI) is often suggested as a key factor pushing towards convergence and undermining the role of national institutions. It should be noted that more recent evidence seems to suggest that FDI may work out differently throughout Europe across combinations of countries and industries (cf. Meardi *et al.* 2011; Myant and Drahokoupil 2012; Brandl *et al.* 2013). In our view, it is important that this more recent research on the effects of FDI should be fed into the convergence/divergence debate with particular emphasis on the outcomes observable for industrial relations structures and bargaining practices. Unfortunately, common frameworks and concepts in this field are, as yet, weakly developed.

Moreover, in this respect the industry level seems, so far, to have been rather under-researched. This has also been the case for research related to the promising framework of the 'comparative political economy of work', in which efforts have been undertaken to integrate the study of national institutions with that of production and business models (cf. Hauptmeier and Vidal 2014). The limited number of studies that have analysed the interaction of bargaining structures and practices with market and employment structures at industry level have tended to point towards divergence tendencies in industrial relations throughout the EU (for example, Hassel *et al.* 2003; Marginson and Sisson 2004; Gautié and Schmitt 2010; Van Klaveren *et al.* 2013).

A main objective of this book is to add some weight to the discussion on how to strengthen collective bargaining throughout the European Union. We are particularly interested in comparing and contrasting the outcomes of bargaining processes and collective agreements at different levels in order to establish the optimum strategies that trade unions might adopt over the next few decades.

For the avoidance of doubt, we define multi-employer bargaining (MEB) as the process under which an agreement is either negotiated with an employers' organisation or where more than one employer are signatories to a collective agreement where it is agreed that this process is decisive for setting pay levels and deciding upon wage increases. Contrastingly, where pay levels and wage increases are negotiated at single-employer level, even where there is delegation from higher-level multi-employer agreements in so-called second-level negotiations, we define this practice as single-employer bargaining (SEB), of which the most common form is the company-level agreement. In everyday practice, the division between 'MEB' and 'SEB' is not that easy to maintain or trace, in particular when studying the multi-level or multi-tier bargaining systems operative in many EU countries (cf. Marginson and Sisson 2004).

Concerning the key conditions for the effectiveness of MEB, Marginson (2014: 98) points to the importance of vertical and horizontal articulation (Crouch) or the coordination (Traxler) of industrial relations. Vertical coordination can be seen when bargaining relationships and decision-making at the 'first' level of negotiations are envisaged to extend downwards to facilitate further discussions within the trade union and employer ranks at secondary level. Such relationships may be difficult to disentangle, especially if the complex interaction between the two in bargaining processes and final outcomes is under any form of review. Further complications may additionally arise from state interventions. Horizontal co-ordination, between lead trade union and employer federations (and eventually the state) at national level, but also between sub-sectoral organisations at industry level, can add even greater complexity. Furthermore, if we consider the variety of 'higher' and 'lower' levels involved in collective bargaining, and that multi-tier bargaining systems frequently also include a geographical dimension (particularly in large countries) that may extend to the relationships between national and European organisations, we can see just how difficult it is to generalise about collective bargaining processes and practice across the EU.

Against this backdrop, we pursue an approach based on detailed statistical data. Following the sociological tradition shaped over the last three decades by Visser, Schnabel, Grimshaw and others, we affirm that research into the scope and extent of institutional change in industrial relations benefits from statistical analysis based on a number of quantitative indicators. This is not, of course, to downplay the importance of more qualitatively-oriented research in industrial relations.

Our quantitative data have been assembled at three levels: national; industry; and company, with the latter level, where possible, being divided into parent firm and company/subsidiary sub-levels. We focus on four key indicators in particular: the union density rate (TUD); employers' organisation density (EOD); collective bargaining coverage (CBC); and the articulation and coverage of multi-employer bargaining (MEB). Concerning other relevant factors brought up, for instance, by Visser (2016a; see Codebook), we cover the effective numbers of unions and employers' organisations and also pay attention to the mandatory extension of collective labour agreements (CLAs). We refrain from a detailed elaboration of horizontal and vertical coordination, as defined above, although this is present in Visser's enumeration of the relevant indicators. In particular, exploration of the vertical connections between bargaining

levels, shaped through the links between union (con)federations and affiliated unions, is beyond the scope of our project. Nevertheless, the information assembled here on TUD, CBC and MEB rates at country/industry level could very well serve as an input for such an exploration. Further clues in this respect may also be derived from the industry case studies (summarised in Chapter 3) and presented at the three project seminars.

2.2 Setting the scene

Based on an EU social partner agreement from 1991, the Treaties of Maastricht (1992) and Amsterdam (1997) adopted specific 'social dialogue' provisions. Since then, the dialogue between management and labour has been an essential part of the 'European Social Model'; indeed, social dialogue forms an integral part of the *acquis communautaire*. Collective negotiations are considered to lie at the heart of the European model of social dialogue (Eurofound 2012; EC 2015: Chapter 5). Collective bargaining, according to the Constitution and Conventions No. 98 and No. 154 of the ILO, should be based on three important principles: free and voluntary negotiations; autonomy of the social partners; and equal status or equal rights for each partner.

Van Gyes and Schulten (2015) note that such autonomous collective bargaining – in particular pay bargaining – was a pillar of north-western Europe's successful socio-economic model in the three decades after World War II. It provided a wider societal compromise that linked high investment levels, the increasing productivity of the economy as a whole and substantial economic growth with rising wages. Strong trade unionism, even more than direct progressive political influence, was a main driving force of this model. Until its gradual demise after 1973-75, institutionalised forms of social dialogue were a core feature of this system, with solidaristic wage determination as its crown jewel. Thus, the setting of 'fair' wages was '(…) not to be seen as a function of either the particular business situation or a specific balance of power in a company, but instead should be determined within a framework of multi-employer agreements based on a comprehensive system of job evaluation classifications and occupational pay scales.' (Van Gyes and Schulten 2015: 11)

For many years, the European Commission has consequently emphasised the importance of social dialogue and autonomous collective bargaining as core elements of the European Social Model and, in that light, making a major contribution to democracy, good governance, economic efficiency, innovation and social cohesion (Keune and Marginson 2013; Keune 2015).

It is tempting, of course, to succumb to nostalgia for the societal compromise so characteristic of the three decades or so after 1945 in a number of western European countries. However, any restoration of multi-employer bargaining and of collective bargaining *tout court* should be grounded on a new basis – derived from contemporary realities shaped by the economic, technological and social developments of the 2010s. In consultation with ETUC and ETUI, we have chosen to focus our research effort on the potential of multi-employer bargaining to provide crucial industrial relations contributions to social market economy systems with relatively low social inequality.

It has been argued that multi-employer bargaining carries a number of advantages for labour. For instance, one argument from the workers' point of view is that bargaining on this basis, possibly supported by extension mechanisms (see section 2.6), has the potential to enlarge labour's bargaining power with particular benefits accruing to unskilled and vulnerable workers. It can foster inclusion and equality by extending collective bargaining to vulnerable groups of workers with little bargaining power. Thus, multi-employer systems can 'Offer a conducive institutional context for an equality-oriented, solidaristic wage policy,' and 'Can be expected to produce much lower wage inequality than systems in which company bargaining dominates or where bargaining plays no important role at all' (Keune 2015: 291-292).

Other potential advantages may accrue to both labour and to employers. First and foremost, by setting common (minimum) standards for a particular industry and/or region, a multi-employer approach can, to a considerable extent, take wages and working conditions out of competition within any given industry, thus providing collective bargaining with greater stability. Through this cartelisation effect, firms are enabled collectively to pass on wage increases in such a way as to favour 'high-road' competition at the expense of less productive and low-quality competitors. For Europe, such competition may, in any event, be needed for economic survival at global level. Furthermore, notably in labour-intensive industries, the potential to utilise the outcomes of multi-employer bargaining to avoid cut-throat 'race to the bottom' competition has clear attractions for both employers and employees.

In the second place, multi-employer bargaining may have the ability to promote industrial peace and thereby help to keep distributional conflict out of the workplace. In the past, this has proved to be a key motive for employers in many continental European countries to go along with industry bargaining (Visser 2013: 9, 37). A caveat should be inserted here in that highly-skilled workers with strong labour market positions may feel that multi-employer bargaining provides them with less 'voice' compared to a company-level approach, as well as a lower level of control over their representatives.

A third set of advantages accrue when aggregating the interests of labour and employers, putting the social partners in better positions insofar as negotiations with governments are concerned. In turn, governments can use multi-employer bargaining as a quasi-legislative tool, for instance when setting minimum wages standards in particular industries or establishing 'voluntary' schemes for occupational pensions (Visser 2013: 9).

Last but not least, multi-employer arrangements may have greater capacity to address the negative externalities generated by the market, such as environmental damage. This is especially the case if such arrangements are vertically articulated and provide procedural frameworks for firm-level adjustments (Marginson *et al.* 2014; Keune 2015).

Neither should we overlook that multi-employer approaches are likely to incur fewer bargaining or transaction costs, notably in industries that are rather homogeneous and have a large representation of small and medium-sized enterprises (SMEs). There are potential benefits here for both trade unions and employers where the availability of skilled negotiators may be limited.

When considering the key conditions for the effectiveness of multi-employer bargaining, Marginson applied the vertical-horizontal coordination issue in a dynamic approach while referring to Traxler's differentiation between 'organized' and 'disorganized' decentralisation. The demise of industry-level bargaining in the United Kingdom is a showcase of the complexities that 'disorganized' cases can assume. In the 1960s, large firms like Ford had already broken away from industry-wide agreements but, in the 1980s, industry-level bargaining arrangements in the country's private sector almost totally disappeared, not least through the pressure applied by the policies of successive Thatcher administrations. Meanwhile, both employers' organisations and trade unions in the UK stuck to the voluntarist character of collective bargaining, as well as to collective agreements being non-legally enforceable (Griffin and Gregory 2015).

Regarding 'organized' decentralisation, Marginson (2014: 100-101) indicated the existence of a spectrum in which sectoral agreements could maintain the principle of universally applicable standards. He also looked at the extent to which such agreements might prescribe parameters for subsequent company negotiations, foreseeing here five options:

1. sectoral framework agreements which specify the main substantive standards but provide scope for variation in their implementation in company negotiations;
2. opening clauses which provide for variation on the basis of equivalence;
3. two-tier bargaining arrangements which distribute competence between bargaining levels according to issue;
4. 'opt-out', 'hardship' or 'discount' clauses which provide for derogation by individual companies from the universal sectoral standard;
5. incomplete framework agreements which form a departure from universal standards since they are predicated on substantive variation between companies.

The first option seems most appropriate for further consideration in the trade union movement throughout Europe. Such arrangements combine elements of multi-employer and single-employer bargaining. Moreover, arrangements like this are already in existence in a number of EU countries. Here, however, complications in practice seem likely to arise particularly from uncertainties or conflicts within and between bargaining parties as to which particular bargaining level should be used to determine pay as a basis for wage increases. In some countries, for instance the Netherlands and Belgium, such pay levels are often related to job classification schemes and related pay scales which are settled at (sub-)sector level. Therefore, the most obvious classification of the collective agreements at stake in such circumstances may well be 'MEB'. However if, as in a minority of Dutch and Belgian cases and, to a larger extent, in many other countries, the decentralisation of wage-setting to single-company level is at hand, then 'SEB' clearly applies.

In the course of this chapter we present an overview of developments in the four industrial relations indicators chosen (i.e. TUD, EOD, CBC and MEB) at national level in the 23 countries under study. Wherever possible, we use the latest data available from the ICTWSS 5.1 database and, when needed, add information from official sources (national censuses, household or labour force surveys) related to the numbers of

individual workers or trade union and employers' organisations. We gained access to such sources also through the European research projects in which AIAS participated, notably the CAWIE-1 and CAWIE-2 projects. In the very last resort, we trace some of the data through those contact persons who cooperated with various aspects of the WIBAR-3 Industrial Relations survey.

2.3 Multi-employer bargaining before the 2007-2008 crisis

2.3.1 Political and institutional conditions at European level

The European Union has, for over four decades, been a generally supportive force for social dialogue and coordinated wage bargaining. Affirming the right of workers and employers and their respective organisations to negotiate and conclude collective labour agreements, the European Commission has played a leading role in efforts to establish a system of multi-level industrial relations in Europe (Keune and Marginson 2013). In so doing, the Commission has been a strong proponent of strengthening both the European Social Dialogue and other forms of coordinated collective bargaining. Subsequent to the enshrinement of the European Social Dialogue in the Maastricht and Amsterdam treaties, the Commission decided in 1998 on the 'Establishment of Sectoral Dialogue Committees promoting dialogue between the social partners at European level,' with, as an ultimate goal, 'The development of real collective bargaining at European level.' In the early 2000s, a strengthening of national social dialogue was still a key demand of the Commission with regard to the preparation of central and eastern European (CEE) countries for their accession to the EU although, by that time, a more neoliberal-oriented Commission had begun to apply less pressure for productive social dialogue outcomes than the more social democratic-oriented Commissions of the 1990s (Keune 2012, 2015).

It has to be said that pay and wage-setting remain peculiar issues in the EU context. Formally, wage regulation is excluded from the list of competences of the EU as the Treaty on the Functioning of the European Union explicitly recognises the autonomy of the social partners in pay bargaining. However, for over two decades wage-setting has been addressed by European institutions such as the Commission, the European Council and the European Central Bank (ECB) through statements, or recommendations, about wages and wage-related policies (cf. Deakin and Koukiadaki 2013; Eurofound 2014a, 2014b). Between 2010 and 2015, these statements frequently turned into demands requiring reforms of wage-setting arrangements as preconditions for receiving financial package deals and, as such, they had a direct and strong impact on national industrial relations policies.

Besides pay issues, EU Council directives have also influenced the shaping of a wide variety of work-related issues such as working time; parental leave; employee representation, information and consultation; and other employment practices including those related to human resource management. Such directives have lifted minimum standards on these issues to a higher level in most member states (Van Klaveren and Tijdens 2008). In the 1990s, three directives emerged from the cross-sectoral framework agreements

concluded by the European social partners (on parental leave, part-time work and fixed-term work) and thus became part of EU law. In the 2000s, a new generation of framework agreements was concluded through the European Social Dialogue along the 'autonomous route' inscribed in the European Treaty and not linked to Council directives.

It may well be that the four cross-sectoral agreements of this kind (teleworking; work-related stress; harassment and violence at work; and inclusive labour markets) imply commitments to the national social partners going beyond the traditional soft tools which characterised the earlier approach to the European Social Dialogue (Smismans 2008: 171). However, Keune and Marginson (2013) have argued convincingly that such autonomous agreements have to entail multiple relationships for their implementation, including a large variety of social partners and public authorities, as well as complex power relations and implementation modes across the member states. These authors suggest that this sheer complexity of relationships may help explain why the number of such agreements which have been signed has been quite limited.

Well before the outbreak of the crisis in 2007-08, trends were evident that showed declining trade union density and the erosion and fragmentation of collective bargaining. These trends were discernible in various countries as early as the 1970s.

In some countries, neither development could be divorced from political intervention aimed at scaling back the negotiating rights of workers. A clear example of such 'institutional destruction' can be seen to have taken place in the United Kingdom. Nonetheless, the relationship between national developments and the growing pressure on the European Social Model that became apparent around the turn of the century seems to have been rather indirect – not least because of the low level of vertical integration between national and European organisations of workers and employers alike. The shift in macroeconomic policy focus from demand side to supply side may well have been the decisive factor here, alongside the growing criticism of European industrial relations: in debates among 'leading' economists and politicians, the 'hawkish' view tended to predominate that, across the EU, industrial relations were hampering competitiveness and innovation, in particular when compared with the industrial relations and business models prevailing in the US.

This policy shift took place against the backdrop of the development of Economic and Monetary Union (EMU), the establishment of the European Central Bank (ECB) and the launch of the Euro as a single currency (1999-2002). The consequences for European industrial relations of EMU/ECB formation from 1990 onwards have been widely discussed, including that the remit of the ECB has primarily been concerned with price stability and not with economic and employment growth as such (cf. Marginson and Sisson 2004: 3-10). The design of EMU assumed that, in the event of asymmetric economic shocks, national economies, regions and industries would adapt through a reduction in labour costs in order to generate the conditions to improve national competitiveness. In addition, EMU rule-setting has furthered an EU-wide, level playing field for MNEs, stimulating the Europeanisation of business structures and adding an impetus to 'regime competition' or 'regime shopping' (see section 3.7, under Transnational Company Agreements).

In the 1990s, the European Social Model envisaged that constructive dialogues between management and employee representatives should be encouraged to take place at multiple levels, including the firm, establishment and workplace. Social partnership approaches at micro level were seen to be crucial in realising the European ambition of combining economic efficiency and competitiveness with better quality of work and organisation. Indeed, this was advocated in the Commission's Green Paper *Partnership for a New Organisation of Work*, launched in April 1997 (European Commission 1997). It contended that, through the development of participative, dialogue-based forms of work organisation, EU member states could gain competitive advantage over those competitors who lacked the traditions and social infrastructure necessary for such an approach to flourish (Gregory and Nilsson 2004: 13; Eurofound 2015a: 11). In 1998, the Commission issued a Communication entitled *Modernising the organisation of work – A positive approach to change*. This invited the social partners to 'Negotiate agreements to modernise the organisation of work (…) at all appropriate levels' within the 'adaptability pillar' of the mainly macroeconomic Employment Guidelines adopted by the Luxemburg Council in November 1997 (European Commission 1998: 3-4).

Thereafter, the appeal to the social partners to negotiate 'innovation agreements', included through union pressure in the final text of the Lisbon Summit in 2000, seemed to be a heavily watered-down version of previous social partnership assumptions (Scott 2004: 46). Indeed, Directive 2002/14/EC, establishing a general framework for informing and consulting employees in the EU, could perhaps be seen as the final policy instrument whereby the European Commission underpinned the case for social dialogue at micro level.

Currently, the Commission advertises this Directive as playing 'A key role in promoting social dialogue,' (website EC - Social Dialogue) but more recent EU policy-making has been slow to follow through on this, as well as being rather weak in advocating innovative and socially-acceptable change at firm and workplace level. For instance, it was not until October 2012 that the Commission, when calling for a reinforced industrial policy, recognised the need to 'Promote the transformation of workplaces that stimulate new forms of "active jobs" and encourage the development of new skills.' (European Commission 2012a: 14) Furthermore, in view of this rather vague wording it remains to be seen to what extent social dialogue is regarded by the Commission as playing a key role in the delivery of such aspirations.

2.3.2 Political and institutional conditions at national level

From the early 1990s, sustained pressure from employers and their organisations has ensured that decentralisation, whether 'organized' or 'disorganized', has taken place in industrial relations dialogue throughout Europe. Thus, the effective coordination of collective bargaining between national, industry and company levels has become increasingly cumbersome and is constraining the functioning of multi-employer bargaining systems. These constraints emerged in those countries where the coordination of collective bargaining levels was already weak, in particular in central

and eastern Europe (Bulgaria, Hungary, Poland, Romania and Slovakia), as well as in the UK, but it is also apparent at least to some extent in countries with stronger coordination mechanisms such as in Austria, France, Germany, Ireland, Italy, the Nordic countries and Slovenia (Visser 2013; Marginson 2014; Eurofound 2014b, 2015b; Koukiadaki *et al.* 2016).

Concerning the CEE country group, it should be noted that, after the system change in 1989-90, foreign investment grew quickly in the four Visegrád countries (Poland, Czech Republic, Slovakia and Hungary). In the late 1990s, FDI focused on capacity increases in automotive, electrical machinery and electronics manufacturing; that is, on intermediate products manufactured in supply chains dominated by Germany-based MNEs. To a large extent, these developments depended on a ready supply of relatively cheap, but skilled, labour. The Visegrád countries also offered foreign investors institutional and legal stability combined with privatisation, liberalisation and attractive investment incentives, as well as Association Agreements with the EU. In this respect, they can be characterised as FDI-based (second rank) market economies (cf. Meardi *et al.* 2009; Onaran 2011; Myant and Drahokoupil 2012).

Thus, for these countries *de facto* economic integration through free trade and the free movement of capital had already taken place in the rather chaotic 1990s. Their subsequent accession to full membership of the EU (eight CEE countries joined in 2004, followed by Romania and Bulgaria in 2007 and Croatia in 2013) can thus be regarded as a political-institutional act that completed an integration process which was already underway (Galgóczi 2017).

After the 1989-90 transformation, trade unions in CEE countries, which had formerly acted essentially as 'transmission belts' for the policy of the Communist Party, had to re-invent themselves. The democratic turn created an institutional basis for autonomous collective bargaining, but the steps towards such bargaining were prescribed in a top-down manner with little regard for local conditions: 'As a consequence, the legitimacy of trade unions has remained low and collective bargaining did not develop into a stable institutional anchor in these societies.' (Galgóczi 2017: 31-32). Under such conditions –albeit differentiated according to varying communist legacies, policy choices and influences through foreign investment and international trade (cf. Bernaciak *et al.* 2014) – union density rates went through long-term decline, mostly alongside decreases in collective bargaining coverage, right across CEE countries. With the exception of Slovenia, multi-employer bargaining emerged only patchily and the continued existence of union representation was frequently left to the discretion of management. Unions have often had to deal with the latter's refusal to give up their prerogative in deciding technology, organisation and work practices – a feature that is thought to have provided a major attraction for investors in these countries (cf. Meardi 2007; Drahokoupil and Galgóczi 2015).

2.3.3 Changes in market structures

The changes in business conditions which have been taking place in the last three or four decades suggest that, in many countries and industries, multi-employer bargaining is regarded as a less attractive option for management. It has been widely assumed that the prevailing conditions in market structures, industrial organisation and industrial relations all act against multi-employer bargaining being seen as an effective and feasible option in the regulation of industrial relations.

In this respect, at least three assumptions related to increasing globalisation and international competition are important. First, it has been argued that, since multi-employer bargaining binds firms to national, industry-specific wage rates, it hampers the ability of businesses to take advantage of opportunities in foreign markets. Generally, this argument has weakened in the light of the growing importance attached to securing competitive advantage in international markets via product or process innovation and quality levels, and in contrast to the diminishing role played in this respect by wage competition.

A second, and related, argument holds that the current volatility in international markets mitigates against any revival of multi-employer bargaining (Brandl and Lehr 2016). This contention suggests that industries featuring notably strong levels of international competition (exposed sectors) need the flexibility to make frequent cuts in nominal wages in order to survive market swings. However, European evidence supporting this position seems scarce. For example, research covering 14 European countries suggested, at least early on in the recent crisis, that such cuts in nominal wages were rare. The overall share of firms that had cut wages was a low 2.4 per cent although, in these firms, 35 per cent of employees were affected. A strong positive association between collective bargaining coverage and the relevance of labour regulation was revealed as a reason for avoiding wage cuts and this held for multi-employer and single-company bargaining approaches as well as for combinations of both (Du Caju *et al.* 2013; see, for outcomes over the 2010-2013 period, the ECB/Wage Dynamics Network website).

It should be added here that a study comparing employers' crisis responses in Germany and the Netherlands presents a more nuanced picture. In both countries, workforce adjustments were reported much more often than basic wage reductions, but the latter were mainly reported by low-waged and low-skilled employees (Tijdens *et al.* 2014).

Thirdly, in the light of (international) competition, various trends have come to diminish the relevance of the industry classifications that have, hitherto, structured both national and European industrial relations. Until about the turn of the century,[1] these classifications also acted as demarcation lines for trade union activities. Changes to these well-established industrial relations structures began in the mid-1960s and were led in

1. From the late 1990s throughout Europe, a wave of 'horizontal' trade union mergers took place, partly inspired by analyses concerning the changes in competitive structures as indicated here. Examples are the merger of four German trade unions into ver.di (2001), the similar merger into FNV Bondgenoten in the Netherlands (1998) and in LO-Sweden the mergers creating IF Metall for manual workers (2006) and Unionen for white-collar workers (2008).

particular by US MNEs in car and electronics manufacturing. Here, production and servicing processes were increasingly fragmented and executed in vertical production networks at separate locations around the globe. The integration of massive pools of cheap labour from countries such as China and India, in a liberalising world economy, acted as a major pull factor. From the 1970s onwards, notably in Asia, the emphasis began to shift from global value chains driven by producers to chains driven by buyers and controlled by large retail firms and global marketeers (Van Klaveren *et al.* 2013: Chapter 1). The expansion of Walmart, the US-based retail giant, has proven to be the catalyst in the upscaling of buyer-driven global value chains. The keystone in Walmart's strategy has been its ability to exert strong control over factor inputs, including control over US and international supply chains (Christopherson 2007).

2.4 Multi-employer bargaining during the Great Recession and beyond (2007-2015)

2.4.1 Political and institutional conditions at European level

Initially, after the outbreak of the Great Recession in 2007-08, most national governments in Europe implemented some kind of Keynesian macroeconomic crisis management strategy that included substantial fiscal stimulus packages and, in particular, a bailing-out of the banks (which *de facto* transformed private debt into public debt – ETUC and ETUI 2016).

In 2008-09, governments and the social partners in countries with well-developed social dialogue and collective bargaining mechanisms were able to come up with solutions to facilitate adjustments which, initially at least, mitigated the effects of the recession on workers and firms. For example, a number of northern, western and central European countries saw various forms of working time reductions, including the use of temporary short-term working arrangements, in order to pre-empt the fall in Gross Domestic Product (GDP) translating into an equivalent decline in employment. Trade unions promoted these forms of employment-securing tactics at national as well as at company level and such efforts were often coincident with employer practices of labour hoarding designed to cope with anticipated skill shortages in their core workforce. Nevertheless, most of these initiatives were rather short-lived (Glassner and Keune 2012; Tijdens *et al.* 2014; Papadakis and Ghellab 2014).

Moreover, policy-makers in the large majority of EU countries soon opted overwhelmingly to encourage bargained solutions at company and industry level, preferring to abandon any options for negotiating social pacts at national level. In the course of the 2000s, many governments had realised that social pacts were difficult to achieve in view of the full implementation of EMU, the enlargement of the EU and the multitude of other international and national socio-economic changes that were rapidly unfolding (Natali and Pochet 2010; Bernaciak 2015).

At European level, when the crisis deepened, discussions between the European social partners initially seemed to establish some common ground. However, in the course of

2010 it became clear that the crisis had created an environment in which differences at European level between labour and business had, if anything, intensified. On the one hand, BUSINESSEUROPE, the lead European employer organisation, continued to support the principles of the market, the liberalisation of services and 'structural reforms' in different areas. The ETUC, on the other hand, against the backdrop of rapidly-growing unemployment and material deprivation across Europe, focused on the risks to workers' rights and incomes and on maintaining national welfare systems (Eurofound 2012).

In some countries, the shift from fiscal stimulus to fiscal consolidation was undertaken voluntarily, as part of a standard Keynesian approach, reverting to an expansionary policy once growth rates picked up. In others, however, the shift was forced either by pressure from creditors within the framework of the 'external support' provided by the EU and the IMF (initially Latvia, Hungary and Romania suffered this fate; and subsequently Greece, Ireland and Portugal), or in fear of so-called 'bond vigilantes' driving up interest rates where radical austerity measures were not swiftly introduced (Theodoropoulou and Watt 2011). In the latter category, the UK led the way, followed by most Euro area countries. The publication of the Annual Growth Survey (AGS) by the Commission in January 2011 confirmed the EU was committed to a path of structural reform, fiscal consolidation and austerity. Accordingly, cuts in public sector expenditure were prioritised throughout Europe.

In CEE countries in particular, public sector austerity measures were rarely discussed with trade unionists. It was, consequently, hardly a surprise when such measures met with fierce union opposition while societal discontent was stoked by the fear of damage to job security and health care. Despite strikes, mass demonstrations and other forms of protest, CEE governments hardly wavered in their pursuit of the austerity course and most continued to abstain from any dialogue with the social partners (Bernaciak 2015). Elsewhere in the EU, the room for meaningful social dialogue was also substantially diminished (cf. Eurofound 2014b; Papadakis and Ghellab 2014). These country-level developments affected the European Social Dialogue to a considerable extent. In consequence, the potential role of multi-employer bargaining to enforce the strongholds of the EU economy, as laid down in the Lisbon Strategy for 2000-2010 and subsequently in the Europe 2020 Growth Strategy launched in March 2010, was more or less forgotten.

This second phase of the crisis put national industrial relations systems under severe strain and support for multi-employer bargaining came under further threat, in particular in those European countries most severely hit by the downturn (Eurofound 2013, 2014b). In many countries, the trade union movement lost confidence in the national administration as a partner in the recovery processes, not least because governments took refuge in budget cuts that included serious wage cuts for public sector workers. Any European coordination of recovery plans was soon forgotten. The dominant economic thinking in the EU shifted towards neoliberal policies of austerity, budget cuts and so-called structural reforms aimed at overcoming the crisis by increasing the competitiveness of individual countries. This policy shift was heavily promoted through the institutions of the EU and the new forms of economic governance they

had developed to allow a much stronger supra-national influence on national economic policy (Schulten and Müller 2013).

The Europe 2020 Strategy introduced a new platform of governance, known as the European Semester. This enabled the EU and the Eurozone countries to coordinate their budgetary and economic policies. Wage policy and wage-setting mechanisms were brought to the forefront of this policy debate in March 2011 when the Euro Plus Pact (initially called the Competitiveness Pact) was agreed by Eurozone heads of state, joined by the leaders of Bulgaria, Denmark, Latvia, Lithuania, Poland and Romania.

The Pact explicitly outlined wages as an important economic adjustment factor in overcoming macroeconomic imbalances and improving competitiveness. It highlighted wage-setting mechanisms, the degree of centralisation or decentralisation of collective bargaining, indexation mechanisms and wage settlements in the public sector as areas that signatory countries to the Pact should address, review and eventually reform. A subsequent set of legislative initiatives known as the 'Sixpack' (five Regulations and one Directive) entered into force in December 2011 for the EU as a whole after one year of negotiations between the European Council and the European Parliament. Constraining wage policy played an implicit role here and became almost compulsory for member states since ignoring these recommendations carried an increasing risk of financial sanction. In 2012, the European Commission, in *Towards a job-rich recovery*, explicitly appealed for the modernisation of wage-setting systems in order to align wages with productivity developments. The Commission stated that 'wage moderation' could be considered for some sectors of activity or some member states, although it did not exclude the possibility of 'targeted increases' to sustain demand (European Commission 2012c; Schulten and Müller 2013).

Experts in the field have regarded the actions the European Commission subsequently implemented on wage-setting, most notably in southern Europe (under pressure from the European institutions, in particular the 'Troika' of the European Commission, the ECB and the IMF), as a 'Frontal assault on multi-employer bargaining,' (Marginson 2014; Keune 2015) or as 'The destruction of the institutions supporting multi-employer bargaining.' (Visser 2016b: 29)

The sharpening of prevailing EC policies in this respect can be traced back to the measures recommended in 2012 by the Commission's Directorate General for Economic and Financial Affairs (DG ECFIN) under the heading of 'employment-friendly reforms'. Schulten (2013) pinpoints DG ECFIN's four main recommendations:

— general decentralisation of wage-setting and collective bargaining;
— introduction of scope for opportunities to derogate from industry-level agreements at workplace level, or widening that scope;
— limitation or abolition of the 'favourability principle', under which the most favourable agreed term provision in a hierarchy of agreements will apply to employees at lower levels;
— limitations and reduction in the scope for the extension of collective agreements to non-signatory employers.

With these recommendations, DG ECFIN directly targeted 'decreasing bargaining coverage' and 'an overall reduction in the wage-setting power of trade unions' as part of the required reforms. Acknowledging that 'There is no strong evidence in support of a single superior wage-setting model,' DG ECFIN nevertheless took a decentralised, company-based bargaining system as the benchmark, suggesting that such a system would allow companies to adjust better to varying economic conditions (Schulten and Müller 2015: 337).

Spain and Italy did not conclude loan arrangements with the Troika, but both the ECB and the EC exerted significant pressure on their governments to introduce similar policies as in Cyprus, Greece, Portugal and Ireland – thereby indirectly limiting the scope for social dialogue and for free and voluntary collective bargaining along ILO standards (cf. Deakin and Koukiadaki 2013; Leonardi and Sanna 2015; Cruces *et al.* 2015; Malo 2016).

2.4.2 Political and institutional conditions at national level

Table 2.1 presents a basic overview of the industrial relations processes and outcomes between 2007 and 2015 in the 23 countries in our study, focusing on changes related to the economic crisis. Most of the data could be derived from the Eurofound/EurWORK website,[2] supported by additional sources (see footnote to table). We used the same clustering into five country groups as applied in section 2.5 in order to analyse more closely the developments in trade union density rates, the density of employers' organisations and collective bargaining coverage across the 23 countries, as well as in collective agreements.[3]

As far as the outcomes to the industrial relations processes registered between 2007 and 2015 are concerned, the following common denominators most frequently emerge:

— a shorter duration of collective agreements in ten countries (Sweden, Italy, Portugal, Spain, UK, Germany (in a later phase), Netherlands, Estonia, Lithuania and Romania), against an increase in duration in three countries (Denmark, Finland and, in an earlier phase, in Germany);
— (statutory) minimum wage freezes in nine countries (Portugal, Ireland, UK (partial), Czech Republic, Estonia, Hungary (partial), Latvia, Lithuania and Romania);
— nominal pay cuts mainly in the public sector in six countries (Italy, Ireland, Hungary, Latvia, Lithuania and Romania).

2. See EurWORK/collective wage bargaining website (based on Visser 2013 [2015] and partly modified and extended by EIRO, Eurofound); see for details Eurofound 2014: 36-7; and Marginson and Welz 2014.

3. Currently a number of detailed classifications of industrial relations regimes in Europe are evident, often inspired by the varieties of capitalism approach. We have refrained from using them and, for our analysis, have concentrated on the division between 'MEB' and 'SEB' countries (section 2.5 and Table 2.8). That said, the classification used in Table 2.1 comes rather close to the clustering of Bechter *et al.* (Table SA1.4) although their category 'state central' (including Spain, France, Italy and Portugal) cuts across a mere geographical divide.

Table 2.1 **Industrial relations processes and outcomes related to the economic crisis, 23 countries, 2007-2015**

	Industrial relations processes	Industrial relations outcomes
Three Scandinavian countries		
Denmark	Debate on pay adjustment mechanism, regulating wage increases between private and public sectors.	Duration of CLAs increased. TUD: decrease EOD: increase CBC: stable
Finland	2009: social partner agreement on welfare and employment. In 2011-12 centralisation: re-introduction of national-level collective bargaining as advocated by TUs. Growing use of opening clauses.	Duration of CLAs increased. Impact limited, mainly through lower pay increases. TUD: stable EOD: decrease CBC: stable
Sweden	Changes in collective bargaining patterns and, in 2010, change in pattern-setting; growing number of plant-level agreements aimed at job saving.	Shorter duration of CLAs. TUD: decrease EOD: decrease CBC: stable
Three southern European countries		
Italy	Opening or hardship clauses allowed; and growing use. In 2009, cross-sector agreement; 2009 and 2012 agreements not signed by CGIL. In 2011-14, three cross-sector agreements setting rules for derogations in sectoral CLAs; partial re-centralisation. 2015-16 reforms: less room for collective bargaining.	Nominal pay cuts in public sector (repealed after ruling of Constitutional Court). Shortening duration of CLAs. TUD: stable EOD: decrease CBC: stable
Portugal	Forced decentralisation to company collective bargaining. 2009 legislation: limited continuation of CLAs beyond expiration. New 2012 Labour Code inverts favourability principle, allows opening clauses and limits extension procedures. Growing number of protests and strike action.	Drastic decrease in number of CLAs, both MEB and SEB; shorter duration of CLAs. Abolition of four public holidays, reductions in overtime payments. 2011-14: freeze in minimum wage. TUD: decrease EOD: decrease CBC: decrease
Spain	2011-2012 reforms: inverted favourability principle and priority for company-level CLAs, invalidating intention of 2012 agreement; allowing opening clauses and debate on wage indexation; changes to dispute resolution.	Drastic decrease in number of CLAs at all levels; growing number of inconclusive CLAs and non-renewal; shortening duration of CLAs; lower pay increases; minimum wage freeze from 2011-12 and limited increases from 2013-15. TUD: increase EOD: decrease CBC: decrease
Two Anglo-Saxon countries		
Ireland	In 2009, Non-Payment of Wages Act for public sector; tripartite national Social Partnership abandoned alongside disorganised decentralisation of collective bargaining; increase of opening clauses. In 2011-13, High and Supreme Courts declare binding sectoral collective bargaining system to be unconstitutional; partly reinstituted in 2012. 2014-15: recovery of company collective bargaining in private sector.	Large variation in duration of CLAs. Substantial nominal pay cuts, in particular from 2010 in public sector. 2008-15: freeze in minimum wage. TUD: decrease EOD: increase CBC: decrease
UK	Changes in collective bargaining patterns and introduction of opening clauses; changes to dispute resolution; growing number of protests and strike action.	Pay freezes, mainly in public sector; shortening duration of CLAs and fewer CLAs agreed; limited minimum wage increases; freezing minimum wage rate for young workers.

	Industrial relations processes	Industrial relations outcomes
UK (cont.)		TUD: decrease EOD: stable CBC: decrease
Five mid-western European countries		
Austria	Limited changes in industrial relations structure and collective bargaining pattern, though changes in pattern-setting and some decentralisation.	Increase of opening clauses, rather limited. Lower pay increases, pay pauses. TUD: decrease EOD: stable CBC: stable
Belgium	Trend from bipartism toward tripartism. Yet unilateral government decisions in 2011 and 2013 imposing draft wage agreement for 2011-12 and limiting wage increases in 2013-14. Growing number of protests and strikes.	Limited wage increases, decline in number of sectoral agreements in 2013-14. 2009-10 and 2013-15: freeze in minimum wage TUD: stable EOD: stable CBC: stable
France	Until 2016, sectoral collective bargaining rather strong. Despite TU rejection, labour market reforms effected: company CLAs prevail over sector CLAs even when less favourable.	Lower wage increases; growing incidence of hourly wage rates below minimum wage TUD: stable though low EOD: stable CBC: stable at high level
Germany	Initial cooperation between trade unions and employers. Increase of sectors with minimum wage declared binding. 2015 introduction of statutory minimum wage; (re-)strengthening of collective bargaining notably through vaguer criteria for extension. Increasing differentiation in collective bargaining pattern, growing use of opening clauses.	Initial increase in duration of CLAs, followed by a shortening; decline in number of CLAs including wage paragraphs; limited or lacking real wage increases. TUD: decrease EOD: decrease CBC: decrease
Netherlands	Initially closer co-operation, 2010: central agreement between trade unions and employer organisations. Later controversies, notably on issue of pension age.	Lower nominal pay increases and pay freezes in public sector. Shorter duration of CLAs in private sector; delays in renewal of CLAs; growing use of fixed-term contracts and outsourcing. TUD: decrease EOD: stable CBC: stable
Ten CEE countries		
Bulgaria	Decreasing influence of tripartism. Increase of opening clauses in sectoral agreements; decentralisation towards company-level agreements. 2012: amendments to Labour Code; tightened criteria for legal recognition of trade unions.	Growing number of inconclusive CLAs and non-renewal of CLAs; decrease in CLA duration; increasing use of opt-out clauses and cuts to bonuses. TUD: stable EOD: decrease CBC: decrease
Czech Republic	2010: tripartite agreement on short-term anti-crisis measures; later, more controversial. 2012: trade unions leave tripartite councils. Growing number of protests and strike action.	Growing number of inconclusive CLAs, along with decreasing number. 2007-13: freeze in minimum wage. TUD: decrease EOD: increase CBC: decrease
Estonia	Change of law in 2012 allows collective agreements to be terminated by one of the social partners after expiry. Growing number of protests and strike action.	Decrease in number of CLAs; shortening of duration of CLAs and non-renewal; freeze in minimum wage from 2008-11 TUD: decrease EOD: increase CBC: decrease

	Industrial relations processes	Industrial relations outcomes
Hungary	New government abandons tripartism at national and sectoral levels, despite protests from trade unions and employers. Labour Code 2012 limits collective bargaining agenda and room for trade unions, as well as union rights at plant level and individual workers' rights.	Nominal pay cuts, substantial in public sector, alongside freezes or pauses to increases; cuts to bonuses. Minimum wage lowered for the long-term unemployed participating in public works programmes. TUD: decrease EOD: decrease CBC: decrease
Latvia	Changes to wage-setting mechanisms regarding bonuses; freezing of indexation mechanisms; government decreases number of consultation councils. 2013: rules for trade union representation extended.	Decreasing number of CLAs; substantial pay cuts both in public and private sector. 2011: freeze in minimum wage. TUD: decrease EOD: increase CBC: decrease
Lithuania	2013: legal guarantees introduced for functioning trade unions at company level. Yet, amendment allowing collective agreements to lay down standards beneath those of Labour Code; growing number of protests.	Substantial public sector pay cuts, freezes or pauses to increases; shortening of duration of CLAs. 2008-12: freeze in minimum wage TUD: decrease EOD: stable CBC: decrease
Poland	Initially closer co-operation; social partners at central level negotiate 2009 anti-crisis agreement. Growing controversies. 2013: trade unions leave Tripartite Commission in protest at government's approach to social dialogue, followed by general strike and mass demonstrations.	Public sector wage freezes. Growth in precarious jobs and flexibilisation in virtually all sectors. TUD: decrease EOD: stable CBC: decrease
Romania	2011 Social Dialogue Act: unions not allowed to negotiate cross-national agreements; extension options for sectoral agreements omitted; high representative demands of unions – below 51 per cent no right to conclude agreements; conciliation processes obligatory before strike action.	Drastic decrease in number of CLAs and shortening duration; substantial pay cuts in public sector; cuts in unemployment benefit and welfare benefits. 2012-13: freeze in minimum wage. TUD: decrease EOD: decrease CBC: decrease
Slovakia	2013: re-introduction of extension of agreements to sectoral level through amendment on Collective Bargaining Act. New anti-crisis council created, with social partner involvement. 2016: Constitutional Court forbids mandatory extension.	Pay moderation in public sector, increasing use of opt-out clauses. TUD: decrease EOD: increase CBC: decrease
Slovenia	Introduction of derogation clauses in major sectoral agreements; decentralisation to company-level bargaining; changes in dispute resolution; growing number of protests and strike action.	Decrease in number of CLAs and introduction of pay freezes or pauses. TUD: decrease EOD: decrease CBC: decrease

Key: EOD: employers' organisation density; TUD: trade union density; CBC: collective bargaining coverage
Sources: WIBAR-3 Industrial Relations survey; Broughton and Welz 2013; Cruces *et al.* 2015; Delahaie *et al.* 2015; EC 2015; ETUC and ETUI 2014, 2015; website Eurofound/EurWORK *Working life country profiles;* Glassner and Keune 2012; Guyet *et al.* 2012; Marginson and Welz 2014; Marginson *et al.* 2014; Schulten and Müller 2013, 2015; Van Gyes and Schulten 2015; Visser 2013, 2016b; Voss *et al.* 2015; Welz *et al.* 2014; AIAS and ETUI *Collective Bargaining Newsletter;* inputs of participants in WIBAR-3 seminars in Bratislava, Amsterdam and Oxford

These three 'crisis effects' were visible across the five country groups. The first category, combining the effects of a weakening position of trade unions with the expectation of further wage pressure from employers, was most widespread; while the other two, initiated by governments, were mostly concentrated in the CEE country group. More penetrating and lasting effects, often causing qualitative changes in collective bargaining patterns, were commonly related to country-specific agreements between the Troika and national governments, or solely between the IMF and national governments ('crisis-prone' countries) within the framework of Memorandums of Understanding (Schulten and Müller 2013, 2015; Visser 2013, 2016b; Marginson 2014), namely:

— abolition/termination of national cross-sectoral collective agreements: Ireland and Romania;
— facilitating the derogation of firm-level agreements from sectoral agreements or legislative (minimum) provisions: Spain, Italy, Hungary and Portugal;
— general priority of company agreements and abolition of the favourability principle: Spain;
— more restrictive representation criteria for the extension of collective agreements, or the dismantling of the extension mechanism: Portugal and Romania;
— reduction of the 'status quo effect' of expired collective agreements: Portugal and Spain;
— possibilities for non-union groups of employees to conclude company agreements: Spain, Hungary, Italy and Portugal;
— removal of the social partners from decision-making on minimum wage levels: Hungary, Latvia and Spain.

In at least eight of the twelve countries showing the heaviest losses in collective bargaining coverage, this decline was associated with, or was caused by, regulatory change as summarised above: Ireland; Hungary; Latvia; Portugal; Romania; Slovakia; Slovenia; and Spain. These reforms were mostly realized through external pressures (for example, inward investors being unwilling to recognise unions or insisting on company-level bargaining arrangements) or as a result of state imposition rather than by 'organised' negotiation (concertation) between the social partners. Various researchers have concluded that, invariably, they have contributed to the weakening of multi-employer bargaining (Marginson and Welz 2014; Visser 2016b).

2.4.3 A new start?

The economies of most EU countries saw a recovery in GDP growth in 2013 or 2014, consolidated in 2015 and 2016, followed by decreasing unemployment rates. Under these conditions, as suggested by the ILO, there should be room for revitalising the social dialogue at all of its various levels, especially in the many cases where that dialogue had been eroded in the crisis (cf. Guardiancich and Molina 2017). At European level from 2015, attitudes towards the social dialogue seem to have changed for the better. According to the European Commission, a high-level conference on 5 March 2015 was to mark a 'New start for the social dialogue.' The Commission stated it was committed to strengthening dialogue with the social partners, arguing that 'Social dialogue at

all levels is a prerequisite for the functioning of Europe's social market economy and crucial to promote both competitiveness and fairness.'

The result, on 27 June 2016, saw European Commissioners Dombrovskis and Thyssen, together with European cross-industry social partners including the ETUC, sign a formal statement on a 'New start for social dialogue'. In this statement, the Commission and the social partners agreed on a need for (European Commission 2016a):

— a closer involvement of the social partners in the European Semester;
— a stronger emphasis on capacity building of national social partners;
— an increased involvement of social partners in EU policy and law-making; and
— a clearer relation between social partners' agreements and the Better Regulation Agenda.

It remains to be seen how this 'new start' will work out. The current policies of a number of national governments in the EU may not give the European trade union movement much comfort regarding the pledge for 'more substantial involvement of the social partners' at national levels, including official support for restoring multi-employer collective bargaining. Moreover, policy intentions like these may simply get lost amidst the political turmoil at European level following the UK government's 'Brexit' decision and amidst high-level debates on the revitalisation of the EU. Such considerations add to the prevailing reasons why the European trade union movement should, as far as possible, rely on its own power resources and creativity in the effort to restore (multi-employer) bargaining.

2.4.4 Changes in market structures

It can be argued that the Great Depression has hardly hampered the speed and extent of major changes in market structures throughout the EU. This seems particularly the case in the development of 'economic networks' or 'business clusters' that emerged in the 1980s and 1990s. These include complex relationships between chain, cluster or network managers, main suppliers, co-manufacturers, suppliers, co-suppliers, and 'jobbers', often through several tiers extending down from MNEs to small firms and even to self-employed workers.

The development of these new configurations, stimulated by the exploitation of the newest technologies by digital capital-intensive companies, and often cutting across 'classical' industry divisions, seems highly relevant when considering the continued effectiveness of multi-employer bargaining. To mention just a few recent examples: the competition of software- versus hardware-based firms (although existing already for over 30 years), is manifest in current self-driving car initiatives, like those of Google's parent firm Alphabet, versus the equivalent plans of current car manufacturers. Similarly, and already re-shaping wholesale and retail industries into 'wholetail' (see Box 5 in section 3.4), are the digital commerce platforms, such as amazon.com, competing with classical 'bricks and mortar' outlets like groceries and booksellers, etc.

Such developments challenge, and may ultimately render obsolete, existing demarcation lines in national or European industrial relations, as well as in trade union structures and the practices based upon them. They may well have impacts on collective bargaining patterns within countries where (sub-)sectors or large firms used to act as 'wage leaders' in bargaining rounds. For decades, such pattern bargaining was well established in countries like Germany, the Netherlands and Sweden. However, in the last three decades or so, mostly coinciding with processes of decentralisation and fragmentation in industrial relations, wage leadership has already moved away from the classical, large-scale manufacturing industries and firms. For example, in the Netherlands the collective labour agreement for large metalworking firms has gradually lost its leadership, beginning in the 1990s, initially to the collective agreement for banking and, afterwards, to that for the small-scale metalworking industry; the latter also deployed more innovative elements (Van Klaveren and Tijdens 2012).

Most recently, the growth of the 'gig economy' (or the 'platform economy'; or, rather misleadingly, the 'collaborative economy' or the 'sharing economy') has generated much debate. A business model based on the sharing of access to goods and services coordinated through internet-based platforms and supported by 'big data' analytics has received a massive boost. By 2015, the operators of digital platforms – including Google (Alphabet), Apple, Microsoft, Facebook, Twitter, Amazon, eBay, Uber, Airbnb, Alibaba and Tencent – were already dominant among the world's largest internet-based companies. It has been convincingly argued that these new 'technology superstars' will reap the benefits of 'winner-takes-all' network economies and that their expansion implies a massive transformation of competition, giving a powerful push to further concentration in large parts of the economy (Porter and Heppelmann 2014; The Economist 2016; Galloway 2017). It cannot be denied that the rise of digital platforms has already undermined classical demarcation lines between industries and established trade union positions (cf. Drahokoupil and Fabo 2016).

Alongside these contemporary challenges, the increasing worldwide drive towards a green, sustainable or even circular economy continues to pose a major conundrum for both vested economic interests and conventional economic wisdom (cf. Galgóczi 2015). An obvious example here is the ways in which the generation and distribution of renewable energy have challenged the classical demarcation lines imposed by conventional energy producers.

2.5 Changes in collective bargaining regimes: statistical evidence

This section details, as far as possible for all 23 countries covered, developments after the turn of the century in our four main industrial relations indicators: trade union density (TUD); employers' organisation density (EOD); collective bargaining coverage (CBC); and the share of employees covered by multi-employer bargaining agreements (MEB). Next, the interrelations between these indicators are the subject of study, first through a simple statistical comparison, then by various correlation exercises and thirdly through a regression analysis of the impact that the 2007 trade union and employer organisation densities had on the 2013/14 collective bargaining coverage rate.

Finally, we trace the development of the TUD, EOD and CBC rates in those countries where MEB and then SEB were prevalent.

2.5.1 Trade union density

Table 2.2 shows figures for the share of employees who are trade union members (TUD). The table indicates an overall decline across Europe between 2001 and 2007, from 32.9 per cent to 28.5 per cent. Between 2007 and 2010, and most notably in the 13 western/northern/southern (W/N/S) European countries, a level of stabilisation took place before a further (although slower) decline set in, to an overall figure of 26.1 per cent in 2013/14.[4] Between 2001 and 2013/14, TUD in the 23 countries altogether fell by 6.7 percentage points, or 20.5 per cent. In the second period, between 2007 and

Table 2.2 **Trade union density (TUD) in 23 EU member states, 2001, 2007 and 2013/14**

	2001	2007	2013/14	2007 to 2013/4
Austria	35.9	29.9	27.0	Decrease
Belgium	56.3	54.7	55.1	Stable
Bulgaria	23.0	17.2	17.5	Stable
Czech Republic	23.8	18.3	12.7	Decrease
Germany	23.7	19.9	17.7	Decrease
Denmark	73.3	67.9	66.8	Stable
Estonia	14.3	7.8	6.3	Decrease
Finland	74.5	70.3	69.3	Stable
France	11.0	11.0	11.2	Stable
Hungary	20.0	15.0	10.7	Decrease
Ireland	37.8	31.0	28.0	Decrease
Italy	34.2	34.0	33.4	Stable
Latvia	23.1	16.6	13.1	Decrease
Lithuania	16.8	9.3	8.0	Decrease
Netherlands	21.2	19.3	17.8	Decrease
Poland	15.5	15.6	12.4	Decrease
Portugal	22.4	20.8	18.9	Decrease
Romania	34.2	36.0	30.0	Decrease
Slovakia	30.5	18.8	13.3	Decrease
Slovenia	40.8	29.0	21.2	Decrease
Spain	16.4	15.5	16.9	Increase
Sweden	78.0	71.0	67.4	Decrease
United Kingdom	29.4	27.3	25.7	Decrease
Ave. 23 countries	**32.9**	**28.5**	**26.1**	
of which 13 W/N/S	**39.5**	**36.4**	**35.0**	
of which 10 CEE	**26.4**	**20.4**	**14.5**	

Increase/decrease: >1.0 percentage point variation from 2007 to 2013/14
Sources: ICTWSS database 5.1 (Visser 2016a); Eurofound, *Working life country profiles* (2015); national sources (derived from CAWIE-1 and CAWIE-2 research projects); WIBAR-3 Industrial Relations survey; official recalculation for France: Pignoni 2016

4. At the time of writing, the available data did not allow us to cover (2014/)2015.

2013/14, TUD ratios remained stable in six countries whilst in one country (Spain) union density increased by over one percentage point.[5] However, in 16 countries union density decreased by over one percentage point.

We have to add that trade union density figures are repeatedly questioned. For instance, assessing trade union densities can be quite difficult in countries with severe competition between union confederations, such as in France (Husson *et al.* 2015: 208). Also, a unified confederation may contest the official methodology of compiling union membership data and suggest under-reporting, as continues to be the case in Ireland (Hickland and Dundon 2016: 213). We did our utmost to utilise reliable information on TUD rates but are aware that some outcomes will remain disputed. We have refrained from including outcomes on TUD from employer surveys in this respect to avoid further complexity and confusion.

2.5.2 Employers' organisation density

Table 2.3 shows the share of employers who were members of an employers' organisation (EOD) engaged in collective bargaining in the private sector. That share had, as a whole, already fallen somewhat between 2002 and 2007/08 and, measured for all 23 countries, dropped further from 55.8 per cent in 2007/08 to 50.6 per cent in 2013/14. Between 2002 and 2013/14, for the 19 countries where EOD data existed for this entire period, they showed a fall of 6.2 percentage points, or 9.7 per cent; percentage-wise, this was half the decrease in TUD in the same 19 countries in the period 2001 to 2013/14 (19.3 per cent).

Between 2007/08 and 2013/14, EOD overall increased in six of the 23 countries by over one percentage point, quite substantially in the Czech Republic, as well as in Denmark, Estonia, Ireland, Latvia and Slovakia. Over this period, EOD remained stable in seven countries whilst it decreased in ten by over one percentage point, particularly strongly so in Bulgaria, Hungary, Romania, Spain and Slovenia.

In spite of this decrease, in 2013/14 the average level of employer organisation for the 23 countries was nearly double the average figure for trade union density. At this point, EOD outperformed TUD in 20 countries, the exceptions being Bulgaria, Finland and Romania. The base years of 2001-2002 provided a similar picture, although at the time Denmark and Latvia joined Finland as countries with higher levels of density among trade unions than among employer organisations.

It can be argued that employer organisations throughout Europe face essentially the same problem as unions. As with many workers, individual employers have an incentive to 'free-ride' by not joining an interest organisation and not paying membership fees. Frequently, they can take advantage of progress in the collective outcomes that employers' organisations achieve, such as collective bargaining results and policy

5. This increase may be regarded as deceptive against the backdrop of the drastic decrease of nine percentage points in the total number of employees in Spain.

submissions at national and industry levels without formally being members of the collective body. Thus, employers' organisations need selective incentives in order to overcome their collective action problem. This often takes the form of specific services and organisational resources calculated to tip the balance in favour of joining (Brandl and Lehr 2016). Trade unions, by contrast, struggle to widen their service offerings primarily because the cost of extending these beyond the representation services they have traditionally offered, has proved to be prohibitive at a time when union finances have been squeezed by falling membership.

Table 2.3 **Employers' organisation density (EOD) in 23 EU member states, 2002, 2007/08 and 2013/14**

	2002	2007/08	2013/14	2007/08 to 2013/14
Austria	100	100	100	Stable
Belgium	82	82	82	Stable
Bulgaria		55	14	Decrease
Czech Republic	35	35	64	Increase
Germany	63	60	58	Decrease
Denmark	60	58	68	Increase
Estonia	35	23	25	Increase
Finland	66	73	65	Decrease
France	74	75	75	Stable
Hungary		40	21	Decrease
Ireland	60	57	68	Increase
Italy	62	58	56	Decrease
Latvia	20	35	41	Increase
Lithuania		20	19	Stable
Netherlands	85	85	85	Stable
Poland		20	20	Stable
Portugal	58	40	34	Decrease
Romania	80	60	25	Decrease
Slovakia	33	29	31	Increase
Slovenia	100	85	60	Decrease
Spain	72	75	36	Decrease
Sweden	83	84	82	Decrease
United Kingdom	40	35	35	Stable
Ave. 23 countries		**55.8**	**50.6**	
of which 13 W/N/S	**69.6**	**70.1**	**67.3**	
of which 10 CEE	**30.5**	**40.2**	**32.0**	
	(6)			
Ave. 19 countries	**63.6**	**60.5**	**57.4**	

Note: 2013/14: 2013 data for CZ, DE, DK, EE, FR, IE, LV, PL, PT, SK, SI. Other countries 2014 data
Increase/decrease: >1.0 percentage point variation from 2007/08 to 2013/14
Sources: ICTWSS database 5.1 (Visser 2016a); Eurofound, *Working life country profiles* (2015); national sources (derived from CAWIE-1 and CAWIE-2 projects, and ETUI)

Interestingly, Brandl and Lehr (2016: 17-8) found that employer organisation density throughout Europe declined when employers' organisations negotiated binding wage agreements, but increased if they reached binding agreements on non-wage issues. They attributed this to a growing need among employers for assistance in employment and work-related practices. In the light of such outcomes, and in order to prevent membership losses, German associations of employers have, since the late 1990s, introduced a special form of membership under which companies are no longer bound by collective agreements (*OT-Mitgliedschaft; OT= ohne Tarifbindung*) but can avail themselves of their association's legal and other services (Silvia and Schroeder 2007). This move appears to have decelerated the decline of density amongst employers' organisations in Germany, but it can also be argued that such membership agreements have contributed to, or even accelerated, the decline in the country's collective bargaining coverage rate (Schulten and Bispinck 2015: 249).

2.5.3 Collective bargaining coverage

Table 2.4 combines the data series on collective bargaining coverage (CBC) with the shares of employees covered by multi-employer agreements (MEB).

According to the left-hand columns of this Table, the CBC rate overall showed a continuous decline across Europe, from 65.4 per cent in 2001 (for 22 countries), to 62.7 per cent in 2007 (for all 23 countries) and finally down to 52.6 per cent in 2013/14. Between 2001 and 2013/14, the CBC rate in 22 countries fell overall by 11.1 percentage points, or 16.9 per cent; in other words falling between the aggregate decreases in trade union and employers' organisation densities. In the second period in particular, the gap between CEE countries and the others grew. Between 2007 and 2013/14, CBC was stable in eight countries and decreased by over two percentage points in 15, including all ten CEE countries. In the CEE group, the average CBC rate fell sharply, from 43.2 to 28.0 per cent. In the latter period, particularly large decreases were noted for Hungary, Latvia, Poland and Slovakia, while CBC also eroded rapidly in Romania and Slovenia – the two countries which, until 2007/08, stood out as the exceptions in the CEE group in terms of having high EOD and CBC rates. Elsewhere, and as a result of the constraints of international pressure, CBC rates decreased substantially for Ireland, Portugal and Spain.

Concerning the scale of multi-employer bargaining (MEB), the right-hand columns of Table 2.4 show the shares of the total dependent workforce that were covered by MEB for 2001, 2007 and 2013/14. Unfortunately, for the first two base years this information is rather incomplete, covering 13 countries for 2001 and 18 for 2007; in 2013/14 the information was missing only for Slovenia. Inevitably, this hampers broad comparisons over time.

For the 12 countries where MEB information was available over the full period, the average MEB rate decreased by 7.2 percentage points, or 14.8 per cent. For 2013/14, the average MEB for 22 countries was 37.3 per cent, with a massive difference between the averages for the 13 W/N/S countries (58.9 per cent) and the nine CEE countries (6.2 per

cent). Clearly, bargaining at industry level in the CEE country group, already weak, has become highly fragile. In 2013/14, across all countries the shares of MEB varied widely, ranging from zero in Romania (due to legal constraints – cf. Trif 2013) and one per cent in the UK to 80 per cent and higher in Austria, Belgium, Finland, France and Sweden.

Table 2.4 **Collective bargaining coverage (CBC) and the percentage of employees covered by multi-employer agreements (MEB) in 23 EU member states, 2001, 2007 and 2013/14**

	CBC				MEB			
	2001	2007	2013/14	2007 to 2013/14	2001	2007	2013/14	2007 to 2013/14
Austria	98.0	98.0	98.0	Stable	95	95	97	Stable
Belgium	96.0	96.0	96.0	Stable		86	94	Increase
Bulgaria	40.0	30.0	26.0	Decrease			8	
Czech Republic	42.7	50.6	47.3	Decrease	12	24	14	Decrease
Germany	67.8	61.4	57.6	Decrease	61	53	52	Stable
Denmark	85.0	81.5	83.0	Stable			60	
Estonia	28.5	25.0	20.0	Decrease		7	2	Decrease
Finland	91.0	89.5	90.0	Stable		78	86	Increase
France	96.5	97.8	98.0	Stable	93	96	86	Decrease
Hungary	38.8	35.9	23.0	Decrease	5	11	12	Stable
Ireland	42.1	39.1	32.4	Decrease			3	
Italy	80.0	80.0	80.0	Stable		69	68	Stable
Latvia	18.0	20.3	13.0	Decrease			2	
Lithuania	12.5	15.0	11.0	Decrease	0	0	1	Stable
Netherlands	84.0	78.6	79.5	Stable	71	74	71	Decrease
Poland		25.5	15.0	Decrease		3	1	Stable
Portugal	77.3	82.5	39.0	Decrease	76	75	13	Decrease
Romania	82.5	98.0	35.0	Decrease			0	
Slovakia	48.0	40.0	24.9	Decrease	16	16	16	Stable
Slovenia	100.0	92.0	65.0	Decrease	96	91		
Spain	80.5	80.2	60.3	Decrease	73	68	55	Decrease
Sweden	94.0	91.0	89.0	Stable	75	79	80	Stable
United Kingdom	35.2	33.6	27.5	Decrease	7	5	1	Decrease
Average (23) countries	**65.4**	**62.7**	**52.6**		**52.3**	**51.7**	**37.3**	
	(22)				**(13)**	**(18)**	**(22)**	
of which (13) W/N/S	**79.0**	**72.2**	**71.6**		**68.9**	**70.7**	**58.9**	
					(8)	**(11)**	**(13)**	
of which (10) CEE	**44.6**	**43.2**	**28.0**		**25.8**	**21.7**	**6.2**	
	(9)				**(5)**	**(7)**	**(9)**	

Notes:
- CBC 2001: BG – 2003 data; CBC 2013-14: BG, LT, LV, RO – 2012 data
- MEB 2001: SE, UK – 2000 data; MEB 2007: EE, SI – 2008 data
Increase/decrease: >2.0 percentage points variation from 2007 to 2013/14
Sources: ICTWSS database 5.1 (Visser 2016a); Eurofound, *Working life country profiles* (2015); national sources (derived from CAWIE-1 and CAWIE-2 projects, and ETUI)

2.5.4 The interrelations between industrial relations indicators

Table 2.5 shows the development of TUD, EOD and CBC across the country clusters used earlier in Table 2.1, based on the detailed country comparison of Tables SA1.2 and SA1.3 contained in the Statistical Appendix.

The table indicates that, over the full period from 2001 to 2013/14, TUD fell the least in the three southern European countries, followed by the three Scandinavian countries, the five mid-western European countries and the 'Anglo-2', Ireland and the UK. The erosion of TUD was by far the strongest in the CEE group, showing quite similar decreases across the countries in this group; here in 2013/14, trade union density averaged below 15 per cent, less than three-fifths of the value it had reached 12 or 13 years before.

Across the five country clusters, EOD developed differently, with the largest decrease in the three southern European countries but seeing an upsurge in the Scandinavian group and the 'Anglo-2', with the ´mid-western 5' and the CEE group in between. Nevertheless, in the latter group in 2013/14, EOD came out with the lowest average (32 per cent), followed by the southern European countries (42 per cent).

Across the country clusters, the development of CBC looked somewhat closer to that of TUD, with the three Scandinavian countries on top with a small decrease, followed by the five mid-western European countries. Here again, the CEE country cluster showed the largest decrease; in this cluster, the average CBC rate ended up in 2013/14 at 28.0 per cent, even lower than the low average for Ireland and the UK (29.5 per cent).

Table 2.5 **Trade union density (TUD), employers' organisation density (EOD) and collective bargaining coverage (CBC) in 23 EU member states by country clusters, 2013/14 as percentage of 2001 or 2002**

	Country code	TUD	EOD	CBC
		2013/14 as % of 2001	2013/14 as % of 2002	2013/14 as % of 2001
Scandinavia-3	DK, FI, SE	90.0	103.3	97.3
Southern-3	ES, IT, PT	98.0	66.3	79.0
Anglo-2	IE, UK	80.5	106.5	77.0
Mid-western-5	AT, BE, DE, FR, NL	86.6	98.6	94.6
CEE-10	BG, CZ, EE, HU, LV, LT, PL, RO, SI, SK	59.6	91.7*)	70.5**)
Average 23 countries		**76.2**	**92.7*)**	**80.9**)**

*) as per cent of 2007/08 for BG, HU, LT, PL; **) as per cent of 2007 for PL
Sources: see Tables 2.2, 2.3 and 2.4

It can be observed that multi-employer bargaining, in its various forms, has been crucial in attaining high levels of collective bargaining and sophisticated wage-setting systems across most EU countries, at least until the financial crash of 2007/08. It may be tempting to extend this observation to future (potential) developments. According

to Visser (2015: 10), referring to the high correlation coefficients between the two indicators that seem to hold over time, MEB is the key to a high CBC rate. Following in Visser's footsteps, we can hypothesise that a relatively high level of MEB is closely related to a relatively high level of CBC. It follows that the first condition for reaching a high level of CBC is the existence of strong bargaining parties willing to engage in MEB; that is, relatively high levels of TUD and EOD. A second condition is the existence of supportive state policies, in particular concerning the mandatory extension of collective agreements.

Based on the data compiled and presented above, we are now able to detail the statistical relationship between TUD, EOD, CBC and MEB at national level. We start this exploration in a comparative-static way, comparing for the three base years (2001, 2007 and 2013/14) the correlation coefficients covering the 23 countries (sometimes fewer due to missing values): see Table 2.6.

We first explore the relationship between CBC and MEB. The assumption that relatively high MEB levels are closely related to relatively high CBC levels is confirmed. We found that the rule 'the higher the MEB rate, the higher the CBC' held for all three base years with quite high correlation coefficients: R=0.970 for 2001; R=0.989 for 2007; and R=0.967 for 2013/14. These coefficients are even higher than the R=0.77 found by Visser (2013: 10). The opposite is also true: the lower the MEB, the lower the CBC. The coefficients here remained high due to the rather perverse situation that, in countries where government and employer support for MEB has been withdrawn, collective bargaining rapidly collapsed. As stated earlier, the fate of collective bargaining in the United Kingdom in the 1980s and 1990s is a clear example of such institutional destruction.

If both CBC and MEB are related to TUD and EOD (accepting that the levels of CBC and MEB may influence TUD and EOD), striking results emerge. On the one hand, the relationship between TUD and CBC, though getting stronger, remains moderate, as shown by R=0.489 for 2001 and R=0.626 for 2013/14. This is, *a fortiori*, the case for the relationship between TUD and MEB, showing R=0.280 and R=0.576 for the first and last base years.

These moderate outcomes can mainly be explained by the existence of a group of countries who have combined relatively low TUD rates with high CBC rates. First and foremost is France (in 2013/14 where TUD was 11 per cent but CBC recorded a 98 per cent rate); this is an extreme case, but Austria, Germany, the Netherlands and Spain, and even Belgium and Italy, also show gaps of 40 per cent and more between TUD and CBC rates.[6]

6. For non-trade union members, the situation regarding bargaining coverage may be (even) worse: at national and industry level, trade union members tend to have higher CBC rates than non-members. In our earlier research based on *WageIndicator* data covering September 2004 to March 2007, we found that this was the case for all eight countries we then studied. The most marked differences were in the UK, whilst Germany, Hungary and Poland also revealed considerable differences in this respect (Van Klaveren and Tijdens 2008: 148).

Remarkably, in this statistical exercise, employers' organisation density turns out to have played a quite prominent role in maintaining MEB. Comparing the relationships of these indicators with CBC and TUD (although the respective correlation coefficients have converged over time), EOD remains more strongly connected with both CBC and MEB, as shown by the coefficients for EOD: regarding CBC, R=0.894 for 2001/02 and R=0.746 for 2013/14; and regarding MEB, R=0.896 for 2001/02 and R=0.811 for 2013/14.

Table 2.6 **Correlations between trade union density (TUD), employers' organisation density (EOD), collective bargaining coverage (CBC) and multi-employer bargaining (MEB), 23 countries, 2001(/02), 2007(/08) and 2013/14**

Indicator	Year	corr./N	TUD	EOD	CBC	MEB
TUD	2001(/02)	*R*		0.296	0.489	0.280
		N		19	23	13
	2007(/08)	*R*		0.481	0.550	0.482
		N		23	23	18
	2013/14	*R*		0.509	0.626	0.576
		N		23	23	22
EOD	2001(/02)	*R*	0.296		0.894	0.896
		N	19		19	11
	2007(/08)	*R*	0.481		0.820	0.909
		N	23		23	18
	2013/14	*R*	0.509		0.746	0.811
		N	23		23	22
CBC	2001(/02)	*R*	0.489	0.894		0.970
		N	23	19		13
	2007(/08)	*R*	0.550	0.820		0.989
		N	23	23		18
	2013/14	*R*	0.626	0.746		0.967
		N	23	23		22
MEB	2001(/02)	*R*	0.280	0.896	0.970	
		N	13	11	13	
	2007(/08)	*R*	0.482	0.909	0.989	
		N	18	18	18	
	2013/14	*R*	0.576	0.811	0.967	
		N	22	22	22	

Sources: see Tables 2.2, 2.3 and 2.4

Dynamic statistical analysis, correlating the mutual linkages between the TUD, EOD and CBC rates for as many of the 23 countries as possible during two periods – 2001/02 to 2007; and then 2007 to 2013/14 – underlines the connection between the development of EOD and that of CBC (Table 2.7). The relationship between EOD and CBC was particularly strong in the first period (a highly significant R=0.658) and, to a lesser extent, also from 2007 onwards (R=0.370). In contrast, the relationship between the spread of TUD with that of EOD is slightly negative and hardly any different to the link with the development of CBC, which was negative in the first period and about

neutral in the second. Thus, the slowdown in the decrease of TUD we observed for the second period seemingly did not affect EOD positively and naturally did not provide a stimulus for boosting CBC.

We also analysed the extent to which the CBC rate in 2013/14 was dependent on the TUD 2007 rate or the EOD 2007 rate, using a regression model. The previous findings are confirmed. EOD in 2007 did indeed have a significant positive effect on CBC in 2013/14, whereas TUD in 2007 did not have such a significant effect. If the EOD rate had been 1.0 per cent higher in 2007, the CBC rate in 2013/14 would, according to our calculations, have increased by 1.5 per cent. By contrast, TUD 2007 did not have such a significant effect.

Table 2.7 **Correlations between annual growth of trade union density (TUD), employers' organisation density (EOD) and collective bargaining coverage (CBC), 23 countries, 2001/02 to 2007; and 2007 to 2013/14**

Indicator	Period	corr./N	TUD	EOD	CBC
TUD	2001 to 2007	*R*		-.154	-.197
		N		19	22
	2007 to 2013/14	*R*		-.149	0.034
		N		23	23
EOD	2002 to 2007/08	*R*	-.154		0.658***
		N	19		19
	2007/08 to 2013/14	*R*	-.149		0.370*
		N	23		23
CBC	2001 to 2007	*R*	-.197	0.658***	
		N	22	19	
	2007 to 2013/14	*R*	0.034	0.370*	
		N	23	23	

Note: (*) significant at 10%; (***) significant at 1%
Sources: see Tables 2.2, 2.3 and 2.4

2.5.5 The interrelations between industrial relations indicators: more differentiation

In 2013/14, the CBC rate in the 12 countries in which MEB was prevalent, covering over 50 per cent of all wage-earners over a longer period of time, averaged 78.0 per cent. Excluding Portugal – due to that country's MEB scores in this base year – the average coverage rate for the remaining 11 countries ended up at 81.5 per cent. In contrast, the 11 countries in which SEB was predominant (UK, Ireland and the CEE countries minus Slovenia) had, for the same period, an average CBC rate of 25.0 per cent (or 26.0 per cent, if Poland with missing data in 2002 is left out). These numbers confirm that, over the last three decades or so, the relationship between CBC and MEB has not changed. Table 2.8 demonstrates this continuity for the period 2001 to 2013/14.

For an earlier decade, and based on a sample of 20 OECD countries, Traxler presented calculations in 2003 for 'MEB' and 'SEB' country categories over the 1986-90, 1991-93 and 1994-96 periods that gave outcomes similar to ours. According to his data, for countries with MEB as the predominant bargaining mode, the average CBC rate fluctuated around 80 per cent whereas the average for countries in which the SEB form was predominant decreased from 32 to 28 per cent. Our data confirm Traxler's conclusion that, for each period or year analysed, countries where MEB was prevalent registered a significantly higher CBC rate than countries in which collective bargaining predominantly rested on single-employer settlements (Traxler 2003: 150-151).

Table 2.8 also shows that, in the full period covered by our research, the average CBC, TUD and EOD values decreased more rapidly in 'SEB countries' than in 'MEB countries'. Comparing 11 and ten countries on each side, with values indexed at 2001/02=100, the 2013/14 outcomes for 'SEB countries' were, respectively, 25 (CBC), 22 (TUD) and 12 (EOD) percentage points lower than the averages for 'MEB countries'.

These outcomes suggest that multi-employer bargaining offers better conditions for the survival of collective bargaining practices supported by dedicated trade union and employers' organisations – or, to put it more cautiously, that CBC and TUD, in particular, but also EOD, to some extent, are less fragile in a MEB scenario.

Table 2.8 **Average collective bargaining coverage (CBC) and trade union density (TUD), 23 countries, by country clusters according to MEB or SEB dominance, 2001/02, 2007/08 and 2013/14**

No. countries		Year		Average CBC		Average TUD		Average EOD	
MEB	SEB	CBC, TUD	EOD	MEB	SEB	MEB	SEB	MEB	SEB
11	10	2001	2002	88.4	38.8	42.3	25.3	77.0	43.3
11	10	2007	2007/08	86.0	38.7	38.4	19.7	75.9	38.9
11	10	2013/14	2013/14	81.5	26.0	36.7	16.5	69.7	34.3
		Index 2013/14 = 100		**92**	**67**	**87**	**65**	**91**	**79**
12*)	11**)	2001	2002	87.5	38.8	40.6	24.4	75.4	43.3
12*)	11**)	2007	2007/08	85.7	37.5	36.9	19.4	72.9	37.2
12*)	11**)	2013/14	2013/14	78.0	25.0	35.2	16.2	66.8	33.0
		Index 2013/14 = 100		**89**	**64**	**87**	**66**	**89**	**76**

Note:
'MEB countries': AT, BE, DE, DK, FI, FR, IT, NL, (PT), SI, ES, SE
'SEB countries': BG, CZ, EE, IE, HU, LV, LT, (PL), RO, SK, UK
*) Incl. Portugal; **) Incl. Poland
Sources: see Tables 2.2, 2.3 and 2.4

2.6 Mandatory extension

Against the backdrop of the developments in industrial relations and collective bargaining mapped above, the maintenance and restoration of supportive state policies as the second condition for effecting high collective bargaining coverage and multi-employer bargaining levels becomes even more pertinent. In countries where both

workers and employers are weakly organised, such institutional power resources become particularly relevant (although it might be deceptive for the trade union movement to rely fully, or even largely, on these resources).

This is notably the case in CEE countries. As can easily be grasped from Table SA1.2, if, in 2013/14, a density of less than one-third (33 per cent) on both sides could be regarded as a 'danger zone', then seven countries – Bulgaria, Estonia, Lithuania, Hungary, Poland, Romania and Slovakia – were in this zone at this time. The situation in Portugal, Spain and the UK was only slightly better with, on the employer side, EOD rates in 2013/14 in the 34-36 per cent range; while TUD rates in these three countries were clearly below the 33 per cent threshold.

The most significant policy instrument here is the mechanism for mandatory, or administrative, extension under which the provisions of a collective labour agreement are declared generally applicable for a whole industry or profession, provided certain quantitative criteria are met.[7] There are two approaches which can be identified. First, bargaining coverage can be extended to non-organised employees in organised enterprises. For such cases, most European countries have a legal *erga omnes* provision in place, implying that collective agreement provisions in enterprises bound by such agreements are also applicable to their non-organised employees. Second, governmental declarations of general applicability have been used to oblige non-organised companies to conform to negotiated wages and conditions. In this way, the state may stimulate or stabilise multi-employer bargaining without direct interference in the bargaining autonomy of the social partners.

Visser (2013: 20) pointed to the surprising stability of the institution of mandatory extension throughout Europe, at least until 2010 or 2011 when extension provisions came under pressure notably from the Troika, leading to modifications in Portugal and Romania (and Greece). Moreover, only four of the 23 countries scrutinised here did not have legal extension requirements: Denmark, Sweden, UK and Italy. However, two countries have functional equivalents of extension in place: Italy, through its constitutional obligation on employers to pay a 'fair wage'; and Austria where, on the employer side, nearly all industry collective agreements are signed by economic chambers which, having compulsory membership, means that that all companies are covered (Schulten 2016). However, the way in which administrative extension operates varies substantially in practice. According to Visser (2016a, 2016b), for 2013 three extension regimes could be distinguished across countries:[8]

7. Statutory minimum wage (SMW) systems can be regarded as a second mechanism. Though in general the existence of SMWs induces increases in the bargaining power of organized labour, it can be argued that, for the countries and the period in time covered here, only in France has the national SMW (SMIC) been repeatedly influential on the country's wage-setting process (cf. Husson 2015 and other contributions in Van Klaveren *et al.* 2015). Therefore, we have refrained from treating SMW systems in this context.

8. Schulten *et al.* (2015) and Schulten (2016) also distinguished three groups of countries but applied a somewhat different criterion; namely, whether extension is used 'frequently' (1), 'limited' (2) or 'rarely' (3). Compared to Visser's division, this resulted in the following differences: the Netherlands is rated in group 1; Czech Republic, Germany, Ireland, Portugal (recently), Slovakia and Slovenia in group 2; and Estonia in group 3. See also Marginson *et al.* 2014 and Eurofound 2015b.

1. virtually automatic extension, applied to nearly all collective agreements: Austria; Belgium; France; Finland; Slovenia; Spain; Portugal (until 2011); and Romania (until 2011);
2. frequent and regular use, subject to majority thresholds: Bulgaria; Czech Republic; Estonia; and the Netherlands;
3. limited use, subject to high thresholds, public policy tests or veto power: Czech Republic; Germany; Hungary; Latvia; Lithuania; Poland; Portugal; and Slovakia.

Remarkably, five countries we identified within the 'danger zone' of jointly low TUD and EOD rates were in the third category of 'limited' extension regimes, namely: Hungary; Lithuania; Poland; Portugal; and Slovakia.[9]

For 2013, Visser (2016b: 7) calculated direct coverage effects for ten of the 23 countries we studied, measuring the share of employees covered through extension only. According to his calculation, these effects varied from zero in Slovakia up to nine per cent in the Netherlands, over 15 per cent in Belgium, 16 per cent in Finland and over 20 per cent in France. High extension rates help to lift already comparatively high CBC rates, as indicated by their 2013/14 values (Table 2.4), resulting for these ten countries in a high correlation coefficient (R=0.939[10]).

It has to be added that coverage effects may vary widely across industries. Using the collective agreement database of the FNV union confederation, we calculated for the Netherlands a total direct extension effect, as of December 2015, of 12.3 per cent with the following specific effects for the five industries studied here: Metal and electronics manufacturing, 17.4 per cent; Wholesale, 7.6 per cent; Retail, 13.4 per cent; ICT, 0 per cent; and Transport and telecoms, 12.4 per cent. Again, a close relationship showed up between these rates and the CBC rates for these industries, expressed by a high correlation value (R=0.926).

This outcome suggests that the Dutch extension system tends to work out advantageously for industries with already high CBC rates (i.e. Metal and electronics manufacturing) while barely changing CBC rates in industries with initially low coverage. In the latter industries, and in the ICT sector in particular, mandatory extension mostly does not provide sufficient impetus to enter into multi-employer agreements (cf. for the Netherlands: Mevissen *et al.* 2015). It seems likely that extension systems of whatever kind of regime elsewhere will have similar effects.

9. And, according to Schulten's 'rarely' grouping, Estonia as well.

10. Setting the extension rate for Belgium at 15 per cent and for France at 20 per cent. If Germany and Ireland are included, when correlating their 2008 direct coverage effects as mentioned by Visser (respectively 0.4 per cent and 4.0 per cent) with their 2007 CBC values, the coefficient resulting for 12 countries would be decreased somewhat, to R=0.880.

2.7 The industry level

2.7.1 The 'weakest link'

In the course of the 2000s, the European sectoral social dialogue gained in importance. Actively promoted by the Commission, sectoral dialogue committees were created in 14 sectors, bringing the total number to 43 in November 2017 (European Commission 2016b: Chapter 5; website European Commission - Sectoral social dialogue). However, in very few sectors have these Committees adopted framework agreements that are binding on the signatories and in only a few cases have the social partners managed to conclude contractual arrangements derived from the activities of the Committees. The same factors which hampered the earlier, wider European Social Dialogue have also been in play here (cf. Keller and Weber 2011; Keune 2012). Recent research indicates that the European sectoral social dialogue may still have the capacity to influence national industrial relations, but only where the negotiating parties at national level find it worthwhile and gather the resources to act at European level (Perin and Léonard 2016).

Obviously, both the European Social Dialogue and the sectoral dialogue have not developed into collective bargaining arenas at EU level; furthermore, they may even have only a marginal effect on collective bargaining at national/industry levels. The diversity of representation structures and industrial relations traditions, as well as wage-setting and social security systems, across EU member states continues to act as a major factor hampering collective bargaining coordinated at European level. Moreover, especially at European industry level, employers' organisations have been, and remain, weak. Unlike the ETUC, BUSINESSEUROPE has no sectoral dimension to its structure. Yet, on the union side, too, the vertical integration between national federations and single unions on the one hand and their European topline organisations (ETUC and, at industry level, the European Trade Union Federations) on the other has remained a weak spot, although it has been improving over the years.

All in all, Marginson's conclusion from 2005 – that industry level represents a weak link in Europe's multi-level framework of industrial relations – continues to stand up to scrutiny. More specifically, the situation as regards the sectoral social dialogue in what were the new member states in 2003 has been labelled 'the weakest link' (Ghellab and Vaughan-Whitehead 2003) – a characterisation that, as sections 2.4 and 2.5 proved, is still valid for most CEE countries and may even be extended to most of the 23 countries under study.

It is important to note that the characteristics of industrial relations at industry or sector level may differ considerably from those at national level. In this respect, the outcomes of research by Bechter *et al.* (2011, 2012) are interesting. On behalf of Eurofound, they studied industrial relations in nine (sub-)sectors across the (then) 27 EU member states, comparing sectoral with national industrial relations regimes. Using a classification for industrial relations regimes at sectoral level inspired by the varieties of capitalism approach, they found that, in 2009, some countries had similar regimes across all sectors, some had very different regimes from sector to sector, while some

sectors had similar regimes regardless of which country they were in. These authors also showed that the exposure of sectors to international competition, as well as regulation at EU level, could lead to even greater similarity in industrial relations structures across countries. In other words, internationalisation seemed to produce a certain degree of convergence, but not necessarily towards one single industrial relations type (Bechter *et al.* 2011: 52).

Concerning the 23 countries included in our project, Poland and Portugal showed the greatest variety of industrial relations structures across sectors, followed by Italy, Ireland and Belgium. In contrast, Finland, France, Austria, Sweden and the Netherlands showed the most convergence across sectors. That said, it remains remarkable that a large majority of countries displayed such very similar, and quite high, degrees of sectoral variation (Bechter *et al.* 2011: 24).

In Table SA1.4 we present the outcomes of applying the cluster analysis developed by Bechter *et al.* for 'our' 23 countries and for the five sub-sectors included in our current study. It should be noted that the table presents the situation as at 2009. It shows that only a minority (35 out of 107) country-sector combinations shared clear similarities with the prevailing national industrial relations type. A complete or near-complete overlap, with five or four sector combinations similar to the dominant national type, could only be found in the Scandinavian country cluster. In contrast, Belgium, Estonia, France, Italy, Hungary, Poland, Romania and Slovakia showed no overlaps at all. The selection of some industries where state or European Union policies were quite relevant (air transport, railways and telecoms: see section 3.6), may have generated a stronger lack of similarities than if other industries had been selected. Even so, other research in which we have participated shows that the structure and 'behaviour' of industrial relations in other, less state-dependent, industries than those selected by Bechter *et al.* are also divergent from the dominant national type (cf. Gautié and Schmitt 2010; Van Klaveren *et al.* 2013).

Bechter *et al.* (2011: 3) conclude that: 'Given that sectors vary more than countries in their industrial relations specifics, the sector is a very promising level for studying European convergence of industrial relations and the potential for European social dialogue.' The first part of this conclusion will be confirmed by our analysis in section 4.2, thus underlining the contention in the second part.

2.7.2 The number of trade unions

Looking at the ways in which the spread of trade unionism affects collective bargaining coverage rates at industry level is a primary concern of researchers in this field. Various views have been advanced concerning the impact that both the incidence and the size of trade unions tends to have on coverage. On the one hand, both industrial relations researchers and trade union practitioners have latterly argued, in the context of union mergers such as that of ver.di in Germany, that large(r) union entities are indispensable to the maintenance of trade union power in collective bargaining. On the other, such entities – in particular multi-industry unions – may tend to lack identification and

cohesion and put too much distance between union leaders and their rank and file members. Thus, it has been argued that the increase in membership heterogeneity that almost invariably follows on from a union merger, together with organisational conservatism, may be coupled with concurrent membership decline (cf. Waddington 2006; Undy 2008).

In order to measure the effects of the number of trade unions on TUD, CBC and MEB per country/industry cell, we selected those single unions with a proven practice of collective bargaining in the five industries scrutinised. For data concerning these unions, we made use of the AIAS-WageIndicator *Trade Union Database*. This database contains information on the trade union movement in many countries across the world, including the names of confederations and affiliated unions as well as their mutual relations. With regard to the 23 countries we studied, the *Trade Union Database* as of December 2015 included the names and numbers of 84 confederations and 1,134 affiliated unions, of which 51 confederations with 982 unions were ETUC affiliates. It was on the basis of this information that we invited participants to the three WIBAR-3 seminars and we also used it in our research.

Table 2.9 presents an overview of the relevant number of trade unions, with the proviso that these unions should be involved in bargaining collective agreements covering at least five per cent of all employees per industry. The table shows that, in Transport and telecoms, there were 205 trade unions active around negotiating tables spread across the 23 countries studied. This proved to be the largest number of unions in one industry by far. Unions in this industry frequently represented specific sub-sectors, regions or occupations, or combinations of these. Nevertheless, it can be observed, particularly in the transport sector, that workers organised in such relatively small entities were still able to deploy structural power. Eurofound's *Representativeness Studies* confirm that examples of such constellations can be found in particular in the ports and railways sub-sectors and in countries as diverse as France, the Netherlands, Poland and Portugal.

In contrast, we found only 32 trade unions maintaining collective bargaining practices in the ICT industry. Moreover, in eight countries (Czech Republic, Estonia, Latvia, Lithuania, Portugal, Slovakia, Slovenia and Spain) we could not detect any unions at all with genuine bargaining practices covering ICT or companies therein. In the Metal and electronics manufacturing, Wholesale and Retail industries we found, respectively, 78, 59 and 57 trade unions with collective bargaining practices, while trade unions were involved in bargaining in each of the 23 countries in these three industries.

The reader should be aware that the numbers cited here cannot simply be totalled per country. In the main, this is because sector-related unions often negotiate in both wholesale and retail whilst similar overlaps can be found between wholesale and transport. Moreover, in a number of N/W/S European countries, amalgamated unions have come into being involved in collective bargaining in various private industries. This is notably the case in Austria, Germany, Ireland, the Netherlands, Sweden and UK.

Table 2.9 **Number of trade unions involved in collective bargaining*), in five industries and 23 EU member states, latest available data (at least 2013)**

	Metal & electronics manufacturing	Wholesale	Retail	ICT	Transport & telecoms
Austria	2	2	2	1	3
Belgium	8	6	6	3	6
Bulgaria	5	3	3	1	8
Czech Republic	1	1	1	0	3
Germany	1	1	1	1	4
Denmark	4	2	2	1	5
Estonia	2	2	2	0	6
Finland	4	2	2	4	10
France	15	7	6	6	17
Hungary	1	1	1	1	7
Ireland	2	2	2	2	6
Italy	3	3	3	3	7
Latvia	1	1	1	0	6
Lithuania	1	2	2	0	8
Netherlands	3	5	4	2	15
Poland	6	5	5	1	34
Portugal	3	2	2	0	15
Romania	5	1	1	1	5
Slovakia	1	1	1	0	3
Slovenia	2	2	2	0	13
Spain	2	2	2	0	6
Sweden	4	3	3	2	10
UK	2	3	3	3	8
Total	**78**	**59**	**57**	**32**	**205**

Note: *) Only trade unions involving in bargaining agreements covering at least five per cent of employees per industry
Source: AIAS-WageIndicator *Trade Union Database*

We return now to the important question of whether the number of trade unions involved in collective bargaining at industry level is related to the levels of TUD, CBC and MEB. Focusing on our analyses at country/industry level, we tried to trace data for 23 x 5 = 115 cells on TUD, CBC and MEB for the same period (2013/14) as was used for the national data presented earlier. In total, this generated a target of 115 x 3 = 345 values. It should be noted that this is uncharted territory and, to our knowledge at least, it has not systematically been covered by other recent research. At this level of disaggregation, in contrast to the national data, we were not able to rely on official administrative sources. Instead, we drew upon sources related to the European research projects mentioned earlier as well as upon the participants in the project seminars and other contacts gained through the WIBAR-3 Industrial Relations survey. Ultimately, we found all 230 values for CBC and MEB, and 101 out of 115 values (88 per cent) for TUD. The missing values for TUD were in Metal and electronics manufacturing (two) and, notably, in the ICT industry (12) (see Table SA6.1).

We compared the values of TUD, CBC and MEB as of 2013/14 in 3 x 115 cells with the numbers of trade unions as of December 2015 – a small difference in base periods that we judged was permissible for this kind of analysis. We found positive, though mostly not very strong, correlations for four industries, indicating that a larger number of unions is favourable to enhancing TUD, CBC and MEB (Table 2.10). In contrast, in Transport and telecoms a higher number of unions was, to some extent, negatively correlated with TUD and CBC while the correlation with MEB was about nil. In these areas, and in some countries, it is not unreasonable to suggest that mergers to reduce the relatively large amount of individual unions might result in a more attractive union prospect and higher bargaining coverage. Nevertheless, most indications of possible relationships between TUD, CBC and MEB remained counter-intuitive.

We tested whether these outcomes might change if the '0' values were omitted; in other words if, in the correlation exercises, we ignored those instances with no multi-employer bargaining practices. In practice, the three right-hand columns in the table show that this made hardly any difference, with the signs remaining positive even for MEB. Again, however, Transport and telecoms proved to be the exception. Based on this finding, it is at least questionable whether in the transport industry a relatively large number of unions is instrumental to maintaining bargaining coverage; although this does not contradict the observation that, in some countries and some parts of this industry, small unions have continued to act as effective defenders of workers' interests.

Table 2.10 **Correlations between number of trade unions per industry, 23 countries, by industry and industrial relations indicators, 2013/14-2015**

		Full sample			Without '0' values		
		TUD	CBC	MEB	TUD	CBC	MEB
Metal and electronics manufacturing	Correlation	0.166	0.335	0.343	0.096	0.335	0.414
	N	21	23	23	21	23	19
Wholesale	Correlation	0.159	0.305	0.422	0.237	0.295	0.434
	N	23	23	23	23	23	16
Retail	Correlation	0.178	0.317	0.411	0.129	0.317	0.437
	N	23	23	23	23	23	16
ICT	Correlation	0.141	0.606	0.674	0.141	0.606	0.674
	N	11	23	23	11	23	15
Transport and telecoms	Correlation	-.108	-.084	0.002	-.108	-.084	-.197
	N	23	23	23	23	23	18

Source: AIAS-WageIndicator *Trade Union Database*

2.7.3 The number of employers' organisations

Drawing on various sources, we traced the number of employers' organisations in 2015 involved in multi-employer bargaining in the 23 countries and five industries in the study: see Table 2.11.

Similar to the result for trade unions, we found by far the single largest number of employers' organisations in Transport and telecoms (227), and even this number may not represent the full picture.[11] Concerning the other industries, we found 81 employers' organisations involved in multi-employer bargaining in Metal and electronics manufacturing, 91 in Wholesale and 109 in Retail, but only 20 in the ICT industry. Moreover, in ten countries no employers' associations at all could be found in ICT. Our research confirmed that Italy was home to a large number of employers' organisations and that these were also plentiful in the Netherlands and France.

Table 2.11 **Number of employers' organisations involved in multi-employer bargaining (MEB), in five industries and 23 EU member states, latest available data (at least 2013)**

	Metal & electronics manufacturing	Wholesale	Retail	ICT	Transport & telecoms *)
Austria	5	4	3	1	13
Belgium	3	4	4	4	15
Bulgaria	3	1	1	0	5
Czech Republic	3	1	1	0	4
Germany	1	3	2	1	10
Denmark	2	4	2	3	10
Estonia	1	1	1	0	2
Finland	1	1	1	2	15
France	15	3	3	2	22
Hungary	2	4	4	1	6
Ireland	1	3	4	0	2
Italy	9	26	29	1	49
Latvia	1	1	1	0	1
Lithuania	0	1	1	0	2
Netherlands	18	13	32	1	4
Poland	1	1	1	0	2
Portugal	7	8	3	0	7
Romania	3	1	1	0	9
Slovakia	2	1	1	1	3
Slovenia	2	3	3	1	6
Spain	1	4	8	1	16
Sweden	3	2	2	1	18
UK	1	1	1	0	6
Total	**85**	**91**	**109**	**20**	**227**

Note: *) Based on information on seven sub-sectors: ports; road transport and logistics; maritime transport; civil aviation; postal and courier activities; railways and urban public transport; and telecoms.
Sources: Eurofound/EurWORK 2017 *(Representativeness Studies)* and additional internet research; information from UNI Europa; AIAS and ETUI *Collective Bargaining Newsletter*, Netherlands, Belgium: WIBAR-3 IR Survey

11. The note to Table 2.11 indicates that we based our approach on seven (out of possibly 11) sub-sectors covered by Eurofound's *Representativeness Studies*: ports (2016); road transport and logistics (2015); maritime transport (2016); postal and courier activities (2017); railways and urban public transport (2017); civil aviation (2010); and telecoms (2007). We updated information concerning the latter two sub-sectors through internet-based research. We left out: sea fisheries (2012); inland water transport (2009/10); and sea and coastal water transport (2008). At the time of writing, no Eurofound study had covered warehousing.

Table 2.12 shows that the number of employers' organisations correlated positively with TUD (other than in Metal and electronics manufacturing), CBC and MEB; the correlations were particularly strong (excepting TUD) in Transport and telecoms. Five correlation coefficients were clearly higher than their equivalents for the trade unions, but another five were also clearly lower. Again, we tested whether the outcomes might change if the '0' values were left out and, once more, the results hardly differed. Obviously, the rule 'the more employers' organisations, the higher the bargaining coverage' was in evidence. Eurofound's *Representativeness Studies* suggest that this outcome, notably for Retail and for Transport and telecoms, is mainly due to the widespread practice of having separate employers' organisations engaged in bargaining without much overlap with different sub-sectors.

Table 2.12 **Correlations between number of employers' organisations per industry, 23 countries, by industry and industrial relations indicators, 2013/14-2015**

		Full sample			Without '0' values		
		TUD	CBC	MEB	TUD	CBC	MEB
Metal and electronics manufacturing	Correlation	-.054	0.417	0.426	-.080	0.348	0.362
	N	21	23	23	21	23	19
Wholesale	Correlation	0.253	0.262	0.295	0.253	0.262	0.169
	N	23	23	23	23	23	16
Retail	Correlation	0.165	0.433	0.459	0.084	0.392	0.423
	N	23	23	23	23	23	16
ICT	Correlation	0.141	0.606	0.683	0.141	0.407	0.487
	N	11	23	23	11	23	15
Transport and telecoms	Correlation	0.500	0.653	0.678	0.500	0.653	0.647
	N	23	23	23	23	23	18

Sources: see Table 2.11 and Table SA6.1

We also checked whether the numbers of trade unions and employers' organisations were mutually correlated. For four industries, we found positive correlations, indicating that a relatively large number of unions is connected with a relatively large number of employers' organisations. This is most strongly the case for Metal and electronics (R=0.489) and ICT (R=0.473); and more modestly for Wholesale (R=0.198) and Retail (R=0.240). Again, for Transport and telecoms the relationship, although weak, is inverse (R=-.076). Thus, except for the latter industry, a higher number of trade unions does indeed correspond with a higher number of employers' organisations.

2.8 Employees' bargaining preferences

For ten out of 23 countries, we were able to relate the bargaining preferences of individual employees to the extent to which they were covered by a collective agreement. In order to trace this relationship, we used data from the continuous, multi-country, multi-lingual *WageIndicator* web survey on work and wages. The main survey questions analysed here related to bargaining coverage and the perceived importance of being covered by a CLA. The *WageIndicator* survey includes two relevant questions/statements, namely:

'Are you covered by a collective agreement' and 'I think it is important to be covered by a collective agreement.' It should be noted that more than one in five workers in the relevant industries answered 'Don't know' to the question on bargaining coverage, with the incidence of such responses being particularly high in Belgium, the Netherlands, Germany and Portugal.

Box 1 **About the *WageIndicator* web-survey**

The *WageIndicator* web survey is posted continuously on the national *WageIndicator* websites (www.wageindicator.org). The websites consist of job-related content, labour law and minimum wage information and a free Salary Check. To date, they have received millions of visitors. Web visitors are invited to complete a questionnaire, with a lottery prize incentive in return for the free information provided. Between one and five per cent of visitors do so. Each survey is in the national language(s) and the answers to a number of questions, such as education, are adapted to the respondent's particular country.

Being a volunteer web survey, the data are not representative of national labour forces. In most countries, the survey data deviate to some extent from representative surveys with regard to age, gender and education (Steinmetz *et al.* 2013). In almost all countries, the labour force aged 40 years and over is slightly under-represented in the *WageIndicator* survey, more so for women than for men. Given the budget constraints for social dialogue projects and the desire to have detailed cross-country comparative survey data, the data from the *WageIndicator* web survey seem sufficiently detailed and the bias not too large. Nevertheless, research results should be considered indicative rather than representative. One ought also to note that, in common with other web surveys, the *WageIndicator* web survey has a substantial drop-out rate during survey completion.

Table 2.13 shows that the collective bargaining coverage (CBC) rate cited by *WageIndicator* survey respondents in the Metal and electronics industry was highest in Finland and Italy (above 90 per cent) and lowest in Bulgaria and the United Kingdom (below 30 per cent). CBC in the Wholesale sector was highest in Italy (79 per cent) and lowest in the Czech Republic and particularly the UK (26 per cent and five per cent, respectively). Bargaining coverage in the Retail sector was highest again in Italy (82 per cent), followed by the Netherlands (75 per cent) and Belgium (73 per cent), and lowest again in the Czech Republic (29 per cent). Similar outcomes showed up for Transport and telecoms, where Finland and Italy stood out with shares of over 90 per cent, while the UK (35 per cent) and Bulgaria (23 per cent) were at the other end of this ranking. In the ICT industry, coverage was again highest in Finland and Italy (both above 80 per cent) but rather more countries showed low rates, including the UK, Germany and the Netherlands and, in particular, the Czech Republic (8 per cent).

Comparing these *WageIndicator* outcomes with CBC data from other sources as reported earlier in this Chapter, it is striking to note that the outcomes were quite close, in particular for Germany, Italy, the Netherlands and the UK. Overall, in 24 of 45 comparable country/industry combinations (cells), the differences between the two sets of outcomes were lower than 15 percentage points.

Overall, respondents expressed a high preference for being covered by a collective agreement. In almost all countries and all industries, more than 50 per cent of respondents indicated that it was important to be covered by a CLA (not shown in table). In Metal and electronics manufacturing, such preference scores were particularly high in Finland (89 per cent), Spain (82 per cent) and Italy (78 per cent). In Wholesale and Retail, this was again the case in Spain (79 and 84 per cent respectively) and Italy (83 and 82 per cent), although it was below one-half (43 and 45 per cent) of respondents in the Czech Republic. In ICT, however, these preferences were repeatedly lower, notably in the Czech Republic (16 per cent) but also in Germany (37 per cent) and the Netherlands (38 per cent). In Transport and telecoms, Spain (85 per cent) and Italy (81 per cent) again displayed the highest rates of preference to be covered by a collective agreement.

Of course, it is interesting to compare these preferences with the actual CBC rates. The right-hand columns in Table 2.13 correlate the actual coverage percentages with the *WageIndicator* survey scores on 'important to be covered'. In three countries – Germany, Spain and the UK – the levels of respondents' positive opinions were consistently higher than the actual coverage rates, and by notably large margins in the UK. In the Czech Republic, the Netherlands and Portugal, this was also the case in four industries, with Metal and electronics manufacturing in each country being the exception. In contrast, in Finland and Italy, the two countries with the highest CBC rates, only one industry showed a higher preference than actual CBC rates, while in Belgium all five preference percentages remained below the actual coverage rates.

Table 2.13 **Share of employees covered by collective agreement, share of positive responses to 'It is important to be covered by collective agreement' minus share actually covered and correlations between covered by a collective agreement and preference to be covered; five industries and ten countries; January 2014 to April 2016**

	Collective bargaining coverage					'Important to be covered' minus collective bargaining coverage					Correlation	
	M&E	Whol	Ret	ICT	T&T	M&E	Whol	Ret	ICT	T&T	*R*	N
Belgium	64	63	73	52	72	-13	-6	-9	-9	-14	0.245**	456
Bulgaria	27	33	35	41	23	-	-	18	24	-	0.396**	52
Czech Republic	54	26	29	8	50	-2	17	16	8	5	0.476**	347
Finland	94	-	76	85	91	-5	-	17	-15	-22	0.238*	105
Germany	52	34	38	18	54	17	21	30	19	17	0.366**	4,591
Italy	91	79	82	82	92	-13	4	0	0	-11	0.097	332
Netherlands	68	42	75	17	63	-4	19	3	21	13	0.375**	3,795
Portugal	63	42	48	39	59	-12	25	28	20	16	0.246**	192
Spain	68	47	51	67	63	14	32	33	17	22	0.068	586
UK	29	5	44	19	35	30	66	33	39	36	0.344**	185

Note: cells with fewer than ten observations are not shown. * significant at 10%; ** significant at 5%
Source: *WageIndicator* data, January 2014 to April 2016. Selection of waged workers in the five industries in ten countries

Correlation analysis also allows us to test the extent to which individual respondents who were covered by a collective agreement actually expressed a preference for being covered by one. Again, the results can be found in the two extreme right-hand columns of Table 2.13. For eight countries, the relationship was positive and significant, while the remaining two, Italy and Spain, showed a positive but not significant relationship. Hence, in Belgium, Bulgaria, Czech Republic, Finland, Germany, the Netherlands, Portugal and the UK, respondents who were covered by a collective agreement tended to show a higher preference for being covered than those who were not. This relationship was independent of the country's high or low CBC rate.

Overall then, these results show that, whilst CBC rates vary across the industries and countries we studied, the support for collective bargaining coming from respondents is strong and positive. Moreover, this has not changed much over time. Ten years ago, the *WageIndicator* survey (September 2004 to March 2007) covering six countries posed the same question to respondents. The outcomes were quite similar for Finland, Germany, Spain and the UK although not for Belgium (where preference levels were higher in the earlier period) or for the Netherlands (where preference levels were higher in the more recent period) (Van Klaveren and Tijdens 2008: 157-162).

In addition, it is worthwhile pointing out that the view, widely held in trade union circles, that ICT is a difficult industry to organise for bargaining purposes is not particularly borne out by the *WageIndicator* data. According to Table 2.13, only in four of the ten countries studied was CBC coverage in ICT either low (less than 20 per cent) or very low (less than ten per cent). The intriguing question raised by these findings concerns the factors behind the contrasting fortunes of trade union organisers in the ICT sectors of Germany, Netherlands and the UK – all of whom met low CBC rates – and their counterparts in Finland, Italy and Spain, all of whom managed relatively high CBC rates.

3. Employment in the selected five industries

3.1 Introduction

Our research focused on five industries: Metal and electronics manufacturing; Wholesale; Retail; Information and communication technology (ICT); and Transport and telecommunications (telecoms).[12] According to Eurostat data, these five industries employed a total of 49.4 million employees (wage-earner headcount) in 2014 across the 23 countries we reviewed, accounting for 23.8 per cent of total private and public sector employment (207.5 million) in these countries (Table SA6.6 in the Statistical Appendix provides details on the employment shares by individual country).

In this chapter, we present detailed information on market structures and employment trends in the five industries and the 23 countries during the 2008-2014 period. We also summarise the presentations and debates which took place at the three project seminars, respectively on Metal and electronics manufacturing (in section 3.2), on Wholesale and Retail (section 3.4) and on the Transport and telecoms and ICT industries (section 3.6). This information is intended to serve as a background in particular to Chapter 4, although it also aims to provide the reader with insights into the linkages and dynamics between market structures, industrial relations and employment. For example, we include data on the level of economic concentration in the industries we studied, including detailed analyses of employment in foreign-owned affiliates of MNEs, and an overview of the major companies in each industry.

The final section of this chapter is devoted to developments regarding multinational enterprises, including the relationship between MNEs and collective bargaining and the influence of such firms' internationalisation strategies. To elaborate on this, we cover a specific form of collective bargaining associated with MNEs; namely, the negotiation of Transnational Company Agreements (TCAs).

Before delving into the five industries, it is relevant to dwell on the remarkable degree of divergence in employment trends between 2008 and 2014 across industries as well as between the main country groups. According to Table 3.1A, which reports wage-earner employment using headcount rather than full-time equivalents (FTEs), in the 23 countries as a whole during these six years there was a net loss of employment in two industries. The most serious decline, nearly eight per cent, was posted in Metal and

12. The industries can be identified with their NACE 2.0 codes. Table SA1.1, in the Statistical Appendix, shows the detailed list of the codes covered.

electronics manufacturing. Transport and telecoms was less affected, with a moderate decline of slightly over one per cent. In contrast, Wholesale and Retail showed increases, although the really significant growth was registered by the (relatively small) ICT industry.

However, these trends diverged widely between country groups. In the ten CEE countries, employment in Metal and electronics manufacturing fell less rapidly than in the 13 W/N/S European countries, while employment in ICT across the former grew at double the rate shown in the latter. However, whereas wholesale and retail employment increased in the latter's 13 countries, these same sectors showed quite marked declines in employment in the ten CEE nations. Tables SA2.3, SA3.4, SA.3.7, SA4.2 and SA5.3 in the Statistical Appendix capture developments in employment in the period 2008-2014 in more detail for the respective industries.

Table 3.1B explores the development of employment in foreign-owned affiliates of MNEs, indicating the significance in employment terms of inwards FDI both for countries and industries. To produce this, we used the 'total employed' figures for FDI-related employment from Eurostat (so-called FATS statistics).[13]

The table again shows a divergence in employment trends, although this differs from trends in wage-earner employment at large. Clearly, with the exception of Wholesale, FDI-related employment grew more rapidly in the ten CEE countries than it did in the 13 W/N/S European countries. Tables SA2.1, SA3.2, SA3.5, SA4.1 and SA5.1 in the Statistical Appendix provide greater detail on FDI-related employment between 2008 and 2014 for the five industries.

Table 3.1A **Growth of employment in five industries by sector and country group (in %), 23 EU member states, 2008-2014**

	M & E	Wholesale	Retail	ICT	T & T	Total 5 industries
W/N/S (13)	-8.6	4.6	4.3	22.0	-0.3	1.0
CEE (10)	-5.4	-10.0	-7.5	50.7	-4.1	-5.8
Total (23)	**-7.9**	**1.4**	**2.2**	**24.8**	**-1.1**	**-0.2**

Sources: Tables SA2.3, SA3.4, SA3.7, SA4.2 and SA5.3

13. Concerning the number of employees in foreign-owned affiliates of MNEs, the FATS statistics contain many gaps and do not allow a consistent overview. Therefore, we have refrained from including these figures and have, instead, consistently used figures for the total number of employees in FDI-related employment, thus including the self-employed. As a consequence, most of the FDI-related employment shares we present in Chapter 3 are somewhat over-estimated, with larger deviations for combinations of industries (notably Retail and Transport and telecoms) and countries with considerable shares of self-employed people (see footnotes 17, 19 and 23). Nevertheless, the shares presented overall do indicate both the order of magnitude of FDI-related employment in the respective countries and industries as well as the trend in the figures between 2008 and 2014.

Table 3.1B **Growth of FDI-related employment in five industries by sector and country group (in %), 23 EU member states, 2008-2014**

	M & E	Wholesale	Retail	ICT	T & T	Total 5 industries
W/N/S (13)	-2.5	2.8	18.9	14.7	15.4	7.2
CEE (10)	2.3	-1.6	29.5	102.2	22.8	12.7
Total (23)	**-0.8**	**1.9**	**21.5**	**26.1**	**16.9**	**8.6**

Sources: Tables SA2.1, SA3.2, SA3.5, SA4.1 and SA5.1

3.2 Metal and electronics manufacturing

3.2.1 Employment in 2014

Metal and electronics manufacturing in 2014 was the second largest industry of the five we studied, accounting for nearly 12.5 million employees, or 6.0 per cent of total waged employment in the 23 countries. Some 9.8 million of this total were located in W/N/S European countries while around 2.7 million were in CEE countries. The joint employment share of Metal and electronics manufacturing was somewhat higher in the latter country group (6.5 per cent) than in the W/N/S European country group (5.9 per cent).

National employment shares showed quite some divergence between countries. The very high employment share of Metal and electronics manufacturing in the Czech Republic (12.3 per cent), jointly with the shares of over nine per cent in Slovakia and Slovenia, contributed to the industry's relatively high share in CEE countries. The latter two countries' shares were only surpassed by that of Germany (10.2 per cent). In these four countries as well as in four others (Finland, Italy, Sweden and Hungary), Metal and electronics manufacturing was the largest employer among the five industries. Bycontrast, the industry's share in total employment remained below four per cent in Ireland, the Netherlands, Portugal, Spain, the UK, Latvia and Lithuania (Table SA6.6).

The statistics divide Metal and electronics manufacturing into seven sub-sectors. Fabricated metal products except machinery and equipment (NACE 25) was the largest sub-sector overall, accounting for over 3.2 million employees in 2014 in the 23 countries studied, followed by the rather heterogeneous sub-sector for the Manufacture of machinery and equipment n.e.c. (NACE 28), with 2.8 million employees, and then by the Manufacture of motor vehicles etc. (NACE 29), usually called the car industry, totalling over 2.3 million employees. This ranking was different in CEE countries. Fabricated metal products etc. was again on top, with more than 700,000 employees, but Car manufacturing (649,000 employees) ranked second here while Machinery and equipment n.e.c. was third (445,000). In both country groups, the four other sub-sectors were substantially smaller (see Table SA2.2).

3.2.2 Development of employment, 2008-2014

Table SA2.1 reveals that, in the early years of the crisis between 2008-2010, the industry's waged employment fell by over four per cent across the 23 countries, with the decrease in CEE countries closer to five per cent. Between 2010 and 2014, employment continued to fall strongly in the N/W/S country group and stronger still in CEE countries. The result is that over one million jobs in Metal and electronics manufacturing overall (nearly eight per cent) were lost in these six years.

Table SA2.3 details the development of waged employment in the seven metal and electronics sub-sectors for the period 2008-2014. A decrease in employment was the dominant trend. In only 45 out of 161 cells (28 per cent) could net employment growth be observed in these six years; 20 of these cells were in the 11 W/N/S European countries, whereas 25 could be found in CEE countries, which consequently did slightly better insofar as employment growth is concerned.

The Manufacture of basic materials (NACE 24), with an overall employment decline of 16 per cent, was the worst affected sub-sector. After 2008, the long-standing over-capacity crisis in the European steel industry was aggravated by the emergence of new Asian, notably Chinese, competitors along with a fall in demand (Trappmann 2015). Concerning employment losses, the Manufacture of basic materials was followed by Computer, electronic and optical products (NACE 26), with a 13 per cent decline, while there was a nine per cent fall in Fabricated metal products except machinery and equipment (NACE 25). It is most likely here that the effects of technological change, notably robotisation, combined with offshoring to China and other Asian countries to produce this fall. Three other sub-sectors displayed lower, but still substantial, losses. The car industry was the exception, with employment decreasing by less than one per cent.

Germany was the only country where employment in the industry increased overall between 2008 and 2014. This was due to growth in five of the seven sub-sectors (cells), including the huge German car industry which, by 2014, had reached 836,000 employees. Austria and Slovakia were notable for the rather small overall losses of employment they recorded; here, five cells showed an increase. At the other extreme, four countries (Ireland, Italy, Spain and Estonia) showed no growth at all in any cell. However, it was in Spain where developments were most dramatic, with a loss of nearly one-third of employment in the industry. The generally downwards trend was only slightly less visible in Belgium, Finland, Ireland, Italy, Portugal, Sweden and Slovenia. In the latter seven countries, between one-sixth and one-third of jobs in the industry disappeared.

Employment in car manufacturing grew in six CEE countries, even by double-digit percentages in Bulgaria, Latvia, Poland and Romania, resulting in a net growth of about 60,000 jobs in this sub-sector, whereas in 11 W/N/S European countries nearly 80,000 jobs in the car industry disappeared. Nevertheless, even in the six CEE countries just mentioned, the car industry's growth could not compensate for the negative developments in employment in most of the other sub-sectors of the industry.

For 2014-2016, an overview of the restructuring plans announced by employers in the industry and covered by the *Restructuring Events* database of Eurofound's EMCC provided some clues to employment developments. To this end, we have summarised the detailed data, based on the 358 notifications in this database, in Table 3.2.

The total number of employees involved was 218,000, some 110,000 of whom were covered by 205 positive notifications and approximately 108,000 by 153 negative ones. It should be noted that these amounts are based on initial announcements and that the final employment outcomes – 'good' or 'bad' – may have been considerably different following negotiations with trade unions and (local) authorities. As such, the total numbers should not be exaggerated. The estimated yearly labour turnover (the attrition rate) in Metal and electronics manufacturing in the 23 countries of approximately 12 per cent would imply annual mobility on the labour market of some 1.6 million workers in the industry, or a churn of around 4.8 million employees between 2014 and 2016 – among whom the 218,000 covered by the *Restructuring Events* database would make up less than five per cent. Yet, it is still worthwhile having a closer look at this information.

The notifications registered suggest further improvement in employment in the industry in particular for six CEE countries (Bulgaria, Czech Republic, Hungary, Poland, Romania and Slovakia) who, together, recorded 132 positive against 16 negative notifications. All of these six countries showed an increasing number of expansion announcements. If these messages are an accurate indication of the trend in Metal and electronics employment, then the net outcomes for the six CEE countries would imply a break with the decline in employment that official statistics otherwise displayed for the years 2008-2014. On the other hand, in 2015-16 the negative employment trend in the industry seems to have deepened particularly in Germany, Sweden and the UK.

Both positive and negative restructuring figures were strongly influenced by events in the car industry which, on the positive side, accounted for 130 notifications covering over 76,000 jobs and, on the negative side, for 32 announcements. Positive announcements for this industry made up the largest share of net positive figures for the six CEE countries mentioned above. Their contributions varied from 70 per cent of the positive job balance in Poland up to 95 per cent of that balance for Bulgaria and Romania. The negative notifications for the car industry concerned some 42,000 jobs, of which Volkswagen's announcement, in November 2016, to dismiss 20,000 of its German employees accounted for nearly one-half.

Table 3.2 **Overview of restructuring events in Metal and electronics manufacturing in 23 countries, 2014-2016**

	Positive		Negative		No. employees/messages by year		
	No. employees	No. messages	No. employees	No. messages	2014	2015	2016
Austria		*2*		*3*	*2*	*1*	*2*
	3,250		843		-573	-270	+3,250
Belgium		*2*		*4*	*1*	*4*	*1*
	550		3,076		-313	-112	-2,101
Bulgaria		*13*		*0*	*3*	*4*	*6*
	6,650		0		+1,350	+2,900	+2,400
Czech Republic		*19*		*4*	*7*	*5*	*11*
	9,710		840		+2,410	+1,000	+5,760
Denmark		*1*		*5*	*3*	*2*	*1*
	200		1003		-93	-360	-350
Estonia		*1*		*1*	*0*	*1*	*1*
	150		840		0	+150	-840
Finland		*6*		*9*	*2*	*3*	*10*
	2,680		3,378		+410	-578	-530
France		*9*		*11*	*5*	*3*	*12*
	6,758		7,035		-947	-563	+1,233
Germany		*10*		*44*	*23*	*15*	*16*
	15,100		52,951		-10,177	-2,135	-25,539
Hungary		*11*		*1*	*5*	*4*	*3*
	5,055		1,800		+330	+1,725	+1,200
Ireland		*2*		*2*	*2*	*1*	*1*
	260		310		+260	-140	-170
Italy		*3*		*11*	*6*	*4*	*4*
	1,950		5,067		-3,141	-538	+562
Latvia		*0*		*1*	*0*	*0*	*1*
	0		153		0	0	-153
Lithuania		*3*		*0*	*2*	*1*	*0*
	590		0		+440	+150	0
Netherlands		*1*		*5*	*1*	*1*	*4*
	3,000		3,137		-300	-1,400	+1,563
Poland		*38*		*4*	*11*	12	*19*
	17,330		1,637		+2,808	+3,510	+9,375
Portugal		*4*		*0*	0	*2*	*2*
	1,600		0		0	+700	+900
Romania		*23*		*3*	*14*	*1*	*11*
	13,475		1,137		+6,908	+500	+4,930
Slovakia		*28*		*4*	*13*	*8*	*11*
	8,889		1,365		+2,240	+1,164	+4,120
Slovenia		*10*		*5*	*5*	3	*7*
	1,890		1,682		-39	-723	+970

Spain		*4*		*5*	*3*	*2*	*4*
	3,636		1,866		+2,836	*+400*	-1,466
Sweden		*5*		*10*	*5*	*6*	*4*
	2,950		8,511		+127	-3,318	-2,370
UK		*10*		*21*	*12*	*9*	*10*
	4,187		11,455		-423	-3,856	-3,249
Total	**109,860**	***205***	**108,086**	***153***	***125***	***93***	***140***
Balance			**-1,774**		**+3,813**	**-1,794**	**-3,793**

Source: Eurofound European Monitoring Centre on Change (EMCC) *Restructuring Events* database, 2014-2016; for AT, BE, CZ, FR, DE, HU, IT, NL, PL, PT, RO, ES, SE, UK: events affecting the employment of 250 employees or more; for BG, DK, EE, FI, IE, LT, LV, SK, SI: events affecting the employment of 100 employees or more

3.2.3 FDI-related employment, 2008-2014

Between 2008 and 2010, the overall decline in employment in Metal and electronics manufacturing in foreign-owned affiliates was, at nearly ten per cent, much greater than employment decline overall. Notwithstanding that FDI-related employment recovered by just over ten per cent in the next four years, the net effect in the 23 countries was a decrease of some 30,000 employees in foreign-owned affiliates. Due to the large decrease in total employment between 2008 and 2014, however, the share of those employed in foreign-owned firms in the industry actually increased, from 29.2 per cent in 2008 to 31.4 per cent in 2014 (Table SA2.1).

In CEE countries, foreign-owned affiliates came to dominate the industry; their employment shares, already high, grew even further to reach, on average, 54 per cent in 2014. Such a large share overall was reached in five countries, namely, four CEE countries: Czech Republic (56 per cent), Hungary, Romania and Slovakia (all three 66-67 per cent); as well as Ireland (65 per cent). We found the lowest FDI shares for metal and electronics manufacturing in Italy (16 per cent) and Germany (20 per cent). Compared to the other four industries in our study, Metal and electronics manufacturing overall showed up as the most internationalised industry (Table SA6.4).

Data detailing developments in sub-sectors (not shown here) revealed that, for the 23 countries in 2014, the total FDI-related share was clearly highest in car manufacturing with 49 per cent, implying that nearly one-half of those working in this sub-sector in these countries were employed by foreign investors. At that point, European MNEs maintained a slight majority (54 per cent) of FDI-related employment in car production; as for country of origin, the largest shares were connected with German investors (26 per cent) alongside their competitors from the US (23 per cent), Japan (11 per cent) and France (8.5 per cent).

For 2014, we found very high shares of FDI-based employment in car manufacturing in Portugal (100 per cent), Slovakia (91 per cent), Romania (90 per cent), Hungary (86 per cent), the Czech Republic (84 per cent) and Poland (78 per cent). In the 1990s, based on the investments of initially German and US MNEs and, later on, Korean MNEs, supported by government tax and other incentives, a major car assembly

cluster emerged comprising the Czech Republic, southern Poland, Slovakia, northern Hungary and western Romania. The 2008-09 economic crisis marked a change in the strategies of leading car manufacturers, from acquiring existing (privatised) firms and subsequently, after EU accession in 2004, building greenfield plants to consolidate existing investments (Pavlínek 2015).

In car manufacturing, away from CEE countries, high FDI-related shares could also be noted in Spain (77 per cent), Belgium (73 per cent), Austria (69 per cent), UK (65 per cent), Sweden (62 per cent) and the Netherlands (60 per cent). As could be expected, Germany (20 per cent), France (25 per cent) and Italy (22 per cent), large countries who were all home to major domestic car manufacturers, showed much lower percentages. Between 2008 and 2014 in France and Italy, FDI-related employment shares in car manufacturing even fell, by four-five percentage points. In contrast, these shares increased over this period in most countries, modestly in Germany, Hungary and Poland (three-six percentage points), and more strongly in the Netherlands, Spain and Sweden (14-16 percentage points).

As for the share of total FDI-related employment, car manufacturing was followed by the Manufacture of basic materials (NACE 24; 38 per cent); Computer, electronics and optical products (NACE 26) and Other transport equipment (NACE 30, both 35 per cent); and thereafter by Electrical equipment (NACE 27, 32 per cent); and Machinery and equipment n.e.c. (NACE 28, 29 per cent). The employment share of FDI in Fabricated metal products except machinery and equipment (NACE 25; 17 per cent) was the lowest in these rankings.

In Table SA2.2, the country/sub-sector combinations (cells) where the share of FDI-related employment in 2014 was at least 50 per cent are indicated in italics. It turns out that, for 55 out of 161 cells (34 per cent), this was the case. The regional split showed this was true for 21 of 91 cells in W/N/S European countries and for no less than 34 of 70 cells in CEE countries.

In CEE countries, the expansion of FDI in the manufacturing of consumer electronics and electrical equipment basically followed the pattern as described for the car industry. That expansion resulted in a similarly high level of integration in the global value chains dominated by a small number of western European, US, Japanese and Korean MNEs. There is evidence that such integration, for example in car and electronics manufacturing in the Czech Republic and Hungary, can lead to an upgrading of products, processes and skills (Szent-Iványi 2017: 175).

Even so, contradictory trends can also be discerned. In the years after 2008, electronics manufacturing has proved to be rather footloose on a global scale. As regards Hungary, for example, three moves can be traced: relocation of the production facilities of German, US and Asian MNEs to that country; relocations taking place away from Hungary to China; and 'backshoring', i.e. the return from Asian locations to Hungary (Sass 2015: 267-268). Sales-leading firms, such as Apple, Cisco, LG and Microsoft, are increasingly focusing on product development and marketing while, through manufacturing contracts, redirecting production to huge industrial complexes located mainly (but not

only) in Asia. The major players here are Taiwan-based Hon Hai/Foxconn, currently by far the world's largest contract manufacturer, and Singapore-based Flextronics International. Furthermore, the flexible production models on display in consumer electronics in CEE countries tend to put wages, working conditions and job security in the lower tiers of the respective value chains under a heavy level of strain (cf. various contributions in Drahokoupil *et al.* 2016).

The Manufacture of other transport equipment follows car and electronics manufacturing, with six cells having majority FDI-related employment. Remarkably, Germany was significant in this latter sub-sector, with about two-thirds of employees being employed by foreign firms. Machinery and equipment n.e.c. (three cells) and Fabricated metal products except machinery (two cells), in contrast, had the lowest level of FDI penetration on this measure.

Concerning individual countries, two (Finland and Italy) had no sub-sectors at all with a majority of FDI-related employment, while six (Denmark, France, Germany, Sweden, UK and Slovenia) had just one sub-sector in this category. At the other end of the spectrum, in Hungary and Romania six of the seven sub-sectors included majorities of workers employed in foreign-owned firms while in Slovakia the number was five.

3.2.3 Concentration

In this section, we add some notes on the level of economic concentration in Metal and electronics manufacturing. Combining data from our Industrial Relations survey, the AIAS MNE database and Eurostat employment statistics, we can establish that, overall across the 23 countries, the largest five Metal and electronics employers in 2014 accounted for 15.3 per cent (unweighted average) or 14.6 per cent (weighted average[14]) of employment in the industry. These 'top-5' concentration ratios varied widely between countries, from three per cent in Poland, five per cent in Portugal and seven-eight per cent in the Czech Republic, Lithuania and Spain to 28 per cent in Sweden, 32 per cent in Denmark and 43 per cent in Ireland.

We have calculated 'top-5' percentages separately for car manufacturing, although it should be noted that only in Romania were the largest five companies in Metal and electronics all car and related (automotive) manufacturers; in five countries, four automotive manufacturers were among the 'top-5' and in three others there were three car manufacturers in this position. We included employment in 18 countries and 47 car manufacturing firms in calculating the averages, leaving out those five countries where car manufacturers were not among their largest five employers. The subsequent calculation of the concentration ratio for the car industry resulted in figures of 36.3 per cent (unweighted average) and 50.1 per cent (weighted average) – a large difference caused mainly by the huge number of employees working in 'top-5' German car

14. 'Unweighted' refers here to the average of the percentages of the 23 countries; 'weighted' to the number of employees in the 'top-5' firms in the 23 countries divided by the total number of employees overall.

manufacturers. We found the highest ratios in Sweden (80 per cent), Germany (71 per cent) and the Netherlands (70 per cent). Table SA6.2 presents the detailed outcomes.

We used these figures on concentration ratios and on FDI-related employment shares to look at their mutual relationship. Thus, we can calculate correlation coefficients for 2014 for Metal and electronics manufacturing overall, and for car manufacturing separately, covering the 23 countries. For the wider industry, the relationship proved to be weakly negative (R=-.180 for FDI shares/'top-5' percentages); but, for the car industry, it was even more negative (R=-.372). The outcomes were, however, quite country-specific. For a few countries (like Sweden) a high level of concentration combined with high FDI-related employment shares but, for most countries, that connection was rather minimal or lacking altogether.

In the car industry, a high FDI share repeatedly combined with modest or even low shares for automotive manufacturers in 'top-5' employment. This was particularly the case for the Czech Republic, Poland and Portugal. Developments within the car industry can, by and large, explain this apparent contradiction. Even if well-established car producers remained at the core of the national metalworking industry, the automation/robotisation efficiency gains have been so massive that the same levels of output as were achieved some two decades ago are now well within the reach of a workforce some 30-40 per cent smaller. Also, the refining and upgrading of outsourcing relationships in the car industry has allowed a greater role for formally independent suppliers, increasingly acting otherwise as co-manufacturers. In consequence, employment has shifted from core companies to these – often quite large – suppliers (cf. Sturgeon *et al.* 2008; Schmitt and Van Biesebroeck 2013; Krzywdzinski 2014b).

At first sight, another explanation for the shrinking base for employment in the car industry would be an increase in diversification and the growth of other sub-sectors in Metal and electronics manufacturing. However, reviewing the available statistics suggests this explanation is less likely. Between 2008 and 2014, employment in car manufacturing either fell, but less sharply than the average for Metal and electronics as a whole (Czech Republic and Portugal); or continued to grow while employment fell in the other sub-sectors (Poland).

We should add here that, in the last few years, foreign-owned car manufacturers in the eastern European cluster have faced mounting difficulties recruiting skilled and experienced workers. Employers in other skill-based industries, like IT-based business services, have also been confronted with shortages of skilled labour, notably in Poland, the Czech Republic and Slovakia. Obviously, MNE subsidiaries were poaching skilled workers from local companies in the 1990s and early 2000s to deal with this problem. However, these subsidiaries have themselves suffered from skill shortages recently, suggesting that poaching from local companies is, at best, a short-term fix for a longer-term problem (Drahokoupil and Galgóczi 2015**;** Micek 2015). However, shortages of skilled labour might be another factor leading electronics producers in countries like the Czech Republic, Hungary and Romania to stick with labour-intensive production models. In factories based on such models, relatively low wages and flexibility in terms of working time and employment sit alongside precarious conditions and the erosion

of trade union rights. Notwithstanding that governments have repeatedly supported such strategies by changes in labour legislation (Plank and Staritz 2013; Čaněk 2016; Schipper 2016), it remains an unproductive answer to the fundamental question of how to deal with skill shortages.

3.2.4 Major companies

We now turn our attention to the major companies we identified in Metal and electronics manufacturing. Outside of their home countries, ten MNE names figured three or more times among the five largest Metal and electronics employers per country in 2014, if we include the three 'special cases' of ABB, Autoliv and Ford (which do not strictly conform to our criteria). The key data in these profiles relate to 2014, but we have added major developments up to September 2017:

— Volkswagen Group (DE, NACE 29). Across Europe, VW was the most internationalised manufacturer in Metal and electronics manufacturing, with subsidiaries running production facilities in Belgium, Czech Republic (Škoda), Hungary, Poland, Portugal, Slovakia, Spain (Seat) and Sweden. In these eight countries, VW employed 86,100 people in 2014, as well as 265,300 in its home country. Jointly, these employees represented nearly three-fifths of the 592,600 that VW then employed in total (followed by a rise, in spite of the emissions scandal known as 'dieselgate', to be the world's largest car manufacturer with 626,700 people employed in 2016). In August 2014 and January 2016, Škoda made expansion plans public for two Czech factories, while VW in January 2016 made a similar announcement for its establishment in Poznan, Poland, contrasting sharply with the massive job cuts the parent firm announced in Germany, most notably in November 2016;

— ArcelorMittal (LU, NACE 24). In 2014, the steel producer, with its statutory seat in Luxembourg and 46 per cent of its shares owned by the Indian Mittal family, had manufacturing subsidiaries among the five largest firms in four countries – Belgium, Czech Republic, Finland and Spain – totalling 31,600 employees, or one-seventh of its 222,300 employees worldwide. Over 2016, the latter total decreased to 198,500;

— Siemens (DE, NACE 27). In 2014, the Germany-based metal and electronics conglomerate also had 'top-5' manufacturing subsidiaries in four countries – Czech Republic, Denmark, Portugal and the UK – jointly employing 27,910 people, on top of 114,000 employees in Germany, representing together some two-fifths of Siemens's 346,000-strong workforce. In March 2016, Siemens made restructuring plans public for German establishments leading to massive job cuts, similar to announcements in February and September 2015 regarding units in France. In contrast, Siemens had announced expansion plans for its UK facilities in July 2015. Over 2016, the Siemens worldwide workforce increased to 351,000 people;

— Groupe Renault (FR, NACE 29). The French car producer had manufacturing subsidiaries among the five largest firms in three countries – Romania (Dacia), Spain and Slovenia (Revoz) – jointly employing 27,800 people in addition to the 31,800 employees in its home base (50 per cent of the group total of 117,400 employees). In 2016, Renault announced expansion in France, Romania and Slovenia. By the end of that year, the group counted 124,800 employees;

— PSA Peugeot-Citroën (FR, NACE 29). This French car manufacturer also had manufacturing subsidiaries, including those of automotive parts manufacturer Faurecia (in which it held a 54 per cent majority interest), among the largest five firms in three countries – Poland, Portugal and Slovakia – jointly employing 14,200 people in addition to 71,700 employees in France. Recently, PSA's employment figures have followed a volatile pattern. In 2015 and early 2016, the group announced considerable expansion in France and Slovakia before, in October 2016, retreating on the basis of substantial job cuts in France. By the end of 2016, PSA had 170,200 employees worldwide, a drop of 19,500 employees compared with the total at the end of 2014. In August 2017, the French firm completed the takeover of Opel and Vauxhall, the ailing European brands of General Motors (US, NACE 29), which jointly employed 38,100 people in 2016;

— Robert Bosch (DE, NACE 29). The German conglomerate with major interests in car and industrial technology had 'top-5' manufacturing subsidiaries in three countries – Austria, Czech Republic and Hungary – which between them employed 16,600 people on top of its 128,400 employees in Germany (50 per cent of Bosch's total). In 2014-16, Bosch announced, on the one hand, expansion in Germany but, on the other, job cuts in its German Bosch Rexroth and Solar Energy subsidiaries; similarly announcing job cuts in Belgium but expansion plans in Hungary, Poland and Romania. At the end of 2016, the Bosch workforce had increased to 389,200 people worldwide, one-third higher than the 2014 total;

— ABB (CH/SE, NACE 27), the Swiss/Swedish MNE focusing on power and automation technologies owned manufacturing subsidiaries in three countries (Bulgaria, Finland and Sweden) which, including Sweden (19,200 employees), employed 27,420 people, one-fifth of the ABB total. At the end of 2016, ABB had 132,300 employees, six per cent less than in 2014;

— Autoliv (SE, NACE 29): the Swedish automotive parts supplier (albeit registered in Delaware, US) had production facilities in Estonia and Romania employing 8,420 people in addition to 7,500 employees in Sweden – together one-third of its December 2014 worldwide workforce of 50,800. In 2014 and again in 2016, Autoliv announced plans for considerable expansion in Romania. At the end of 2016, the firm's workforce had increased to 70,300 people;

— Volvo AB (SE, NACE 29) employed 3,500 people in 2014 in Belgium in its truck-producing facilities as well as 21,400 in its home base of Sweden, and a further 14,400 in France in the Renault Truck subsidiary, at that point jointly making up 40 per cent of its total of 94,600 employees. In June 2016, Volvo AB announced

expansion in its Swedish truck factory after earlier job cuts in other Swedish establishments. Its worldwide workforce had stabilised at 94,900 at December 2016;

— Ford Motor Company (US, NACE 29). The American car producer owned manufacturing subsidiaries in Spain and the UK, jointly employing 19,050 people in 2014, and employed 24,000 people in Germany, together making up 23 per cent of its worldwide employed workforce of 187,000. In 2015-16, Ford did not announce any restructuring in its European production facilities. At the end of 2016, the number of people working for Ford had increased to 201,000.

A number of Metal and electronics manufacturing MNEs had, by 2014, a range of more dispersed interests:

— Daimler Group (DE, NACE 29) employed 3,540 people in Hungary and 168,900 in its Germany home base, as well as 280,000 worldwide (December 2016: 282,500). After major restructuring and job losses in Germany in 2014-15, Daimler announced expansion plans in March 2016 in Romania;
— Ericsson (SE, NACE 26) employed 1,500 people in Estonia and 17,600 in its home base of Sweden which, in December 2014, made up one-sixth of Ericsson's 117,200 staff (December 2016: 105,900). In 2015-16, Ericsson announced massive job cuts in Sweden, hitting some 5,000 employees, as well as in Italy and Finland;
— Fiat Chrysler Group (Exor Group, IT, NACE 29), employed 2,640 people in manufacturing facilities in Poland and 61,300 in Italy as part of its worldwide employee base of 232,200 in December 2014 (December 2016: 234,500). After years of contraction, in late 2016 Fiat Chrysler announced expansion plans in Italy;
— Tata Group (India, NACE 24) employed 22,800 people by the end of 2014 in its steelworks in the Netherlands and in the UK. Throughout 2014-15 and in early 2016, Tata Steel announced plant closures in the UK. By the end of 2016, the massive Tata Group conglomerate employed over 689,000 people worldwide;
— Zhejiang Geely Holding Group (China, NACE 29) employed 20,850 people in 2014 both in Belgium and Sweden through its Volvo Car subsidiary. Throughout 2014-16, the Chinese parent firm unfolded expansion plans for its Swedish facilities. An annex to Geely's 2016 Annual Report notes 29,340 employees in Volvo Car by the December of that year.

Regarding their 2014-2016 employment figures, nine of these 15 MNEs were 'growers': VW, Siemens, Renault, Robert Bosch, Autoliv, Ford, Daimler, Fiat Chrysler and (most likely) Tata Group. Four showed decreased employment numbers (Arcelor-Mittal, PSA, ABB and Ericsson), while Volvo AB and Zhejiang Geely (only counting Volvo Car) seemed to have stabilised. Besides Robert Bosch and Autoliv, other automotive suppliers expanded substantially after 2013 in Austria, Bulgaria, Hungary and Romania. These expansions continued to shape the trend towards outsourcing and co-manufacturing operations in the car industry. Notable examples of this expansion were:

— Continental Automotive Group (Germany);
— LEONI Group (Germany);
— Magna International (Canada);

— Sensata Technologies (US);
— Sumitomo Electric Industries (Japan);
— Takata Corporation (Japan), and
— Yazaki Corporation (Japan).

According to the *Restructuring Events* database maintained by Eurofound, notifications of expansion from these seven firms in the four countries mentioned in 2014-16 covered a total of over 12,000 jobs.

Box 2 **Outcomes of the Bratislava seminar**

Presentations and debates at the WIBAR-3 seminar on Metal and electronics manufacturing (Bratislava, 23 September 2016), gave an illuminating overview of major developments in the industry. Six presentations* covered:
— collective bargaining in the metal sector in the Slovak Republic;
— the Slovak case study: experience from Volkswagen;
— introduction to industrial relations in metal and electronics in Hungary;
— collective bargaining at company level in the electronics sector in Hungary: trade union experiences, strategies, obstacles and achievements;
— industrial relations in Italy and collective bargaining in the Italian metal and electronics sector;
— collective bargaining in the UK car industry.

The major issues in the debate embraced the following issues: developments in employment, market structures, technology and employment; developments in industrial relations, including political conditions and the position (and lack) of employers' organisations; and the implications for collective bargaining practice.

Developments in market structures, technology and employment
Internationalisation/globalisation was revealed as a dominant factor in the European Metal and electronics manufacturing sector, with major implications for employees. In CEE countries in particular, unions and employees have evidently come under pressure from the combination of internationalisation and the retreat from social dialogue, including the positional weakening of trade unions and the general decrease in collective bargaining coverage. At the same time, the tensions around growing migration and the multicultural society have put further pressure on opportunities for collective action.

In most countries, a sharp division could be seen between subsidiaries of multinational firms, often with high union density, and the large majority of small firms with low or no union presence.** Moreover, in some sub-sectors and in some countries, collective bargaining was a near-impossibility due to the lack of any employers' organisation. The Czech and Polish delegates, in particular, noted this as a problem. In contrast, in Italy the existence of a multitude of employer federations has led to about 700 nationwide collective agreements in the metal industry, creating coordination and similar problems for all the parties to these agreements. It was also noted that Volkswagen seems to have exported elements of the German industrial relations system to countries like Italy, and that this could work out negatively for the position of trade unions, for example, where the

creation of works councils was achieved. It was recognised that, at least in some countries, the dominance of MNEs in sub-sectors like the car industry has contributed to the continuation of multi-employer bargaining although the spread effects of such practices to other (sub-)sectors remained quite limited.

For the car industry, various recent developments in technology and organisation were highlighted. It was observed that, in spite of the breakdown of the Japanese (country) model, 'world-class manufacturing' and 'lean production' have, notably in CEE countries, remained as leading trends and have spread from the car industry to other parts of Metal and electronics manufacturing. These organisational models imply the growth of ever more complicated subcontracting chains. It was argued from the union side that this growth requires multi-level bargaining while, at the same time, maintaining individualised forms of internal coordination. In large countries like Italy and the UK, it was suggested that regional coordination may be more effective than national coordination, in particular when dealing with pay scales and developing claims on specific arrangements, such as on work-life balance.

Developments in industrial relations

The general discussion focused on the role of governments. Participants especially from the Czech Republic and Poland reported worrying developments concerning the Labour Codes in their respective countries. A major, but increasingly difficult, task for the union movement under such conditions was to force employers and their organisations to the negotiation table. In this respect, some participants put a measure of hope in the revival of social dialogue as announced by the European Commission. Others expected more from genuine international trade union cooperation through the medium of transnational company agreements (TCAs). The issues raised by the relationship between unions and works councils featured strongly in the debate. Various participants argued that governments currently seemed to be gambling on strengthening works councils with the intention of weakening unions.

Finally, the presentation on (pay bargaining in) the UK car industry provoked discussion on how to strengthen collective bargaining preparation and related trade union policy-making. The importance was acknowledged of including as many lay activists as possible in preparing pay claims and of making full use of training opportunities and other supportive facilities, such as cooperation with worker consultants and progressive researchers. It was argued that the inclusion of broader layers of rank-and-file unionists could be highly important in the development of specific demands, for instance concerning the adaptation of work for older workers and ensuring vocational training schemes leading to the creation of challenging jobs for young workers.

In addition, the need was emphasised to build and maintain strong information and knowledge positions in leading companies while continuing to exert pressure for the improvement of information disclosure in company reporting. Participants regarded it as essential that collective bargaining should be evidence-based concerning the market positions of companies, their investment and innovation policies and the social impact of these.

* All presentations can be downloaded from the project website: https://wageindicator.org/main/Wageindicatorfoundation/projects/wibar-3. It should be noted that these presentations may contain information that has, in the meantime, become outdated and may have been replaced by data used in this book.

** It is relevant to note that maintaining a high level of unionisation has proved to be easier in privatised companies (like koda in the Czech Republic: 70 per cent union density in 2013) than building up a union organisation from scratch in greenfield investments, as in the subsidiaries of Hyundai in the Czech Republic (15 per cent density) or Kia in Slovakia (28 per cent). Even so, whether the practices of recognising and negotiating with workers' representatives emerged were also dependent on a number of other factors, not least the industrial relations that the MNEs concerned practised in their home countries alongside employees' ability to influence public opinion in these countries (Drahokoupil *et al.* 2015).

3.3 The Wholesale industry

3.3.1 Employment in 2014

The Wholesale industry, accounting in 2014 for over 8.6 million employees in the 23 countries (nearly seven million in W/N/S countries and over 1.6 million in CEE countries), was ranked fourth in terms of waged employment out of the five industries in our study.[15] The share of total employment taken by Wholesale was 4.2 per cent.

The variation in this share across countries was somewhat lower than in the other industries, although still considerable. The lowest share was found for Italy (3.2 per cent) and the highest for Denmark (7.3 per cent) (Table SA6.6). Table SA3.1, covering both Wholesale and Retail, shows that Denmark was exceptional since its employment share in wholesale was larger even than that of the retail industry. Furthermore, wholesale and water (sea) transport may well be complimentary: Denmark also has a high share of employment in the latter sub-sector (cf. Dachs *et al.* 2016: 16, 24).

Overall in the 23 countries, the contribution of the share of wholesale employment to the share taken by commerce more broadly was 37.3 per cent (Table SA3.1). It should be added that the distinction between retail and wholesale activities has become increasingly blurred. For example, large retail chains have expanded into wholesale operations, although these are mostly classified under 'Retail'.

Table SA3.3 details employment for 2014 in the eight sub-sectors of the wholesale industry, positioned in various value chains between manufacturers and end consumers. In W/N/S European countries, the Wholesale of household goods (NACE 46.4) was the largest sub-sector, followed by Other specialised wholesale (NACE 46.7) and the Wholesale of food, beverages and tobacco (NACE 46.3). Jointly, these three sub-sectors accounted for 70 per cent of total wholesale employment in this part of Europe. In CEE countries, the same three sub-sectors covered some 60 per cent, although the sub-sector for Other specialised wholesale was at the top.

More specifically, various patterns of specialisation across countries can be traced. For example, the Netherlands showed relatively large numbers of employees in the Wholesale

15. According to Eurostat's *Structural Business Statistics*, between 2008 and 2014 the total share of self-employed and similar in wholesale for the 23 countries fell from 15.0 to 12.5 per cent and was rather balanced across countries except for the Czech Republic and Slovakia, where substantial increases (of 14 and 24 percentage points, respectively) could be noted. In 2014, this share varied widely, from 38 per cent in Italy, 23 per cent in the Czech Republic and 19 per cent in Poland to 3 per cent in the UK and 2 per cent in Estonia and Latvia.

of agricultural raw materials and live animals (NACE 46.2). In Spain and Romania, large numbers of employees were in the Wholesale of food, beverages and tobacco whereas in Denmark, Germany and the Netherlands, the Wholesale of household goods also garnered large numbers. Employment in Other specialised wholesale was relatively sizable in Germany and Poland, as were the numbers of employees in Non-specialised wholesale trade (NACE 46.9), again especially in Poland.

3.3.2 Development of employment, 2008-2014

Employment trends in the wholesale industry have diverged between W/N/S European and CEE countries. Between 2008 and 2010, waged employment in wholesale for the 23 countries in total increased by 2.4 per cent, comprising an increase of nearly five per cent in the former country grouping and a fall of nearly eight per cent in the latter. Between 2010 and 2014, employment decreased slightly in W/N/S European countries (by 0.3 per cent) but decreased more quickly (by 2.3 per cent) in CEE countries. The net result over 2008-2014 was an increase of some 38,000 in the employed base, made up of a 44,000 growth in W/N/S European countries and a small decrease in the CEE country group (Table SA3.2).

Table SA3.4 details the development of wage-earner employment in the sub-sectors of the industry for the period 2008-2014. In the crisis and immediate post-crisis years, the wholesale industry clearly developed in divergent ways, with a number of countries and sub-sectors suffering serious losses of employment. In the W/N/S European group, this was particularly the case in Portugal and Spain, where job losses took place in all eight sub-sectors. As many as eight CEE countries went through a similarly negative experience, most seriously in the Baltic countries and in Romania. In the CEE group, only the Czech Republic witnessed overall employment growth in wholesale whilst, in the W/N/S Europe group, Austria, Denmark, France, Germany, Sweden and the UK all posted growth.[16]

In most W/N/S European countries, employment in Wholesale on a fee or contract basis (NACE 46.1) showed serious decline, while the experience of CEE countries in this respect was quite diverse. The Wholesale of agricultural raw materials and live animals also showed a diverse picture, with strong employment growth in five CEE countries. In contrast, in six CEE countries the numbers employed in the Wholesale of food, beverages and tobacco fell considerably, whereas in W/N/S Europe this was the case only in Ireland, Portugal and Spain. Job losses in most CEE countries were even bigger in the Wholesale of household goods, but in W/N/S Europe the outcomes were rather mixed. Developments in employment in the four remaining sub-sectors – the Wholesale of ICT equipment (NACE 46.5); the Wholesale of other machinery, equipment and supplies (NACE 46.6); Other specialised wholesale; and Non-specialised wholesale – showed a very mixed picture irrespective of country grouping (Table SA3.4).

16. Although it should be noted for Denmark and Germany that changes in the official registration of wholesale and retail employment in 2009 may be at least partly responsible for this outcome.

3.3.3 FDI-related employment, 2008-2014

By 2014, the share of employment of foreign-owned firms in Wholesale in total had returned to its 2008 level; that is, to 23 per cent. The highest rates of FDI-related employment in 2014 were in Sweden (37 per cent) followed by Austria, Denmark, Finland, the Netherlands and Latvia, all in the 31-33 per cent range. The lowest FDI employment shares for Wholesale were found in Italy, Portugal, Spain and Estonia, all in the 15-16 per cent range (Table SA3.2).

According to Eurostat's FATS statistics for the 23 countries as a whole (not shown), employment in foreign-owned wholesale affiliates is connected slightly more to investors from EU countries (51.5 per cent in 2014, 51 per cent for the EU-28) than with their competitors from outside the EU. Nevertheless, as regards country of origin, American MNEs in that year made up the largest group of foreign investors in wholesale, accounting for 22 per cent of FDI-related employment; next came MNEs based in Germany (17 per cent), France (eight per cent), Switzerland (seven per cent) and Japan (six per cent). With the rapid growth of primarily US-owned digital commerce platforms, such as Amazon, American MNEs may come to dominate wholesaling.

Eurostat data detailing developments in the eight sub-sectors (not shown) indicate that, for all the 23 countries together, the FDI-related share in 2014 was highest in the Wholesale of ICT equipment (43 per cent), followed at some distance by the Wholesale of household goods (30 per cent); the Wholesale of other machinery, equipment and supplies (27 per cent); Wholesale on a fee or contract basis (23 per cent); Non-specialised wholesale (20 per cent); Other specialised wholesale (19 per cent); and the Wholesale of food, beverages and tobacco (16 per cent). The Wholesale of agricultural raw materials and live animals sub-sector was considerably less internationalised, as indicated by its FDI-related employment share of just eight per cent. The average employment shares of foreign-owned firms in these sub-sectors were remarkably similar for both W/N/S European and CEE country groups.

In Table SA3.3, those country/sub-sector combinations (cells) in which the 2014 share of FDI-related employment in wholesale was at least 30 per cent are indicated in italics. This concerns 33 out of 184 cells (18 per cent) of which some 26 were in W/N/S European countries and only seven in CEE countries. The relatively high degree of internationalisation of the Wholesale of ICT equipment was reflected in 13 out of 23 countries exceeding the 30 per cent FDI yardstick in this sub-sector in 2014. Here, the Netherlands had the highest share of FDI-related employment (55 per cent, the only cell in the wholesale industry exceeding 50 per cent), followed by Germany and the UK (both 43 per cent). In the Wholesale of household goods, seven countries had over 30 per cent employed by foreign-owned firms, with Sweden (44 per cent) at the top. Other cells with relatively high FDI-related employment were those of Austria and Sweden in the Wholesale of other machinery, equipment and supplies (both 40 per cent).

3.3.4 Concentration

The figures presented above suggest that the expansion of foreign investment in wholesale has developed on a rather haphazard basis. This may well be related to the highly specialised character of large parts of this industry, with low degrees of concentration and often strong positions being held by small and medium-sized enterprises, i.e. firms employing fewer than 250 people. According to Eurostat's *Structural Business Statistics*, nearly four in five (79 per cent) of all those employed in wholesale, in 19 out of the 23 countries for which information was available in 2014, could be found in SMEs. In 12 W/N/S European countries (other than Ireland), the employment share of large firms, employing 250 people or more, was 23 per cent whereas in seven CEE countries (other than Estonia, Lithuania and Slovenia) it was much lower, at only 14 per cent. Across the five industries scrutinised, these figures were by far the lowest. This size division has been stable from 2008 and shows rather consistently among the various wholesale sub-sectors (Dachs *et al.* 2016: 35-36). Interestingly, the employment shares of large enterprises were particularly low in the wholesale sectors of smaller economies, for instance seven per cent in Portugal and Latvia. They were highest in the large economies, notably Germany (30 per cent), France (32 per cent) and the UK, where a 37 per cent share was posted.

Linking data from our Industrial Relations survey and the AIAS MNE database with Eurostat data for 2014, we found that, within the 23 countries, the largest five wholesale employers in that year only accounted for an average of 7.4 per cent (unweighted) or 4.7 per cent (weighted) of wholesale employment – again, the lowest outcomes among the five industries studied. Across countries, these 'top-5' concentration ratios varied from only two per cent in Austria and France, rising to 18 per cent in Ireland, 21 per cent in Denmark and a rather high 42 per cent in Finland. Table SA6.2 shows the detailed outcomes.

3.3.5 Major companies

One highly internationalised and dominant MNE (the Germany-based METRO Group) could be traced in the Wholesale of food, beverages and tobacco (NACE 46.3), but employment elsewhere in this sub-sector was not particularly FDI-related, as its foreign employment share of 16 per cent testifies. In 2014, METRO Group's activities outside Germany, through its wholesale brands Metro and MAKRO Cash & Carry, were ranked among the five largest wholesale operations in terms of employment in no less than 13 countries, namely: Austria; Belgium; Bulgaria; Czech Republic; France; Hungary; Italy; Netherlands; Poland; Portugal; Romania; Slovakia; and Spain. On top of employing 14,800 people in the METRO branch in Germany in September 2014, Metro/MAKRO Cash & Carry employed a further 49,900 people in these 13 countries, making a total employment base of about 64,700.

METRO's wholesale activities abroad expanded strongly up to around 2010 but, from 2014, significant divestment took place in some countries. In that year, METRO announced it would cease its Cash & Carry operations in Denmark and it also restructured

its Belgian operations with substantial job losses. In 2016, this restructuring continued and an even larger staff reduction took place in MAKRO Cash & Carry Poland. Averaged over 2015/16, METRO Group employed 219,700 people, implying that the group had 36,300 fewer employees than two years previously. Alongside its wholesale activities, the company had considerable retail interests through Real and Galeria Kaufhof in Germany (NACE 47.1) as well as through its Media-Saturn consumer electronics holding (NACE 47.4). In Germany, averaged over 2013/14, Real, Kaufhof and Media-Saturn together employed 98,100 people, meaning that METRO ranked among the five largest retail employers in that country. It was, otherwise, ranked in this way only in Bulgaria and Slovakia but, if the numbers of the employees of Media-Saturn are included in the firm's total employment, then the Group also achieved 'top-5' rankings in Austria and the Netherlands. This can be seen in Table SA3.8, showing an overview of the largest five employers in Commerce. In March 2016, METRO Group announced a 'demerger': METRO Wholesale & Food Specialist would be split from Media-Saturn and renamed CECONOMY, a split that came into effect in July 2017.

The France-based Sonepar Group was the only other MNE which had major interests in wholesale in more than four of the 23 countries scrutinised. Sonepar concentrated on the Wholesale of electrical/electronic equipment and supplies (NACE 46.6) which, with 27 per cent FDI-related employment, is a relatively strongly internationalised subsector. Outside France, Sonepar subsidiaries ranked among the five largest wholesale employers in six countries: Austria; Belgium; Estonia; Germany; Netherlands; and Romania. Altogether in these countries, the French firm employed some 15,700 people out of a group 2014 total of 42,000 (2016 total: 43,000).

A competitor of Sonepar was another France-based MNE, Rexel. At the end of 2014, Rexel totalled 30,000 employees (2016: 27,000).

There were three other MNEs with major wholesaling interests in 2014 and 'top-5' subsidiaries in more than one of the countries studied, as follows:

— Coop Group (NACE 46.3), headquartered in Basel, Switzerland. Through its Transgourmet Holding, it controlled food wholesaler SELGROS Cash & Carry. SELGROS was among the five largest wholesale employers in Germany, Poland and Romania, employing jointly 15,400 people in 2014. At that point, the Coop Group at large had about 77,000 employees (2016: 85,000);
— the South Africa-based Bidvest Group (NACE 46.3), owning 'top-5' food wholesalers in Belgium and the UK and jointly employing some 6,000 workers. By mid-2014, Bidvest had a worldwide total of 143,828 employees, but this decreased, after splitting off Bidcorp food services in 2016, to 114,000 (Bidcorp's 2016 employment base was 24,064);
— the Germany-based Phoenix Group (NACE 46.4), a wholesaler of pharmaceutical products and among the 'top-5' wholesalers in Estonia, Italy and Slovakia; by mid-2014, Phoenix Group employed 28,555 people (29,745 by mid-2016).

3.4 The Retail industry

3.4.1 Employment in 2014

In 2014, the Retail industry was, in employment terms, the largest of the five industries we studied, accounting in the 23 countries for more than 14.5 million employees. Just over 12.1 million were located in W/N/S EU countries and over 2.3 million in CEE countries. Additionally, according to Eurostat statistics, about 3.5 million (19.5 per cent) of all those employed in retail were self-employed or had a similar employment status.[17] In 2014, retail employment took 7.0 per cent of total waged employment (headcount) in the 23 countries, 7.3 per cent in the W/N/S EU country group and 5.7 per cent in the CEE group.

The employment shares taken by retail varied widely in separate countries, from 4.6 per cent in Italy and the Czech Republic up to 10.2 per cent in the UK and 10.3 per cent in Latvia (Table SA6.6; though note the large shares of self-employed people in Italy and the Czech Republic, see footnote 19). If these shares were calculated on an FTE basis, they would end up 1.0 to 2.2 percentage points lower because of the large numbers of part-time workers in retail.

Across Europe, retail is the largest of the low-wage industries. Based on *WageIndicator* data for 2006-2011, covering ten EU member states and five industries, the median gross hourly wages of workers in domestic retail firms were consistently amongst the lowest ranked, followed by wages in retail MNEs (Van Klaveren *et al.* 2013: 270[18]).

In considerable parts of retail, people work on the margins of the labour market and union efforts to organise them meet structural difficulties, not least due to their geographical dispersion, often in small establishments. In the EU-28, in 2014 over three in five workers in retail (61 per cent) worked in firms employing fewer than 250 people, although their share varied widely across countries, from 87 per cent in Bulgaria and 81 per cent in Romania to only 31 per cent in the UK (source: Eurostat, *Structural Business Statistics*). Other common features of retail employment throughout Europe, intertwined with this characteristic dispersion, are the prevalence of part-time employment and the high share of female workers.

A second major feature of retail employment is the high share of women, who accounted for approximately 63 per cent of retail employment in the EU-27 in 2012. In the W/N/S country group, the share taken by women varied from below 55 per cent in Denmark to 72 per cent in Germany, whereas in CEE countries on average nearly seven out of ten

17. According to Eurostat's Structural Business Statistics, the share of the self-employed varied widely across countries, from 45 per cent in Italy, 36 per cent in the Czech Republic and 31 per cent in Spain to 8 per cent in Estonia and Latvia and only 5 per cent in the UK. Between 2008 and 2014, the total share fell by 1 percentage point while slightly falling in most countries except in Slovakia and Hungary, where there was considerable growth (25 and 11 percentage points, respectively).

18. We refer here to the WIBAR-2 research project. In the first WIBAR project, covering 13 industries in nine EU countries (Van Klaveren and Tijdens 2008), and in a five-country research project (Denmark, France, Germany, Netherlands and UK; cf. Mason and Salverda 2010), the hotels and restaurants industry consistently turned out to have the highest incidence of low pay, even higher than that of retail.

retail workers are women (Eurostat 2013). More recent figures are only available for commerce more generally. For 2016, these show that, in the 23 countries, women made up 49.4 per cent of the commerce workforce, the same share as for the EU-28. In the W/N/S country group, the share taken by women was 48.2 per cent, while in the CEE country group it was, at 55.3 per cent, substantially higher. The highest shares taken by women in commerce are to be found in Austria and the three Baltic countries (source: Eurostat, *Employment by sex, age and economic activity*).

Box 3 **Part-time work and retailers' staffing strategies**

The high incidence of part-time workers is a major feature of retail employment. Across all the countries involved in our project, the retail trade showed itself to be highly dependent on fluctuating consumer streams, with retail hours invariably extending beyond standard daytime working hours. Retail employers in western Europe have responded to these fluctuations and non-standard operating hours by making substantial use of part-time labour to achieve the operating flexibility that long shopping hours require. In a number of W/N/S countries (Denmark, Germany, UK) as much as half of the retail workforce is made up of part-time workers, though within this country group the differences are substantial, from France with less than 30 per cent part-timers to the Netherlands where part-timers make up approximately 70 per cent of the retail workforce (Van Klaveren 2010; Carré and Tilly 2017).

As was underlined in various contributions to the Amsterdam project seminar, flexible staffing has been, and remains, a central strategy in retailing all over Europe. Employers' flexibility strategies appear in different forms and with different effects. In some countries, the search for flexible staffing has prompted retail employers to exploit 'exit options': exemptions, exceptions or loopholes in national institutional settlements regulating wages and working conditions. In the Netherlands, for example, low statutory minimum youth wages have created such an option for many years. In Germany, the introduction of marginal part-time employment contracts – so-called mini-jobs – has enabled very low wages to be paid in particular to many women workers who do not expect to earn a substantial part of household income (Van Klaveren and Voss-Dahm 2011).

In a country like Sweden, with a strong trade union movement and an institutional context more supportive of 'high road' strategies – even in the retail industry—where workers' interests are more to the fore, employers do meet substantial resistance against efforts to implement further flexibilisation strategies. In Sweden, and in some CEE countries like Hungary, the hiring of temporary workers through agencies seemed to offer a way out for retail employers. In contrast, the Dutch and German retail industries continued to display a low share of temporary workers (Andersson *et al.* 2011; Tullberg *et al.* 2014; Van Klaveren and Voss-Dahm 2011; information from Tibor Meszmann on Hungary). Participants from CEE countries emphasised that the recent influx of students and others working on temporary contracts – clearly less regulated than in Sweden – has been widespread in retailing and continues to put pressure on wages and conditions in these countries.

For some countries, a considerable proportion of young workers is another feature. In 2012, in the EU-27 the overall share of workers aged 15-24 in retail employment was 16 per cent, but that share was much higher in Denmark and the Netherlands, at

48 and 44 per cent respectively, as well as in the UK, Finland and Sweden (27-28 per cent). In contrast, the share of retail employment taken by young workers was below the EU average in France, Germany, Belgium and all CEE countries except Estonia; in Italy, Spain, Czech Republic and Hungary it remained even below ten per cent (Eurostat 2013). Again, more recent Eurostat figures embrace commerce. These indicate that, in 2016, 12.7 per cent of the commerce workforce of the 23 countries (as well as in the EU-28) was aged 15-24 with, once more, high ratios of young people in Denmark, the Netherlands, the UK, Finland and Sweden.

The sub-sector for Supermarkets and department stores (NACE 47.1, Retail sale in non-specialised stores) was, in 2014, by far the largest retail sub-sector, accounting for 43 per cent of the industry's employment in the 23 countries – 41 per cent in the W/N/S country group and just over one-half of all retail employees in CEE countries. The heterogenous sub-sector Retail sale of other goods in specialised stores (NACE 47.7) emerged as the second largest, accounting for 29 per cent of retail employment – 30 per cent in the W/N/S country group and 23 per cent in CEE countries. The other retail sub-sectors remained much smaller, with rather limited variation in their shares across country groups and countries (Table SA3.7).

3.4.2 Development of employment, 2008-2014

Employment in the retail industry, captured in Table SA3.5, shows diverging developments across Europe, similar only in part to those in the wholesale industry. Both in 2008-2010 and 2010-2014, overall waged employment in retail increased slightly, although developments varied across country groups; for example, in both time periods retail employment in W/N/S European countries grew modestly, while in CEE countries in the first period a considerable decrease of nearly seven per cent was followed by a slight decrease in the second. As for individual countries, 2008-2014 saw a strong increase in Austria, France and Slovakia; but a decrease in Ireland, Portugal and Spain along with six CEE countries: Czech Republic; Latvia; Lithuania; Hungary; Poland; and Romania.[19]

Table SA3.7 details the development of wage-earner employment in the seven sub-sectors of the retail industry for 2008-2014. Across sub-sectors, developments in the two country groups varied considerably. All sub-sectors, except the combined sub-sectors Other retail sale via stalls and markets (NACE 47.8) and Other retail sale via mail order houses or via the internet (NACE 47.9), saw employment in CEE countries decrease. In this combined sub-sector, the strong increase in internet sales clearly had employment effects in both country groups. From 2013, the internet seller Amazon showed strong employment growth, expanding notably in warehousing facilities in the Czech Republic, Germany, Ireland, Poland and the UK.

19. As with wholesale, we should be aware that, for Denmark and Germany, changes in official registration may have distorted statistical outcomes after 2009.

At the Amsterdam project seminar, examples from various countries were presented illustrating that the expansion of internet selling had gone hand-in-hand with a growing amount of precarious jobs, the worsening of employment contracts and managerial refusals to enter into collective bargaining. In this respect, the considerable number of strikes and strike threats at Amazon's affiliates in Europe in the period 2013-2016, in the countries mentioned above other than Ireland, should hardly have been a surprise (AIAS and ETUI *Collective Bargaining Newsletter*; website ver.di/Amazon).

Table SA3.7 also shows that countries suffering net employment losses in retail did so on a wide front: Ireland and Spain lost employment in all seven sub-sectors of the industry; the Czech Republic, Latvia and Lithuania in six; and Portugal, Hungary, Poland and Romania in five. Except for Ireland, in western and northern European countries the pressure on consumers' purchasing power mainly seems to have had an impact on the Retail sale of ICT equipment, Other household equipment and Cultural and recreational goods. As for CEE countries, the decrease of retail employment in Latvia, Lithuania, Hungary, Poland and Romania shows many similarities with the decreases in Ireland, Portugal and Spain.

An overview of the restructuring plans announced by wholesale and retail employers as recorded by Eurofound's *Restructuring Events* database for 2014-2016 provides some clues about recent employment trends in both industries. Table 3.3 shows that retail businesses accounted for the large majority (304 out of 339, or 89 per cent) of all notifications. The total number of employees covered was 208,000, some 125,000 of whom were covered by positive messages and 83,000 by negative ones (these amounts are based on initial announcements, and the final employment outcomes – 'good' or 'bad' – may have been different). Either way, the total numbers should not be exaggerated. A conservative estimate that yearly labour turnover (attrition) in retail in the 23 countries amounts to approximately 20 per cent (Van Klaveren 2010) would imply an annual labour market mobility of some 2.8 million retail workers. Over 2014-2016, this would suggest an attrition total of approximately 8.4 million, of which the 185,000 identified in Table 3.3 would make up just over two per cent.

The total number and nature of the notifications suggest a rather dark picture for 2014-2016 for four countries – Austria, Finland, the Netherlands and France – whereas six countries – the Czech Republic, Italy, Poland, Romania, Spain and the UK – showed a positive balance. Across the countries, the numbers were particularly influenced by:

— expansion of discount supermarket chains, notably Aldi (DE) in the Czech Republic, Ireland and the UK; and Lidl/Kaufland (Schwarz Gruppe, DE) particularly in Italy, Lithuania, Poland and, again, the UK;
— expansion of supermarket chains operating in middle or higher segments, mostly in home or neighbouring countries or in countries where they already had vested interests, like Albert Heijn (Ahold, NL) in Belgium; Biedronka (Jeronimo Martins, PT) in Poland; Carrefour (FR) in Romania and Spain; the Lithuania-based Maxima Grupe in the Baltic countries; and Esselunga in its home country of Italy;
— expansion of internet-based retailers, notably Amazon (US);

— bankruptcy or closure of department store chains operating in the middle segment affecting large numbers of employees; this was the case when, in 2016, V&D (Netherlands, owned by Sun Capital of the US) and British Home Stores (UK) filed for bankruptcy, the latter after the dubious extraction of dividends and fees left a pension deficit of well over £500 million (Hudson 2016: 266).

Table 3.3 **Overview of restructuring events in Wholesale and Retail in 23 countries, 2014-2016**

	Positive		Negative		No. employees/messages by year		
	No. employees	No. messages	No. employees	No. messages	2014	2015	2016
Austria		*3*		*4*	*1*	*2*	*4*
	1,230		4,185		-255	-3,800	+1,100
Belgium		*4*		*12*	*8*	*2*	*6*
	2,250		3,856		-1,239	0	-587
Bulgaria		*2*		*0*	*1*	*0*	*1*
	300		0		+100	0	+200
Czech Republic		*4*		*1*	*2*	*2*	*1*
	3,350		102		+200	+48	+3,000
Denmark		*0*		*3*	*1*	*1*	*1*
	0		1,150		-700	-150	-300
Estonia		*3*		*0*	*1*	*1*	*1*
	819		0		+350	+119	+350
Finland		*0*		*7*	*2*	*2*	*3*
	0		3,657		-947	-950	-1,760
France		*19*		*26*	*16*	*11*	*18*
	7,510		9,014		-1,926	-3,105	+3,527
Germany		*15*		*18*	*10*	*10*	*13*
	4,740		7,089		-2,507	-1,159	+4,317
Hungary		*3*		*3*	*1*	*2*	*3*
	485		1,101		+155	-972	301
Ireland		*8*		*1*	4	*0*	*5*
	3,500		580		+1,960	0	+1,060
Italy		*8*		*5*	*3*	*6*	*4*
	8,600		2,497		+1,206	-403	+5,300
Latvia		*2*		*2*	*3*	*0*	*1*
	220		285		+110	-185	
Lithuania		*5*		*2*	*1*	*1*	*5*
	1,920		803		-136	-667	2,100
Netherlands		*3*		*19*	*11*	*1*	*10*
	3,250		15,765		-2,050	+350	-10,725
Poland		*36*		*7*	*17*	*8*	*18*
	15,734		3,470		+9,420	+1,473	+1,201
Portugal		*4*		*2*	*2*	*3*	*1*
	847		359		+360	-109	+237

	Positive		Negative		No. employees/messages by year		
	No. employees	No. messages	No. employees	No. messages	2014	2015	2016
Romania		*21*		*2*	*7*	*7*	*9*
	10,608		205		+2,313	+2,195	+5,895
Slovakia		*4*		*0*	*0*	*4*	*0*
	550		0		0	+550	0
Slovenia		*2*		*0*	0	*1*	*1*
	320		0			+220	+100
Spain		*9*		*8*	*5*	*7*	*5*
	10,914		3,126		-26	+3,385	+4,429
Sweden		*1*		*2*	*0*	*2*	*1*
	150		400			-70	-180
UK		*34*		*28*	*21*	*19*	*22*
	47,675		25,331		+16,834	+9,445	-3,935
TOTAL	**124,972**	**187**	**82,975**	**152**	**117**	**92**	**130**
Balance			**+41,997**		**+23,822**	**+5,670**	**+12,505**
Balance Wholesale		14	+1,715	21	-898	+3,548	-935
Balance Retail		173	+40,282	131	+24,720	+2,122	+13,440

Source: Eurofound European Monitoring Centre on Change (EMCC) *Restructuring Events* database, 2014-2016; for all countries, events affecting the employment of 100 employees or more

The development of e-commerce (sales and purchases over computer networks such as the internet) has become increasingly relevant to the shape of market structures and work in both wholesale and retail. The adoption of e-commerce, jointly with marketing and process innovations enlarging market transparency, such as devices for barcode scanning, is likely to lead to increasing 'disintermediation'; that is, retailers dealing directly with manufacturers and thus to increased pressure on wholesalers' margins and employment (Dachs *et al.* 2016). A 2017 Eurostat survey found that, during 2016, nearly one out of five enterprises (18 per cent) in the EU-28 had made e-commerce sales (2008: 11 per cent). Across countries, the share of such enterprises ranged from a high of 33 per cent in Ireland, followed by Sweden (31 per cent) and Denmark (30 per cent), to a low of eight per cent in Romania (Eurostat *E-commerce statistics*).

Another Eurostat survey undertaken in 2017 found that, in the EU-28, nearly three in five individual internet users aged 16 to 74 (57 per cent) had, in that year, ordered or bought goods and services online. The proportion of these e-shoppers also varied considerably, from less than 20 per cent in Bulgaria and Romania to 81 per cent in Sweden and 82 per cent in the UK (Eurostat *Digital economy and society statistics*).

3.4.3 FDI-related employment, 2008-2014

In W/N/S countries, employment in foreign-owned retail affiliates initially fell somewhat (by 2.2 per cent) in the 2008-2010 period, but it increased substantially (by over 13 per cent) in CEE countries. From 2010 until 2014, however, with over 21 per cent employment growth, foreign investment in the W/N/S European retail sector

recovered massively. In CEE countries, the growth rate was more modest, but still over 14 per cent.

This strong growth boosted the shares of FDI-related employment in retailing up to 18 per cent overall with a figure of nearly 16 per cent in W/N/S European countries and no less than 29 per cent in CEE countries. Remarkably, while the FDI-related employment share in Retail in W/N/S Europe for 2014 remained over seven percentage points below that for Wholesale, the trend in CEE countries was exactly the opposite, with the joint Retail share of foreign firms rising some seven percentage points higher than that of Wholesale (Tables A3.2 and A3.5).

From 2008, large French and German MNEs invested substantially in supermarket chains and related store formats in Austria and a number of CEE countries: Auchan; Carrefour; Aldi; REWE; and the Schwarz Gruppe (Lidl, Kaufland). So, at least initially, did UK-based Tesco. Due to the sheer size of employment in Supermarkets and department stores, this expansion had a major impact on the shares of FDI-related employment in Retail. By 2014 in the Czech Republic and Slovenia, employment in foreign-owned retailers had risen to almost 50 per cent, followed by Austria (37 per cent) and Hungary (34 per cent). Yet, foreign retailers had evidently penetrated on a quite limited scale in Bulgaria (12 per cent) and Germany (8 per cent; in 2014, foreign firms employed only four per cent of the staff of all German supermarkets and department stores). Outside of Bulgaria, in all CEE countries more than one in five Retail staff was employed in foreign subsidiaries (Table SA3.5). The company overview in Table SA3.8 confirms that, by 2014, in Austria, Czech Republic, Poland, Romania and Slovakia, foreign-owned MNEs owned all the five largest companies in Commerce.

In the retail industry, European MNEs, jointly with large domestic firms, continue to determine investment patterns in the 23 countries. MNEs from outside the EU have persistent difficulties in penetrating European end-consumer markets. Eurostat's FATS statistics (not shown) confirm that employment in foreign retail affiliates in the 23 countries was linked more strongly with investors from EU countries than with their non-EU competitors; in 2014, the latter accounted for 29 per cent (29.5 per cent for the EU-28). German MNEs formed the largest group of foreign investors in retailing, accounting in 2014 for 19 per cent of FDI-related employment. Next came American investors (14 per cent) and MNEs based in France (12 per cent), the UK (nine per cent) and the Netherlands (seven per cent). Japanese investors did not yet play any significant role in European retail.

In the Supermarkets and department stores sub-sector, with 18 per cent FDI-related employment in 2014 reflecting exactly the average for the industry as a whole, the presence of non-EU competitors was even lower; they accounted for 24 per cent of FDI-related employment. Employment in foreign-owned supermarkets and department stores was mostly related to MNEs based in Germany (27 per cent), France (17 per cent), the US (16 per cent) and the UK (nine per cent). Walmart's UK subsidiary, Asda, accounted for over four-fifths of the employees of American-owned MNEs working in this sub-sector.

As for sub-sectors, for the 23 countries together, the FDI-related share in 2014 was largest in the Retail sale of ICT equipment (NACE 47.4, 23 per cent), followed by the Retail sale of other household equipment (NACE 47.5, 19 per cent) and of Other goods in specialised stores (NACE 47.7, also 19 per cent). Remarkably, the latter sub-sector, including the Specialised sale of clothing and footwear, stood out in retail as an exception: non-European MNEs accounted for nearly one-half (48 per cent) of FDI-related employment. Even more remarkable may well be that investors located in 'offshore financial centres' represented the largest share (23 per cent). They were followed by MNEs based in Germany (13 per cent), the US (11 per cent), Sweden (eight per cent), Spain (seven per cent) and Hong Kong (six per cent).

Concerning employment in foreign affiliates, the combined sub-sectors Other retail sale via stalls and markets/via mail order houses or via the internet (NACE 47.8/47.9) scored below the average (17 per cent), as did the Retail sale of cultural and recreational goods (NACE 47.6, 16 per cent). Finally, in 2014, Retail sales in specialised food stores (NACE 47.2), with its FDI-related share of only three per cent, turned out to be hardly internationalised at all.

In Table SA3.6, those country/sub-sector combinations (cells) in which the share of FDI-related employment in retail in 2013 was at least 25 per cent have been indicated in italics. This was the case in 34 out of 161 cells (21 per cent) and was rather balanced across the country groups, comprising 18 of the 91 cells appropriate to W/N/S European countries and 16 of the 70 cells of CEE countries. Considering the amount of cells with at least one-quarter of employment dependent on FDI, the Supermarkets and department store sub-sector ranked at the top, with ten such cells and high shares of employment in foreign retailers, notably in the Czech Republic (63 per cent), Austria (47 per cent) and Hungary (44 per cent). FDI-related employment in the Retail sale of ICT equipment ranked second, with eight cells being at least 25 per cent FDI-related, among which Sweden (50 per cent) showed by far the largest share. Two sub-sectors followed with five cells: the Retail sale of other goods in specialised stores and the combination represented by Other retail sale. As for countries, Austria led overall, with five of seven sub-sectors exceeding the 25 per cent yardstick, followed by the Czech Republic with four and Ireland and Poland with three – thus confirming the ranking of countries with the highest shares employed in foreign retail affiliates.

3.4.4 Concentration

Linking the data from our Industrial Relations survey and the AIAS MNE database with Eurostat *Employment Statistics*, we found that, in the 23 countries overall, the largest five retail employers in 2014 accounted for 23.8 per cent (both unweighted and weighted averages) of retail employment. However, the 'top-5' concentration ratios varied widely across countries, notably within the CEE group, from 11 per cent in Romania and Bulgaria to 33 per cent in Hungary and 39 per cent in Slovenia. For the largest economies, these ratios were in the middle range but were still considerable, standing at 26 per cent in both the UK and Germany, and at 27 per cent in France.

We calculated 'top-5' employment percentages separately for Supermarkets and department stores, resulting in significant average ratios of 53.1 per cent (unweighted) and 52.9 per cent (weighted) for the 23 countries. In all countries, the ratios for Supermarkets and department stores were just about double the outcomes for Retail in general. We found the highest 'top-5' outcomes for Supermarkets etc. in Austria (80 per cent); Germany, Hungary and Slovenia (73 per cent); France (70 per cent); and Belgium (69 per cent); with the lowest being again in Romania (21 per cent) and Bulgaria (29 per cent). Table SA6.2 presents the detailed outcomes.

The figures on concentration ratios and on FDI-related employment shares allowed us again to look at the relationship between the two indicators in 2014. We calculated correlation coefficients for the Wholesale and Retail industries and for the Supermarkets and department store sub-sector separately, in both cases covering the 23 countries. For both industries overall, the relationship proved to be positive, but rather weak (R=0.353 for FDI shares/top-5 in Wholesale; R=0.373 for FDI shares/top-5 in Retail); and slightly weaker for Supermarkets and department stores (R=0.314). For some countries, a relatively high level of concentration combined with high FDI-related employment shares, but for others that connection was minimal. These outcomes show once more that the relationship between the size of retail firms and their international expansion is rather complex and varies substantially across sub-sectors (cf. Van Klaveren *et al.* 2013: Chapter 4). The same holds for the wholesale industry (cf. Dachs *et al.* 2016).

3.4.5 Major companies

We now examine the major retail companies operating in the 23 countries, enabling us to identify the brand names behind the figures. Outside their home countries, six MNE names (or store brands carried by these MNEs) figured four or more times among the five largest retail employers per country in 2014. All six are basically grocery retailers and have their main interests in the Supermarkets and department store sub-sector. These comprise three Germany-based and two France-based MNEs, as well as one UK-based firm. In order of total employment size, these were: Tesco (UK); Groupe Carrefour (FR); Groupe Auchan (FR); REWE Group (DE); Lidl (Schwarz Gruppe, DE), and Aldi (DE). Their impact on industrial relations in retailing may be considerable. Based on 2014 figures, we calculate that over one in four (26 per cent) of all 6.2 million employees in the Supermarkets and department store sub-sectors of the 23 countries we studied worked for one of these six MNEs.

Below we provide brief profiles of these six MNEs, largely based on the AIAS MNE database.

— Tesco is the biggest UK food retailing MNE and has the strongest international presence among UK-based supermarket chains. The company was among the 'top-5' food store chains in the Czech Republic, Hungary, Ireland, Poland and Slovakia, jointly employing nearly 83,000 people in 2014. In 2014, Tesco had 317,850 employees in UK retail. Based on 2014 figures, more than one in seven of the 2.2 million employees in the Supermarkets and department store sub-sectors

of these six countries worked for the UK retailer. In 2012-14, Tesco went through major problems including deteriorating relations with suppliers, a massive fall in profits and a leadership crisis, all of which eroded consumer trust. It was no real surprise that, during 2015, Tesco repeatedly announced restructuring and staff reductions in their UK operations. In the four CEE countries, Tesco has launched a programme aimed at cutting overheads, while in Hungary further job cuts have been announced. Averaged over 2016, Tesco had 482,150 employees worldwide, 5.5 per cent fewer than in 2014;

— between 1995 and 2005, Groupe Carrefour, France's largest retailer and (after US-based Walmart and Costco) the world's third largest retail MNE in terms of employment and turnover in 2014-16, followed a strategy of market consolidation, withdrawing from Austria, Czech Republic, Slovakia and the UK. Since the late 2000s, the French firm has adopted more cautious strategies in the remaining EU countries, notably in Belgium, Bulgaria, Italy, Poland and Romania where it was among the largest five. In 2014, Carrefour employed 58,700 people in these five countries. Including the 109,000 employees of the group in France, nearly nine per cent of all 1.9 million people employed in the Supermarkets and department store sub-sectors of these six countries in 2014 worked for Carrefour. In 2015-16, the French retailer expanded strongly in Spain, Poland and Romania. At the end of 2016, Carrefour had 384,200 employees worldwide, 3,000 more than its 2014 total;

— Groupe Auchan was, after Groupe Carrefour, the second biggest French retailer in 2014-16, both as regards turnover and total employment. Auchan has concentrated its recent expansion in Europe notably on CEE countries. Alongside the 71,920 people employed in France, by 2014 Auchan had 43,770 employees in Hungary, Poland, Portugal and Romania, meaning that around seven per cent of the 1.6 million employees in the Supermarkets and department stores sub-sector in these five countries worked for the French firm. At the end of 2016, Auchan had 345,400 employees worldwide, 9,400 more than two years previously;

— the REWE Group in 2014 was the second largest German retail MNE in terms of employment after EDEKA (see below). At that point, REWE, operating under the BILLA, PENNY, BIPA and IKI brands, had 76,700 employees in Austria, Bulgaria, Czech Republic, Lithuania, Romania and Slovakia, and 22,300 more in five other European countries, on top of the 228,100 people engaged in wholesale and retail activities in its home country, Germany. Thus, one in six of all 1.75 million employees in the Supermarkets and department store sub-sectors of these seven countries worked for the REWE Group. At the end of 2016, REWE totalled 325,700 employees, 1,800 fewer than at the end of 2014;

— since 2007, Schwarz Gruppe, the parent firm of discounter Lidl, expanded employment substantially in its home base, Germany, as well as in Austria, Belgium, Bulgaria, Czech Republic, Finland, Ireland, Romania, Slovakia and Slovenia, all countries where, by 2014, Lidl had reached the 'top-5' employer ranks. The total number of employees working for Lidl and Kaufland, the other

brand of Schwarz, in these nine countries reached 57,270 in 2014, at which point Lidl had 96,200 employees in Germany. These figures implied that, based on 2014 figures, seven per cent of the 2.2 million employees in the Supermarkets and department store sub-sectors of these ten countries worked for Lidl. Lidl's growth has continued recently, at least in CEE countries. In 2015 and 2016, the German MNE announced expansion plans for virtually all CEE countries as well as for Italy and the UK. At the end of 2016, Lidl had 315,300 employees, 21 per cent more than two years previously;

— Aldi, the second German discounter among the supermarket chains, has been less expansionist than Lidl since 2007. In its five 'top-5' countries – Austria, Belgium, Germany, Portugal and Slovenia – Aldi (North and South) employed 78,100 people in 2014, including 59,600 in its home base. From 2014, Aldi has focused in particular on expansion in Europe in the UK and Ireland markets and, outside Europe, in the USA. Averaged over 2016, Aldi had 176,800 employees, nearly 10 per cent more than two years previously.

Next to these six MNEs, a number of European grocery companies are large employers but in no more than three of the 23 countries in 2014 were they ranked among the five largest. Ranked according to total employment size, we identified nine such firms, namely: Ahold/Delhaize (NL/BE); Edeka (DE); Groupe Casino (FR); METRO Group (DE); Asda (US); Sainsbury's (UK); ITM Entreprises (FR); Wm. Morrisons (UK); and E. Leclerc (FR). Except for the METRO Group, already covered in the Wholesale section, we also provide brief profiles for these companies:

— Ahold/Delhaize: Dutch Ahold and the Belgian Delhaize Group merged in July 2016 into Ahold Delhaize. Alongside major interests in their home countries and in the US, the new firm in the EU only owns a food retail chain (Albert) in the Czech Republic, a minority share (49 per cent) in the Portuguese Pingo Doce supermarket chain and the Romanian Mega Image chain. At the end of 2016, Ahold/Delhaize accounted for 370,000 employees, 8,000 fewer than both individual companies had two years previously;

— EDEKA is a German voluntary retail chain, that is, an association of independent retailers. Since 2006, EDEKA has only been active in Germany, where it has developed into the leading food retailer mainly through its subsidiary Netto-Marken-Discount, accounting for 351,500 employees at the end of 2016, 25,400 more than the 2014 total;

— Groupe Casino: between 2010 and 2014, this French food retailer has expanded massively in Latin America and Asia where, in 2014, more than three in four of its employees could be found. In France, where Casino in 2014 employed 70,560 people, the group continued to be among the 'top-5' employers in commerce; by the end of that year, it totalled 336,000 employees. Afterwards, Casino de-consolidated its Asian interests, resulting in a much lower employment total at the end of 2016 (227,800) whereas, with 69,800 employees, its French total was only slightly lower;

— Asda is the UK subsidiary of Walmart; at the end of 2016, the American retail giant employed 2.2 million people with Asda at that point accounting for approximately 180,000 employees, some 15,000, or nine per cent, more than it had at the end of 2014;

— Sainsbury's competes with Asda for the second-largest market share in the UK grocery market (behind Tesco) and, in 2014, had 107,000 employees in the UK. It has expanded into Asia but not into continental Europe. At the end of 2016, Sainsbury's had 162,700 employees, 1,700 more than at the end of 2014;

— ITM Entreprises, or Groupement Les Mousquetaires, is a France-based voluntary chain carrying a number of brands including Intermarché and Netto supermarkets and Bricomarché DIY stores. By 2016, Intermarché stores operating according to the voluntary chain model also existed in Belgium, Poland and Portugal. At the end of that year, ITM Entreprises had 146,000 employees, 7,000 more than its 2014 total;

— Wm. Morrisons is the fourth largest supermarket chain in the UK, only operating in that country, employing 132,000 people in 2016 (127,400 in 2014);

— E. Leclerc is another French voluntary chain or cooperative society, recently diversifying beyond grocery retail. At the end of 2016, E. Leclerc had 123,000 employees in France (and only there); 18,000, or 17 per cent, more than at the end of 2014.

A third group of food retailers consists of smaller MNEs who, nevertheless, hold strong positions in some national markets. A prime example is the Jeronimo Martins Group which, besides having the majority share in Pingo Doce in its home base, Portugal (28,050 employees in 2014), held a leading position in the Polish grocery market through the Biedronka chain (55,200 employees in 2014) but was not represented in other EU countries.

Also, by 2014, the subsidiaries of two MNEs, the Lithuanian Maxima Grupe and the Swedish ICA Gruppen, were both among the 'top-5' retail employers in Estonia, Latvia and Lithuania. Of the two, Maxima – also owning smaller chains in Bulgaria and Poland – held the strongest position in the Baltic countries with 29,600 employees in 2014, against 8,960 employees for ICA Gruppen through its Rimi Baltic division. By then, one in four employees in the Supermarkets and department store sub-sectors of the Baltic States worked for Maxima Grupe and eight per cent for ICA Gruppen.

Finally, we should mention the (majority Dutch-based) Spar grocery chain, licensing a number of national voluntary chains that were, in 2014, among the largest five retail employers in Austria, Hungary and Slovenia and jointly employing 58,070. In that year, nearly one-quarter of all employees in the Supermarket and department store sub-sectors of these three countries worked for Spar.

The interests of all retail companies profiled above are concentrated on the Supermarkets and department stores sub-sector (NACE 47.1). Retailers with other centres of gravity all had fewer employees within the 23 countries we studied. Nevertheless, following an expansion path different from that of the big grocery retailers, four Europe-based firms ranked as the world's most internationalised retail companies:

— IKEA (NACE 47.5), the Swedish furniture retailer, had 164,000 employees in 49 countries in 2014 (2016: 183,000), of which 49,000 were employed outside Europe;
— H&M (NACE 47.7), the Swedish clothing retailer, had 132,000 employees in 2014 in 64 countries (2016: 148,000 in 64), of which some 30,000 were employed outside Europe;
— Inditex (NACE 47.7), the Spanish clothing retailer, carrying brands like Zara and Bershka, operated in 93 countries in 2014 with a total of 137,100 employees (2016: 162,500), of which 44,000 were outside Europe;
— LVMH (NACE 47.7), the French luxury goods conglomerate with Christian Dior as its main holding company, had 121,300 employees in 2014 of which 70,300 were located outside Europe (2016 total: 134,000).

Box 4 **Outcomes of the Amsterdam seminar**

Presentations and debates in the WIBAR-3 seminar for the wholesale and retail industries (Amsterdam, 7 October 2016), gave an illuminating overview of major developments in commerce. Seven presentations* from participants covered:
— industrial relations and collective bargaining in the Spanish commerce sector;
— labour market changes and collective bargaining in Hungarian retail;
— social dialogue in the commerce sector: the Slovenian experience;
— recent developments in industrial relations and collective bargaining in Germany;
— competition, collective bargaining and wages in the Dutch commerce sector;
— collective bargaining in commerce: the struggle of the Portuguese unions;
— trade union organising and collective bargaining in British commerce.

Developments in market structures, labour organisation and the labour market
In commerce, internationalisation was reported as a dominant factor, bringing with it major implications for employees. However, the penetration of MNEs in wholesale and retail, as well as in their particular sub-sectors, took various forms. FDI in retail, more so than in wholesale, has had a considerable impact on collective bargaining as well as on wages and working conditions. Interestingly, across host countries major MNEs increasingly seem to have aimed at different positions in the competitive landscape, which may infer different attitudes towards the trade unions and, in some cases, towards collective bargaining as such. Lidl was mentioned as an example of a firm with whom the unions have developed 'workable' relations in Finland and Spain, whereas in other countries this firm is still seen to be trying to evade unions and avoid collective bargaining as much as possible.

The wholesale operations of the METRO Group, that is, Metro/MAKRO Cash & Carry, provide another example of human resources and industrial relations management that varied across EU countries.

The blurring of 'classical' industry boundaries plays a prominent role here. The expansion of Amazon and other online shopping firms received much attention at the seminar. Examples from various countries, such as from the UK (see Box 5), illustrated that this expansion has gone hand-in-hand with the (further) deregulation of the labour market, in particular with a growing number of self-employed people and the growth of employment on poor quality terms and conditions. More generally, seminar participants emphasised that retail remains situated at the bottom of the labour market. They underlined that wages in retailing – mostly alongside those in hotels, restaurants and tourism—were the lowest in their labour markets. The low wages of women were particularly cited, along with the ways in which spurious distinctions that did not mirror responsibilities in practice (the male store manager versus the female first cashier) were used to formalise such inequality.

Developments in industrial relations

The discussion on industrial relations and collective bargaining focused on:

- the weak position of the trade unions in the commerce sector;
- the obstacles to organising;
- the large amount of part-timers and of young workers, the dispersed character of wholesale and retail, with many small workplaces;
- the repeated obstruction of collective bargaining by employers.

Across countries, union densities in retail varied between five and 13 per cent, with densities in wholesale less detailed but, most likely, rather similar. With this as a starting point, participants argued, it was often not a matter of attaining multi-employer bargaining but of 'attaining any bargaining'.

The role of MNEs in wage-setting was also discussed. For some countries – Hungary, for instance – it was suggested that MNEs paid the lowest wages in retail although in other countries this was not the case. This led the participants to evaluate the relevance of the minimum wage, either statutory (SMW) or as laid down in collective agreements, together with the practice of mandatory extension. That practice was mostly regarded as hardly effective in those retailing sub-sectors where union membership was particularly low, like in clothing (fashion) sales. It was noted that, whereas in most countries with a SMW, some positive distance remained between the minimum wage and the lowest pay scales in collective agreements, this was rarely the case in the retail industry, where the SMW was frequently used to define the lowest pay scale.

The variety of employers' positions in the competitive landscape, and differences in dealing with unions noted above, seems to have complicated matters in collective bargaining even more: see Box 5 below. Furthermore, the non-renewal of collective agreements was cited as a specific problem in commerce, notably in Portugal, Spain, Hungary and the Netherlands.

It was emphasised that, after the crisis, the 'purchasing power argument' has become highly relevant to the development of wages and salaries in retail as well as for national economic recovery; this argument should be used to the full by trade unions. Campaigns to mobilise commerce workers and to strengthen unions' bargaining potential in commerce were presented and discussed. The Spanish participants showed interesting and stimulating examples of the use of social media in such campaigns.

* All presentations can be downloaded from the project website: https://wageindicator.org/main/Wageindicatorfoundation/projects/wibar-3. It should be noted that these presentations may contain information that, in the meantime, has become outdated and may have been replaced by data used in this book.

Box 5 **Collective bargaining in the UK commerce sector**

The commerce sector in the UK has provided considerable challenges for trade union density and collective bargaining coverage. Trade unions have struggled to recruit and secure recognition for bargaining purposes in either the retail or wholesale sectors. That said, the union density rate in commerce, although relatively low at 12.7 per cent in 2015, was almost three percentage points higher than 20 years ago. The main union involved, USDAW, has traditionally had robust membership penetration and a comprehensive set of agreements with The Co-operative Group, operating throughout the UK. Yet, the partnership agreement signed with Tesco has grown into the union's most important source of membership. USDAW has also agreed collective agreements with two other major supermarket chains, namely Sainsbury's and Wm. Morrisons, but the union is not recognised by other chains, notably Asda, Waitrose, Aldi and Lidl. The low level of union density is reflected in equally weak collective bargaining coverage. According to the Labour Force Survey of the UK's Office of National Statistics, just 15.6 per cent of employees in the commerce sector in 2015 had their pay determined by collective bargaining. Notwithstanding this poor coverage, the Office of National Statistics found a pay premium for union members in sales and customer services occupations of nearly 18 per cent (based on average hourly earnings and compared with non-union counterparts in those occupations). Thus, where collective agreements in UK commerce do exist, they have some impact on pay levels.

Over the last couple of decades, fierce competition amongst the major retail chains has further intensified, with some well-established firms being forced out of the UK market. We noted at the seminar that British Home Stores recently filed for bankruptcy and that Tesco has gone through major problems. Cost-cutting and store closures have become a familiar activity amongst the established retail players, putting downward pressures on pay and conditions as well as on job opportunities.

At much the same time, the rise of online shopping has injected a new competitive dynamic into commerce, spawning a novel hybrid operational form that combines elements of both retail and wholesale and which might be described as 'wholetail'. A number of MNE-wholetailers have also come under critical scrutiny for their exploitative HR strategies. With very low levels of union density and collective bargaining, wholetail operators have seized the opportunity to employ staff on poor quality terms and conditions, including in the UK on notorious 'zero hours' contracts. Some of the worst offenders here have been accused of perpetrating 'modern-day slavery'. There is a growing awareness amongst both politicians and the general public that the convenience of 24/7 shopping delivered to the door comes at a significant cost to the workers involved. Recent legal challenges have begun to improve the contractual rights of workers who have been obliged to opt for self-employed status in order to deliver the goods from wholetailers.

The commerce sector in the UK remains associated with low pay. Recent reporting from the Low Pay Commission has revealed the extent to which this has been particularly inflicted on young

workers. In 2016, for example, 33 per cent of all 16- and 17-year olds in employment in the UK worked in low-paid jobs in retail that paid only the statutory minimum wage. For the 18-20 age group, the same figure was 27 per cent and, for 21-24 year olds, it was 15 per cent (LPC 2016). Since 'stacking shelves in a supermarket' has, for many years, been seen as the epitome of a dead-end job, it is perhaps a further measure of intergenerational unfairness that so many young workers end up doing just such work. Particularly relevant to the persistence of low pay is evidence showing that, between the last quarter of 2012 and the third quarter of 2016, productivity in UK commerce grew by 15 per cent whereas productivity in the whole economy over the same period hardly increased at all (LPC 2016). Such a development ought to provide significant headroom in commerce for advances in pay.

3.5 The ICT industry

3.5.1 Employment in 2014

Employing just over 3.2 million wage-earners in 2014 in the 23 countries we studied, or 1.6 per cent of all employees, the ICT industry was the smallest industry of the five. Its average share in total employment in 2014 was substantially higher in W/N/S European countries (1.7 per cent) than in CEE countries (1.1 per cent). Additionally, according to Eurostat statistics, in 2014 about 490,000 (13.1 per cent) of all those employed in ICT in the 23 countries were self-employed or had a similar employment status. Between 2008 and 2014, this share fell by just one percentage point.[20] The limited size of the ICT industry, even if the self-employed are included, is one reason for the smaller size of this section. Another contributory factor here concerns the available statistics. The ICT industry is divided into just two sub-sectors: Computer programming, consultancy and related activities (NACE 62) and Information service activities (NACE 63); however, this division proved to be of little value to us because it was rather inconsistently applied in national employment statistics.

As for individual countries, Ireland (with 4.1 per cent) had by far the highest ICT employment share, whereas the lowest shares were found in CEE countries, notably in Poland (0.7 per cent), Romania (0.9 per cent) and Slovakia (1.0 per cent) (Table SA4.2).

3.5.2 Development of employment, 2008-2014

Table SA4.1 shows that, between 2008 and 2014, wage-earner employment in the ICT industry boomed throughout Europe. Both in 2008-2010 and in 2010-2014, CEE

20. According to Eurostat's *Structural Business Statistics*, the shares of self-employed people in the ICT industry in 2014 varied to some extent between countries, from 31 per cent in Belgium and 20 per cent in Italy to six per cent in Romania and seven per cent in Bulgaria, with most countries to be found in the 11-15 per cent range. Between 2008 and 2014, the shares of the self-employed remained stable in most countries, with the exceptions of Belgium, which posted an increase from 24 to 31 per cent; and, at the other extreme, Italy which saw a decrease from 26 to 20 per cent. The share of self-employment is much lower than that in Retail, about equal to that in Wholesale and higher than that in Transport and telecoms.

countries as a group displayed much stronger growth in ICT employment than did W/N/S European countries. For the period under review, ICT employment overall increased by nearly 25 per cent, 22 per cent in the W/N/S European country group and by no less than 51 per cent in the CEE country group.

Table 3.4 **Overview of restructuring events in ICT in 23 countries, 2014-2016**

	Positive		Negative		No. employees/messages by year		
	No. employees	No. messages	No. employees	No. messages	2014	2015	2016
Austria		*0*		*0*	*0*	*0*	*0*
	0		0		0	0	0
Belgium		*1*		*5*	*4*	*0*	*2*
	100		1,118		-580	0	-438
Bulgaria		*3*		*0*	*2*	*1*	*0*
	700		0		+600	+100	0
Czech Republic		*14*		*1*	*5*	*6*	*4*
	2,405		300		+810	+1,070	+325
Denmark		*0*		*2*	*1*	*1*	*0*
	0		320		-120	-200	0
Estonia		*0*		*0*	*0*	*0*	*0*
	0		0		0	0	0
Finland		*0*		*9*	*6*	*1*	*2*
	0		2,990		-2,512	-139	-339
France		*33*		*3*	*11*	*8*	*17*
	15,785		852		+1,553	+3,535	+9,845
Germany		*3*		*3*	*2*	*3*	*1*
	1,040		1,150		-160	-450	+500
Hungary		*8*		*0*	*4*	*3*	*1*
	2,210		0		+1,000	+800	+410
Ireland		*55*		*1*	*14*	*23*	*19*
	8,304		150		+2,035	+3,450	+2,669
Italy		*4*		*4*	*1*	*0*	*7*
	930		844		-260	0	+346
Latvia		*1*		*0*	*0*	*0*	*1*
	200		0		0	0	+200
Lithuania		*10*		*0*	*3*	*2*	*5*
	1,710		0		+420	+400	+890
Netherlands		*0*		*3*	*1*	*0*	*2*
	0		719		-140	0	-579
Poland		*61*		*0*	*5*	*32*	*24*
	18,977		0		+2,750	+6,632	+9,595
Portugal		*9*		*0*	*3*	*5*	*1*
	1,597		0		+647	+850	+100
Romania		*32*		*1*	*7*	*9*	*17*
	6,843		150		+1,605	+2,400	+2,688

	Positive		Negative		No. employees/messages by year		
	No. employees	No. messages	No. employees	No. messages	2014	2015	2016
Slovakia		*3*		*0*	*1*	*0*	*2*
	680		0		+200	0	+480
Slovenia		*0*		*0*	*0*	*0*	*0*
	0		0		0	0	0
Spain		*3*		*5*	*2*	*3*	*3*
	3,100		2,663		0	+113	+314
Sweden		*1*		*2*	*1*	*2*	*0*
	300		420		-160	+40	0
UK		*19*		*6*	*11*	*7*	*7*
	8,946		3,120		+2,976	+930	+1,920
TOTAL	**73,827**	***260***	**14,796**	***45***	**+10,664**	**+19,541**	**+28,826**
Balance		**+59,031**			***84***	***106***	***115***

Source: Eurofound European Monitoring Centre on Change (EMCC) *Restructuring Events database*, 2014-2016; for all countries, events affecting the employment of 100 employees or more

Within W/N/S Europe, the strongest growth in 2008-2014 could be seen in Portugal (42 per cent), Germany (39 per cent) and Austria (35 per cent), followed by France (26 per cent) and the UK (24 per cent). Among CEE countries, ICT employment grew most rapidly in Latvia and Lithuania, where even triple-digit growth figures were reached, but the growth rates of Bulgaria (77 per cent), Poland (72 per cent) and Romania (54 per cent) were also impressive (Table SA4.2).

As for the other industries we have analysed, an overview of restructuring plans announced by ICT employers and covered by Eurofound's *Restructuring Events* database for 2014-2016 provides some indications of recent employment developments in the sector: see Table 3.4. The total number of employees covered by the 305 notifications during these years was 88,500, but with only 14,800 (17 per cent) covered by negative indications. Again, it has to be emphasised that these numbers were only based on initial notifications and, as such, the total numbers should not be exaggerated. A conservative estimate that yearly labour turnover in the ICT industry in the 23 countries amounts to approximately 15 per cent would imply annual mobility on the labour market of some 460,000 ICT employees. For 2014-2016, this would result in total turnover involving around 1.4 million workers, of which those numbers covered in the table make up six per cent.

The figures in the table 3.4 confirm the strong growth of ICT employment in Ireland, Poland, Romania and the UK. Even more remarkable was the scale of the expansion in France. However, the table also indicates a level of restructuring that may partly be responsible for the slowdown of ICT growth in Belgium, Finland and Spain.

3.5.3 FDI-related employment, 2008-2014

As observed in the other industries in our study, FDI-related employment showed different growth patterns in the ICT industry between countries. In W/N/S Europe in 2008-2010, FDI-related employment fell slightly (0.6 per cent) while total employment kept on growing, resulting in a decreasing share for employment in foreign-owned subsidiaries. In contrast, in CEE countries in this first period, employment in the affiliates of foreign-owned ICT companies grew more rapidly than the industry's total employment (23 per cent against 7 per cent), while the joint FDI-related employment share increased here by over four percentage points.

In the second period, 2010-2014, the growth of employment in foreign ICT subsidiaries in the W/N/S European group continued to lag behind that of total employment growth, resulting in a further decrease in the foreign employment share. In this group, the highest such shares could be found in Ireland (42 per cent) and Sweden (37 per cent). In this period, developments concerning foreign investment continued clearly to diverge across the country groups. Due to the accelerated growth of FDI in the CEE country group, the latter's FDI-related employment share in 2014 increased to 43 per cent, with particularly high shares in Romania (57 per cent), Bulgaria (48 per cent) and Czech Republic (46 per cent) (Table SA4.1).

Across the 23 countries, ICT appears as the second most internationalised industry, after Metal and electronics manufacturing (Table SA6.4). According to Eurostat's FATS statistics (not shown), investors from outside EU countries were strongly represented, accounting for 56 per cent of employment in foreign ICT affiliates in the 23 countries (and in the EU-28 as well). US-based MNEs seized by far the largest share (35 per cent), followed by investors in ICT services based in France (13 per cent), Germany (seven per cent), the UK (five per cent), and Canada and Japan (both four per cent).

Table SA4.3 presents an overview of the largest five ICT employers by country. It shows that this 'top-5' includes the affiliates only of foreign-owned MNEs in five countries (Ireland, Lithuania and Romania, but also the Netherlands and the UK); in the other 18 countries, home-based MNEs and domestic companies are also found among the 'top-5' in ICT.

3.5.4 Concentration

Relating data from our own databases to Eurostat employment statistics, we found that, overall across the 23 countries, the largest five ICT employers in 2014 accounted for averages of 15.6 per cent (unweighted) or 11.3 per cent (weighted) of total ICT employment. The 'top-5' concentration ratios varied considerably between countries, from only five per cent in Italy and six per cent in the UK to 27 per cent in Finland and even 49 per cent in Slovakia (Table SA6.2).

We also used figures on concentration ratios and on FDI-related employment shares to look at the relationship in 2014 between these two indicators for the ICT industry,

calculating a correlation coefficient covering the 23 countries. For ICT, this relationship proved to be positive, but quite weak (R=0.105). For some countries, a relatively high level of concentration combined with a high FDI-related employment share (Slovakia) but, for others (e.g. Finland), this relationship was just the opposite.

3.5.5 Major companies

Currently, an amalgam of major new technologies is at various stages of development or already on offer across the globe. In this respect, the OECD identified in 2016 ten key technologies: the Internet of Things; big data analytics; artificial intelligence; neurotechnologies; nano/microsatellites; nanomaterials; additive manufacturing; advanced energy technologies; synthetic biology; and blockchain (OECD 2016: Chapter 2). At the time of writing, this list still seemed reasonably well up-to-date. However, even the short-term effects of the mutual interaction between the development and the adoption (and societal acceptance) of these technologies seem highly insecure, both in terms of market structures and practices and in terms of employment and the quality of work. Under such conditions, the ranking of the largest companies in the ICT industry 'as we know it' may prove to be rather volatile. That said, in 2014 nine major companies operating in the ICT industry appeared in the 'top-5' of the respective countries and industries in at least four of the 23 countries.

Below we present brief profiles of these nine companies. Recent developments have diverged considerably at company level. The profiles show that, from 2012 to 2014, five of these MNEs have been expanding (Accenture; Atos; Capgemini; Microsoft; and SAP) whereas the four others (CGI; Hewlett-Packard; IBM; and Tieto) have had to scale back their activities. In the next two years, 2014-2016, these trends continued except for IBM (which has stabilised) and Microsoft (which has seen a decrease in employment):

— Accenture (US-based, yet incorporated in Ireland): engaged in global professional services and providing strategy, consulting, digital, IT and operations services. By 2016, Accenture employed 384,000 people (2014: 289,000; 2012: 223,000); it had expanded recently in particular in Spain, Ireland, France and Latvia and, outside Europe, in India where over 140,000 people were employed in 2016;
— Atos (FR): offering a broad spectrum of IT services, including cloud, big data and cybersecurity services. Atos employed 100,100 people at the end of 2016 (2014: 85,900; 2012: 76,400). In 2014, Atos acquired Bull (FR) and Xerox ITO (US). In 2015-16, the firm showed expansion, notably in Poland and Romania, while announcing restructuring and job losses in Germany;
— Capgemini (FR): global management consulting and IT services provider. In 2015, Capgemini employed 190,600 people (2014: 143,700; 2012: 125,000). Recent major takeovers were in France, US (IGATE) and China; in 2015-16, Capgemini grew in particular in Poland;
— CGI (Canada): global IT and business services provider. In 2016, CGI had 68,000 employees, similar to the 2014 figure, after some years of decreasing employment (2012: 72,000). In 2015-16, CGI announced it would expand in the Czech Republic, France and the UK while carrying out restructuring in Finland;

— Hewlett-Packard (HP, US): at the end of 2014, HP had 302,000 employees. Up to November 2015, HP had been a global IT developer, service provider and leading laptop and printer manufacturer. However, at this point the latter activities were split off to form HP Inc, while software activities etc. continued as Hewlett Packard Enterprise, HPE. Thereafter, HPE subsequently spun off two major divisions. Thus, at the end of 2016, the company had only 50,000 employees. Between 2012 and 2014, HP subsidiaries in Bulgaria, Hungary and Ireland expanded whereas those in Belgium, Czech Republic, Germany and the Netherlands contracted;
— IBM (US): globally-operating technology firm manufacturing and selling hardware, software and IT consulting services, and world record patent holder. IBM's employment in 2016 reached 380,000 people, stabilising during 2014-16 after years of decline (2014: 379,600; 2012: 434,200). In 2014-16, IBM announced expansion plans for Czech Republic, Hungary, Ireland and (massively so) Poland, while restructuring its operations with job cuts in France, Italy, the Netherlands and Spain;
— Microsoft (US): technology-based MNE, developing and globally selling Windows software and consumer electronics including games. Microsoft bought Nokia's mobile devices division in September 2013 to form Microsoft Mobile. Microsoft employed 124,000 people at the end of 2016, fewer than in 2014 (128,100) but more than in 2012 (94,300). During 2014-16, Microsoft expanded substantially in Ireland and, to a lesser extent, also in Czech Republic, Portugal and the UK while restructuring its Finnish operations;
— SAP (DE): software MNE with a strong position in enterprise resource planning software throughout Europe. SAP employed 84,200 people in December 2016, with expansion picking up again throughout the year after some slowdown, a process that was visible in various European countries (employment at SAP in 2014: 74,400; 2012: 64,400);
— Tieto (FI) offers a range of IT, business consulting and product development services and employed 13,900 people in December 2016 (2014: 14,950; 2012: 17,560). In 2014-16, Tieto carried through substantial job cuts in its home base of Finland as well as in Sweden, while expanding notably in the Czech Republic.

In various European countries, telecom providers operating on an international scale also offer ICT services. The largest in terms of employment appears to be T-Systems, the IT services and consulting subsidiary of Deutsche Telekom, and found among the 'top-5' ICT firms in Germany and Slovakia. Another important player in this respect is BT Group but for 2014 we were not able to find detailed employment figures per country for its IT subsidiary BT Global Services, and hence could not include its activities in Table SA4.3.

3.6 Transport and telecoms industry

3.6.1 Employment in 2014

In 2014, across the 23 countries as a whole, the Transport and telecoms industry was the third largest industry of the five, employing altogether nearly 10.5 million employees: over 8.3 million in W/N/S European countries and two million in the CEE country group – averaging 5.0 per cent of wage-earner employment in the 23 countries, 5.1 per cent in W/N/S Europe and 4.8 per cent in CEE countries. Additionally, in 2014 about 850,000 people, or 7.5 per cent of all those employed in Transport and telecoms, were self-employed or had similar employment status.[21] Table SA6.6 reveals substantial variation in the employment shares for Transport and telecoms across countries, ranging from 3.7 per cent of total employment in Portugal and 4.1 per cent in Poland and Spain, to 8.8 per cent in Lithuania and 9.5 per cent in Latvia.

Table SA5.2 adds detailed information for 2014 on the numbers of employees in the six sub-sectors of Transport and telecoms. Clearly, Land (road and rail) transport (NACE 49) constituted the largest sub-sector, totalling 4.5 million employees (43 per cent of the Transport and telecoms total), followed by Warehousing and support activities for transportation (NACE 52), accounting for close to 2.8 million employees (26 per cent).

The country figures show that, in nearly all countries, these two sub-sectors were first and second, followed in most cases, and in this order, by Post and courier activities (NACE 53, 16 per cent) and Telecoms (NACE 61, nine per cent). The employment contributions of Water transport (NACE 50) and Air transport (NACE 51) were considerably smaller, both in the industry as a whole (with 1.7 per cent and 3.2 per cent of employees, respectively) and across countries -- with the notable exception of Water transport in Denmark, the home country of the large shipping company, A.P. Møller-Mærsk (comprising over 12 per cent of that country's Transport and telecoms employment).

3.6.2 Development of employment, 2008-2014

Wage-earner employment in the Transport and telecoms industry showed a decrease of three per cent throughout Europe between 2008 and 2010, followed by a modest recovery of 1.9 per cent between 2010 and 2014. At nearly six per cent, the initial decrease was strongest in CEE countries, while the 1.5 per cent recovery over the next four years here was also relatively weak. As a result, the 2014 employment level across the countries studied remained some 120,000 below the level of 2008 – approximately 30,000 down in W/N/S Europe and 90,000 down in CEE countries (Table SA5.1).

21. According to Eurostat's Structural Business Statistics in 2014, the shares of self-employed people in Transport and telecoms varied considerably between countries, from 20 per cent in Spain and Poland to less than two per cent in Estonia and Latvia and three per cent in the UK. Between 2008 and 2014, the total share of those employed on a self-employed basis grew from 6.3 to 7.5 per cent, and this was quite evenly balanced between countries.

In this period of time, the gender composition of Transport and storage[22] hardly changed: between 2008 and 2014, the share of women fell below 23 per cent of the industry's workforce in the 23 countries (from 23.1 per cent in 2008 to 22.8 per cent in 2014, for the EU-28: from 22.8 per cent to 22.6 per cent).

We should emphasise that market structures and practices, and the extent and forms of internationalisation together with technological features, differ widely across the respective sub-sectors of Transport and telecoms. Numerous small companies still contribute substantially to employment in Road freight and in Inland water transport but, in sharp contrast, each of Sea, Air and Train transport, as well as Postal and courier services, are dominated by large, sometimes monopolistic, firms. Also, Sea and Air transport and the Telecoms sector have a much higher level of capital-intensity than other parts of the Transport industry. Illustrative here is a comparison of the shares of employment of Telecoms, Air transport and Water transport in the industry generally (respectively nine per cent, 3.2 per cent and 1.7 per cent) with the shares of these three sub-sectors in the total turnover of Transport and telecoms (21 per cent, eight per cent and 6.5 per cent) (2014 data based on Eurostat, *Annual Enterprise Statistics*).

Table SA5.3 details the development of employment in Transport and telecoms by country and sub-sector over the period 2008-2014. The right-hand column of the table shows that only seven of the 23 countries achieved higher employment levels in 2014 than six years earlier: five W/N/S European countries (Belgium, Denmark, Finland, France and Germany) and just two CEE countries (Estonia and Lithuania). A number of countries saw employment losses in Transport and telecoms extending beyond 10 per cent, notably Ireland, Portugal, Spain, Czech Republic and Slovenia. Decreasing employment in all the sub-sectors could be seen in Ireland, Czech Republic and Slovenia, and for all sub-sectors except one in Spain and Romania. None of the 23 countries escaped employment losses in at least one sub-sector.

With some exceptions, employment did not recover in the various transport modes from the slowdown in growth recorded in 2007-2008.[23] In particular in Warehousing, developments diverged across countries, connected with shifts in cross-border outsourcing patterns, supply chains and the creation of European distribution centres (Peeters *et al.* 2009; Van Klaveren *et al.* 2013: 221-222).

Overall between 2008 and 2014, employment in Postal and courier services and in Telecoms in W/N/S Europe witnessed a considerable decrease, extending the negative trend that had already been visible here after 2000. Here, the impact on employment of labour-saving technologies has been significant, in particular the negative impact of rapidly-growing internet use combined with the liberalisation of Postal and courier services (cf. Hermann 2013). In contrast, however, the Telecoms sub-sector in CEE countries generally showed some growth in these six years.

22. Comparable detailed 2014 figures were lacking for Telecoms.

23. Though, it should be noted, the observations on Water and Air transport in the Eurostat statistics are too small to allow robust conclusions.

As for the other industries, an overview of the restructuring plans announced by Transport and telecoms employers recorded in Eurofound's *Restructuring Events* database for 2014-2016 provides some clues about recent employment developments. We have summarised the detailed data in Table 3.5, based on the 294 notifications in the database. The total number of employees affected was 140,700. Only 52,700 (37 per cent) were seen to be covered by positive indications and 88,000 by negative ones. Again, the reader should keep in mind that these amounts were based on initial notifications and that the total numbers should therefore not be exaggerated. A conservative estimate puts the yearly labour turnover rate in Transport and telecoms in the 23 countries at approximately 15 per cent, suggesting annual mobility on the labour market of approximately 1.5 million workers in the industry. For 2014-2016, this would account for around 4.5 million workers annually moving jobs, of which the numbers covered in the table would make up just over three per cent. Large-scale dismissals caused labour market shocks notably in France, Germany, Poland and Spain; only Hungary, Ireland and Portugal saw modest, but consistently positive, outcomes.

Table 3.5 **Overview of restructuring events in Transport and telecoms in 23 countries, 2014-2016**

	Positive		Negative		No. employees/messages by year		
	No. employees	No. messages	No. employees	No. messages	2014	2015	2016
Austria		*4*		*2*	*1*	*2*	*3*
	1,525		400		-250	+100	+1,275
Belgium		*13*		*6*	*3*	*10*	*6*
	3,981		4,034		+946	+1,159	-2,158
Bulgaria		*1*		*0*	*0*	*1*	*0*
	250		0		0	+250	0
Czech Republic		*9*		*4*	*4*	*2*	*7*
	2,390		2,040		-490	-1,120	+1,960
Denmark		*0*		*2*	*1*	*0*	*1*
	0		1,140		-400	0	-740
Estonia		*0*		*1*	*0*	*1*	*0*
	0		182		0	-182	0
Finland		*2*		*14*	*6*	*5*	*5*
	600		4,333		-2,016	-540	-1,177
France		*11*		*18*	*6*	*12*	*11*
	3,705		17,471		-3,224	-5,544	-4,998
Germany		*10*		*21*	13	*4*	*14*
	8,905		12,017		-4,429	+2,837	-2,448
Hungary		*5*		*2*	*5*	*1*	*1*
	2,210		0		+1,000	+800	+410
Ireland		*7*		*1*	*2*	*3*	*3*
	1,053		170		+313	+140	+430
Italy		*8*		*14*	*9*	*8*	*5*
	2,715		4,805		-276	-247	-1,567

Latvia		*1*		*0*	*0*	*0*	*1*
	1,000		0		0	0	+1,000
Lithuania		*2*		*3*	*1*	*1*	*3*
	2,100		810		-210	+2,000	-500
Netherlands		*4*		*6*	*6*	*1*	*3*
	1,300		1,762		-1,762	+1,300	0
Poland		*16*		*11*	*4*	*15*	*8*
	4,300		16,971		-4,810	-7,974	+113
Portugal		*11*		*3*	*5*	*4*	*5*
	2,880		727		+1,140	+330	+683
Romania		*8*		*1*	*2*	*1*	*6*
	2,459		340		-140	+100	+2,159
Slovakia		*0*		*0*	*0*	*0*	*0*
	0		0		0	0	0
Slovenia		*0*		*2*	*1*	*1*	*0*
	0		930		-450	-480	0
Spain		*10*		*14*	*8*	*8*	*8*
	3,639		7,692		-4,747	-550	+1,298
Sweden		*2*		*12*	*7*	*4*	*3*
	430		3,220		-2,102	-403	-285
UK		*17*		*16*	*11*	*9*	*13*
	7,262		8,986		-3,806	+1,788	+294
TOTAL	**52,704**	***141***	**88,030**	***153***	**-25,913**	**-7,136**	**-2,277**
Balance			**-35,326**		***95***	***93***	***106***

Source: Eurofound European Monitoring Centre on Change (EMCC) *Restructuring Events* database, 2014-2016; for all countries, events affecting the employment of 100 employees or more

3.6.3 FDI-related employment, 2008-2014

With the exception of W/N/S Europe over the period 2008-2010, employment in foreign-owned affiliates has increased considerably in Transport and telecoms (Table SA5.1). The result, for the period 2008-2014, has been that the share of FDI-related employment in this industry grew in both country groups, and in particular in CEE countries. Nevertheless, compared to the other four industries, the employment shares of foreign affiliates in Transport and telecoms remains modest, and the industry's overall FDI-related employment share (14.4 per cent in 2014) was clearly the lowest. Only in Denmark did the FDI share in Transport and telecoms reach over 30 per cent by 2014, whereas this share came in at 25-28 per cent in the Netherlands and the UK and was in the 19-24 per cent range in Ireland, Sweden, Czech Republic, Estonia, Hungary and Slovakia.

According to Eurostat's FATS statistics (not shown), employment in Transport and telecoms affiliates in the 23 countries was linked more with investors from EU countries than with their non-EU competitors, the latter encompassing 35 per cent in 2014. In this year, German MNEs accounted for 17 per cent of the industry's FDI-related employment, followed by MNEs based in France (12 per cent), the US and the Netherlands (nine per cent apiece), and the UK (six per cent).

Analysis of foreign-owned employment in the four Transport and telecoms sub-sectors for which data are available indicates that, for the 23 countries as a whole, its share in 2014 was the highest in Telecoms (43 per cent), followed by Warehousing (28 per cent) and then, at quite some distance, Land (rail and road) transport (8.5 per cent) (Table SA5.4).

The picture for combinations of countries and sub-sectors was rather diverse. In Rail and road transport, the somewhat higher FDI-related shares of the Netherlands, Sweden and the UK were related to the partial privatisation of the operational railways systems in the Dutch and Swedish cases and the full privatisation of the British railways system. In some instances, international takeovers prompted substantial growth in FDI-related employment, as in Portuguese and Slovenian warehousing.

Most spectacular were the dramatic changes in the 'FDI landscape' in Telecoms where, between 2008 and 2014, major increases of FDI-related employment shares were posted in Austria, Belgium, the Netherlands, Latvia, Poland and Slovenia. At the same time, large decreases in Finland, the UK, Bulgaria, the Czech Republic and Romania could be observed. The result is that FDI-related employment shares in Telecoms reached, or maintained, very high levels in Austria, Denmark, Estonia and Slovakia, surpassing 80 per cent, followed by Lithuania, Hungary and Poland with shares in the 50-75 per cent range.

In 2014, 38 per cent of FDI-related employment in Telecoms was connected with investors from outside the EU. The largest FDI shares in employment were found in MNEs based in the UK (15 per cent), the Netherlands (11 per cent), France (10 per cent), Germany and the US (both eight per cent).

3.6.4 Concentration

We now focus on the level of economic concentration in Transport and telecoms. Utilising data from our Industrial Relations survey, the AIAS MNE database and Eurostat employment statistics, we found that, for the 23 countries overall, the largest five Transport and telecoms employers accounted for averages of 29.1 per cent (unweighted) or 27.2 per cent (weighted) of Transport and telecoms employment in 2014: across these five industries, the highest 'top-5' ratios (Table SA6.2).

These concentration ratios varied considerably between countries, from 17 per cent in Spain and 20 per cent in the UK to as high as 37 per cent in Belgium, 40 per cent in Slovenia and 45 per cent in Ireland. Not surprisingly, Telecoms was the most concentrated sub-sector. Together, the 34 telecoms companies that are included in our 'top-5' employment listing had, by 2014, shares of 55.1/55.2 per cent (unweighted/weighted averages). In two countries, Belgium and Lithuania, the respective top two telecoms companies accounted for all of the sub-sector's employment. Similarly, in the Netherlands, Portugal and Germany, single telecoms companies accounted for 86, 77 and 67 per cent, respectively, of employment in this sub-sector.

Table SA5.5 presents an overview of the largest five employers in the industry by country. It shows that in none of these countries did this 'top-5' include only affiliates of foreign-owned MNEs. At the other extreme, in Belgium, Germany, Latvia and Slovenia, there were no foreign-owned MNEs at all and, in Finland, only a partially foreign-owned firm (TeliaSonera).

We used the figures assembled on concentration ratios and on FDI-related employment shares again to explore the relationship in 2014 between these two indicators by calculating a correlation coefficient for this industry. The coefficient we calculated covering the 23 countries clarified that, for Transport and telecoms, such a relationship was virtually absent (R=0.025). Medium-high FDI-related employment shares combined with relatively high levels of concentration in some cases (Belgium, Ireland) but also with low concentration levels in others (Bulgaria, UK).

3.6.5 Major companies

Market structures and practices indeed differed widely across the respective sub-sectors of Transport and telecoms. We now look at each sub-sector to highlight some of these differences, while developing information on the industry's major companies.

In the Rail and road land transport sub-sector, the privatisation of railway systems and foreign investment in both private and state-owned companies have all partly reshaped the competitive landscape across Europe. We write 'partly' because, in most countries, state-owned railways have maintained their monopolistic positions. In spite of the three Railway Packages Directives, through which the European Commission intended to open up passenger railways to competition and break up national monopolies, SNCF (France), Deutsche Bahn (DB, Germany) and FS (Italy) were still the largest companies in terms of employment in rail transport in 2014. They were followed, in order, by: PKP Group (Poland), CFR (Romania), ÖBB (Austria), České Dráhy (Czech Republic), DSV (Denmark), NS (Netherlands), NMBS/SNCB (Belgium), MÁV Group (Hungary), and RENFE Operadora (Spain). Following the original 1991 EC Directive which called for the separation of rail infrastructure management from rail transport services, large infrastructure maintenance groups have been created, such as Network Rail in the UK, ProRail in the Netherlands, Infrabel in Belgium and COSFESA (Grupo Ortiz) in Spain – except for the latter, all state-owned companies.

In Freight transport by road and (related) logistics, DB Schenker was by far the largest logistics provider operating across the 23 countries. With 64,800 employees in 2014 (67,000 in 2016), DB Schenker was bigger than most of the rail transport companies mentioned above -- the exceptions being Deutsche Bahn, its parent firm, alongside SNCF and FS. Recently, some road freight transport and logistics firms based in CEE countries have also displayed rapid growth, such as Waberer's (Hungary) and Girteka Logistics (Lithuania). In general, road freight transport, or trucking, has been characterised by a huge amount of small companies. According to Eurostat, by 2014 the (somewhat wider) category 'Land transport' in the 23 countries counted over 900,000 enterprises with two or more people employed although only 1,400 of them employed 250 people or more.

With regard to Water transport, it proved far from easy to connect employment data with specific home and host countries. In Sea and coastal water transport, the widespread use of the flags of convenience (FOC) system prevalent for merchant shipping means that EU countries only formally serve as home countries, to a very limited extent, for large shipping firms. Even so, it was virtually impossible to trace detailed employment figures for most of these firms due, in particular, to the often opaque practices of recruiting (crews of) seafarers. To some extent, Copenhagen-based A.P. Møller-Mærsk, or Mærsk, the world's biggest container shipping company, is an exception to this. Its Mærsk Line subsidiary uses the FOC system most obviously for chartered vessels, but its headquarters is a Danish legal entity. Mærsk in Denmark in 2014 employed 6,100 people while employment in the Mærsk group, according to its Annual Report, then totalled 89,200 (2016: 88,000).

From 2014, in keeping with the slowdown in world economic growth and the decrease in China's growth rates in 2015-16 in particular, worldwide demand for shipping slowed down. At the same time, the operational costs of sailing the huge container ships ordered after 2010 increased, 'In expectation of a rosy global economy that never arrived.' (The Economist 2017) Consequently, profits have fallen massively. The subsequent crisis has prompted a growing number of mergers, acquisitions and joint ventures and saw one of the largest container shipping firms, South-Korean Hanjin Shipping, filing for bankruptcy in August 2016.

Ferry lines are the other major employers in European shipping; in this category, four firms showed up in the AIAS MNE database:

— Stena Line (Sweden), employing 16,000 people both in 2014 and 2016 of which 5,000 are based in Sweden;
— Tallink Group (Estonia), employing in 2014 on average 6,950 people and, in 2016, some 7,200.
— DFDS (Denmark), employing in 2014 on average 6,360 people and, in 2016, some 7,070;
— P&O Ferries (owned by DP World, see below under Warehousing), employing 3,700 people in 2014 and some 4,000 in 2016.

Throughout Europe, competition in Coastal and inland water transport seems heavily dispersed over a range of smaller companies. Nevertheless, in Inland freight water transport, small and medium-sized firms and the self-employed have, to a considerable extent, been squeezed between large shipping firms and the major manufacturers. This is particularly noticeable in the attempt of steel and car manufacturers to control hinterland connections in multimodal transport chains. Shipping lines and manufacturers alike have all pressed for high-quality inland transport networks, thereby intensifying competition between rail, road and water transport. Recently, such developments could particularly be seen in CEE countries (cf. Rodrigue *et al.* 2013).

It is well-known that competition in Air transport has been tough and, for the last two decades, fuelled by the massive expansion of airlines operating low-cost models such as Easyjet, Ryanair, Vueling and Norwegian. Their expansion started following the

EU's deregulation of the airline industry throughout Europe (1992). Air transport is similar to Sea transport in terms of the spread of employment attached to particular companies. For example, the Ireland-based low-cost carrier Ryanair is included in the AIAS MNE database with a total of 9,500 employees in 2014. However, it is more than likely that Ryanair's Irish workforce did not exceed 3,500 people. In 2014-16, Ryanair expanded in Ireland and also in Belgium, Czech Republic, Poland, Portugal, Romania, Spain and the UK, although in 2016 it announced a major restructuring with job cuts in Italy (Ryanair's 2016 annual report noted an average staff level of 10,900).

In 2014, the largest airlines in terms of employment in the 23 countries scrutinised were:

— Lufthansa Group (DE), employing in December 2014 118,871 people (2016: 124,306);
— Air France-KLM (FR/NL), totalling in 2014 on average 94,666 employees (FTE; 82,175 in 2016), of which the Air France Group employed 63,955 (2016: 52,173) and the KLM Group 30,712 (2016: 30,002), jointly locating 90 per cent in France and the Netherlands;
— International Airlines Group (UK/ES), totalling in 2014 on average 59,484 employees (2016: 63,387), of which 40,000 were located in the UK in 2016. It comprises British Airways; Iberia; the Spanish low-cost carrier Vueling; and Aer Lingus;
— Scandinavian Airlines (SE/NO/DK), with 12,329 employees on average in 2014 (2016: 10,710).

The major companies active in Warehousing tended either to be linked with courier firms and their subsidiaries based on Road and on Air transport, or were part of a global terminal operator. Such operators are based in shipping and rail transport and own container terminals, including both sea-bound and inland terminals. In the latter category, three MNEs had major interests in the EU:

— DP World: state-owned by United Arab Emirates (UAE), headquartered in Dubai, owning 77 sea-bound and inland terminals in 40 countries in 2014 (2016: 78 in 42 countries). In 2014, this company had 37,000 employees (2016: 36,500);
— Mærsk's subsidiary APM Terminals (DK), with 63 port and 155 inland facilities in 2014 (2016: 73 and 143) and 22,000 employees (2016: 20,600);
— Hutchison Port Holdings, the world's largest terminal operator in 2014-16, was rebranded in 2016 as Hutchison Ports. It is 80 per cent owned by the CK Hutchison Holdings conglomerate (Hong Kong, formerly Hutchison Whampoa); in 2014, this company had 48 port terminals in 25 countries worldwide (2016: 52 in 26 countries) and 29,500 employees (2016: 30,000).

In the 1990s and 2000s, competition in both Postal and courier activities and in Telecommunications was thoroughly reshaped by the liberalisation of European sectoral markets which came in alongside changes in technologies and business models. Even before the turn of the century, such changes had given rise to the separation of the former PTTs in postal and telecoms activities.

Similarly, although somewhat later, EU regulations were the main trigger of change in postal markets. In 2013, EU member states finally lifted the remaining barriers to competition in the (shrinking) market for letters. Earlier, the (growing) market of express mail and parcel services had been liberalised step-by-step. Even before that process had entered the letters market, some national postal companies had made inroads in the parcel and express delivery sector. For instance, in 1996, KPN, the former Dutch postal and telecoms firm in the midst of a privatisation process, took over Australian TNT to form TNT Post (currently PostNL). Five years later, Deutsche Post changed into a private company and acquired the American parcel and express service DHL. These two former monopolists internationalised by setting up mail subsidiaries in other EU member states, although in the early 2010s they withdrew from some national markets. Former Austrian and Swedish state firms also followed this route, again with limited success.

Until 2016, the Dutch postal service (PostNL, which employed 56,221 people in 2014 on the basis of headcount (28,944 FTE; 2016: 46,456 on headcount) relied on an organisational model of small part-time, flexible and precarious jobs for post deliverers, a model that it largely abandoned under public opinion and trade union pressure. New entrants in the postal markets of other EU countries have sought refuge in similar flexible organisation and employment models (Hermann 2013; Van Klaveren 2014). In spite of recurring labour conflicts, Deutsche Post (Deutsche Post DHL Group, employing at the end of 2014 488,800 people worldwide (2016: 508,000) and, in Germany, 205,700 people (on headcount) seems to have followed a model that sticks closer to decent conditions (website ver.di/Postdienste, Speditionen und Logistik; AIAS and ETUI *Collective Bargaining Newsletter*).

Competition in parcel and express delivery services has actually remained strong, with the US-based MNEs UPS and FedEx as the main non-European contenders. In the letters market, the current picture is less clear. In spite of the full market liberalisation required by the European Commission since 2013, a number of countries have kept their national monopolies intact up to now. This is the case for Austria, Belgium, Bulgaria, Czech Republic and Finland. In PostNord, Sweden and Denmark have created a 'combined monopoly' but that could not prevent employment decline due to the diminishing amounts of letters posted. From 2014 onwards, PostNord has carried out restructuring operations in both countries, resulting in substantial job losses (employees in 2014: 38,000; in 2016: 33,000).

The competitive landscape in Telecommunications is rather complex. Decisive here is control over mobile telecoms networks, with some 35 mobile network operators in existence at group or company level. The two biggest European MNEs in Telecoms, Deutsche Telekom (228,000 employees (FTE) in 2014; 218,300 in 2016); and France-based Orange Group (before May 2013, France Télécom; 144,500 employees in 2014 but 155,200 in 2016) – were active in, respectively, 11 and 12 EU countries and they could be found among the largest five employers in respectively six and five of the 23 countries. Another major provider is Sweden-based TeliaSonera with, in 2014, 26,166 people (2016: 21,030) employed in its home country and four neighbouring ones.

In 2015, the European Commission and consumers' organisations alike argued that the Commission's Digital Single Market initiative had been frustrated by incumbent telecom providers sticking to their national markets and that consumers still face limited choice, barriers to switching and unfair conditions in their contracts. European Commissioner Margrethe Vestager has complained that '(...) a pan-European telecoms market does not yet exist' and referred to the European Commission needing to enforce competition 'With a string of cases against incumbents that were trying to use anticompetitive means to protect their domestic market positions, such as those involving Telefónica of Spain, Deutsche Telekom, Slovak Telekom and Telekomunikacja Polska.' (Vestager 2015)

Box 6 **Outcomes of the Oxford seminar**

Presentations and debate at the WIBAR-3 seminar on the Transport and telecoms and ICT industries (Oxford, 1 July 2016), provided a good overview of major developments in these industries. Most participants here were involved in collective bargaining in Transport and telecoms.

The seven presentations* from participants covered:
- collective negotiations in the Portuguese passenger bus sector;
- the creation of Nautilus International and its collective bargaining practice;
- developments in competition and collective bargaining struggles in the Rotterdam container sector;
- regaining trade union strength in Slovenia, with Adria Airways and the Port of Koper as contemporary cases;
- Ireland: collective bargaining under adverse conditions in the Telecoms sector;
- UK: two case studies (Energy and Telecoms) and a word on reinstating sectoral bargaining;
- the agenda of the Communications Workers Union (UK) in bargaining with Royal Mail.

Developments in market structures, technology and employment
The Rotterdam container port case highlighted the market concentration of a small number of ship-owners and terminal operators and their relationship with automation. For their new Maas Plain II terminals, the dominant international operators HPH, APMT and DP World (through a stake in Rotterdam World Gateway) opted for high levels of automation. For example, the new APMT terminal installed the world's first unmanned, remote-controlled gantry cranes and, at the newest terminal (that of RWG), one remote operator even has to deal with various cranes. The race to ever-larger container ships, led by APMT's parent firm Mærsk, had already resulted in massive over-capacity at sea and, in Rotterdam, that combined with over-capacity in port facilities.

Participants pointed to a range of related problems, first of all the negative effects of the new terminals on dock workers' employment, in particular hitting the lower-skilled, but also the immediate effects of deteriorating terminal revenues with operators squeezed between high fixed costs and lower income than planned. Clearly, in the Rotterdam port the burden of these cost-cutting and flexibility efforts is falling on labour, not least due to an observed growth of subcontracting and a worsening of industrial relations. It took substantial union pressure, including strike threats, to agree a company collective agreement with RWG, a complicated matter as this consortium had outsourced all operational and maintenance jobs. Also, APMT in particular has, at times, shown that it prefers to replace normal bargaining with the trade unions and deal only with its works council.

Indeed, internationalisation seems more generally to have corresponded with an emerging number of non- or anti-union employers who compete heavily on the basis of labour costs. This was explicitly mentioned by participants from Ireland, UK and the Netherlands. Larger-scale shipping and new routes (the Chinese Silk Belt, or One Road One Belt initiative) implied that smaller ports and their road and rail connections with the hinterland were in danger of being marginalised, as the Portuguese and Slovenian cases indicated. Participants argued that, in such cases, national and local authorities appeared to be taking refuge far too easily in privatisation.

In various countries, privatisation was plainly another major factor, for instance, in the Portuguese passenger bus and rail transport sectors; the airways and port case studies from both Slovenia and Italy; in Irish Telecoms; and in the UK (Energy and Telecoms). In all these cases, privatisation was linked with the threat of losing job security, the shrinking of union bargaining power and increased competition on the basis of labour costs, all combining to put downwards pressure on wages. In some cases, in particular in Telecoms, privatisation went hand-in-hand with (further) outsourcing that included replacing employees with the self-employed. Three cases were presented in which privatisation, even from a management perspective, was quoted 'as a lesson in how not to do it', as one of the presenters succinctly put it. Repeatedly, the rationale for privatisation remained unclear and could be traced back to ideological objections to public companies, characterised by allegations that public ownership was synonymous with the payment of 'luxury wages' and vested too much power in workers' representatives.

The Portuguese bus transport case showed the importance of maintaining the collective agreement in full force under conditions of privatisation. Public bus transport was privatised in the early 1990s, but the existing agreement continued in force to cover the newly-privatised bus companies. This was recognised and protected by the country's constitutional court. This situation lasted until 2011 when the right-wing government, under pressure from the IMF and the ECB, over-rode the collective agreements then in place, and replaced them with much weaker individual agreements. In effect, this move was unconstitutional. After 2015, the newly-elected centre-left government returned to the original collective bargaining arrangements. This has helped to restore, at least to some extent, the power of the unions and has brought social peace to the transport sector and beyond. Even the employers' organisations recognise this as an improvement. The new agreements signed in 2016 contained improvements in terms and conditions that had lagged behind, some even dating from 1974, and that needed updating to reflect changes in labour legislation, such as on maternity and paternity leave and equal rights. The Portuguese railways sub-sector showed a similar development. From 2011 onwards, rail freight transport and the rail workshops were privatised with the proviso that the privatised companies were forced to accept the existing collective agreements.

Developments in industrial relations

Participants emphasised that those multi-employer agreements that remained in existence were nevertheless often under pressure. The evidence was similarly clear that, in a number of countries/sectors, comprehensive sectoral agreements had not been in existence during the last three or four decades, even in countries with traditions of multi-employer bargaining. For example, in the Rotterdam port, a genuine employers' organisation with bargaining power had been lacking and that had frustrated attempts at signing a multi-employer arrangement.

At the same time, some positive developments were also mentioned, like those in the Portuguese passenger bus sector. Moreover, a number of continental-European trade unions obviously regarded the keeping up of, or the return to, sectoral agreements as being a worthwhile objective, at least as a safety net for bargaining in those sectors with low union density and where SMEs tended to dominate. Overall, Anglo-Saxon union delegates seemed more sceptical here, perhaps because they did not perceive it to be possible to return to a strong vested tradition of sectoral bargaining.

Moreover, in various countries political developments have worked against multi-employer bargaining although, in some cases, changes were at hand. Besides Portugal, Ireland was mentioned in this respect. In this country, sectoral bargaining has recently regained something of a legal footing, although it remains to be seen to what extent this will translate into a significant shift in the locus of bargaining away from the company level.

The trade union response

Of particular interest was the story of how the maritime union Nautilus International came into being and the innovative way in which it has developed its company bargaining practices. Currently, this international union has a membership of some 22,000 maritime professionals working in Sea and Inland water transport in the UK, Netherlands and Switzerland. Bargaining practices have latterly included attempts to sign European collective agreements with major shipping companies where the agreement specifies common terms and conditions (including pay) for all the officers employed by the companies irrespective of the nationality and place of residence of those officers. Thus, the agreement with Shell International covers 49 nationalities. Similar agreements are in negotiation with major maritime players such as HAL/Carnival Cruise Lines and P&O Ferries. Nautilus additionally uses positive aspects of internationalisation, such as rule-setting through the ILO's Maritime Labour Convention (2006).

The need to strengthen a number of 'basic' trade union activities in order to underpin collective bargaining practice was widely acknowledged. All the presenters emphasised the need for the expansion of mobilising and organising activities. In particular, mobilisation was mentioned against the rise of precarious employment, including fixed-term contracts and (bogus) self-employment. For a number of the participants, building a critical approach to management decision-making and strategic planning, whilst taking into account the *realpolitik* of output and product/service quality, had obviously become important. Examples of this could be found in particular in the inputs from Ireland, the UK and the Netherlands.

* All presentations can be downloaded from the project website: https://wageindicator.org/main/Wageindicatorfoundation/projects/wibar-3. It should be noted that these presentations may contain information that, in the meantime, has become outdated and may have been replaced by data used in this book.

3.7 Developments regarding multinational enterprises

3.7.1 Multinational enterprises and collective bargaining: a framework

Anticipating the emergence of a single 'regulatory space' in the European Union, two major waves of cross-border mergers, joint ventures and acquisitions in the EU could be traced in the periods 1985-1990 and 1995-2000. Katz and Darbishire (2000) have shown that convergence in production and work organisation, technology and product strategy of the major firms in the automotive and telecoms sectors from the 1960s onwards had prepared the ground across countries for growing similarities in inter-firm relations. These similarities extended to aspects of industrial relations and collective bargaining.

Joint ventures and strategic alliances also led to the 'Europeanisation' of management structures or the creation of European-scale firms and firm structures. Europe-based MNEs were the first to initiate such changes, although American and Japanese MNEs soon followed suit. The MNEs in question aimed at securing the EU-wide coordination of marketing, production and HR management efforts. The most internationalised firms repeatedly did so through splitting off European structures from their global governance systems. Such strategic integration at European level took shape in the major car and electronics manufacturing MNEs. Already in its first preparatory stages, EMU speeded up developments in this direction. The launch of the Euro and the steps taken towards EU corporate governance, including the EWC Directive, the European Company Statute Directive and the 13th Takeover Directive, all provided further stimuli to the Europeanisation of management structures (cf. Marginson and Sisson 2004; Arrowsmith and Marginson 2006).

We now turn attention to the qualitative relationship between MNEs on the one hand and industrial relations on the other. The observation of Marginson and Meardi (Eurofound 2009b) that the significance of MNEs as employers has important implications for the structure, agenda and outcomes of collective bargaining seems a good starting point. These authors indicated that these implications centre on three issues:

1. MNEs have been prominent in pressing for changes in national collective bargaining systems, including the call for greater scope for negotiations at company level and for bringing considerations of competitiveness to the fore on bargaining agendas;
2. the agendas and outcomes of local negotiations can be influenced by cross-border comparisons of costs, performance and 'best practice' working and employment practices within MNEs;
3. increased flows of FDI between countries with different labour costs and conditions have led to growing concerns about the relocation of employment.

Regarding the first issue, neither in our Industrial Relations survey nor in the presentations and debates in the three project seminars was there much reporting of explicit MNE pressure for changes in national collective bargaining systems. One got the impression that, in 2015-16, MNE policies did not focus that much on industrial relations but instead were concentrating after emerging from the Great Depression

on how to regain strong competitive positions. As far as HR policies were concerned, MNEs in particular seemed to be focusing on shortages of skilled labour and on the development of competences.

The second issue brought up by Marginson and Meardi focused on MNE practices influencing the agendas and outcomes of local negotiations. In shaping their internal structures, MNEs of various kinds have made choices concerning the degree of global integration (globalisation) they seek to achieve versus the degree of local adaptation (localisation) that is deemed necessary. This confrontation has become particularly visible in their HRM strategies and practices, not least because approaches to human resources are more subject to national industrial relations legislation and practices than production structures and the use of technology (Léonard *et al.* 2014). The relationship between the two strategic pressures has developed into a central theme in the international management literature.

The integration and diffusion of management and production structures and strategies through benchmarking standards, 'best practice' and modes of governance derived from HRM strategies and industrial relations in the home countries of MNEs has come to dominate approaches to HR and industrial relations practices more widely within an international group. Indeed, where single-employer bargaining prevailed, MNE headquarters have increasingly been able to influence local bargaining outcomes with the help of monitoring and benchmarking performance. These have proven to be powerful instruments, which MNE managements have also deployed in more centralised bargaining settings with greater shares of multi-employer arrangements. In particular in the car industry, it has been documented that national union negotiators have often found themselves under pressure from management's cross-border coordination of local negotiations. In the project seminars, examples of such pressure were mentioned and were also observed to be occurring more widely in Metal and electronics manufacturing as well as in the Retail and Telecoms industries.

In the 2000s, such complex interaction processes were still evolving. For example, it has been found in Germany that US-based MNEs, though formally accepting German industrial relations institutions and the dominance of multi-employer bargaining at the time, sought to weaken links with those institutions and orient themselves towards single-employer bargaining with less union influence (Singe and Croucher 2005). Similarly, in the last two decades the industrial relations of smaller economies, like those of the Netherlands, Belgium, Denmark and Sweden, have been exposed to a substantial extent to Anglo-Saxon, shareholder-oriented governance and HRM practices (Van Klaveren *et al.* 2013: Chapter 1, 1.5.2 and 1.5.4).

MNEs headquartered in different home countries tend to follow different routes concerning HR management and industrial relations. Such 'home country effects' are likely to be the case when these countries play dominant roles within the world economy. Thus, the prevailing mode of production, together with institutional influences and modernisation strategies at MNE level, all tend to create 'dominance effects' (cf. Smith and Meiksins 1995).

American MNEs have favoured a more centralised approach to HRM and industrial relations issues, with a stronger emphasis on procedures for internal benchmarking and monitoring, compared to their Europe-based competitors. Large American conglomerates and American management styles were dominant in the 1950s, 1960s and most of the 1970s, setting the worldwide standard for what was perceived as 'best practice' and pushing the global convergence of approaches to HRM.

In the 1970s and 1980s, the Japanese management model clearly rivalled that of the US. In the 1990s, however, the Japanese economy and, with it, the Japanese management model went into a crisis from which neither have fully recovered. Consequently, Japanese management associated strongly with 'lean production' seems to have lost much of its attractiveness throughout Europe (Van Klaveren *et al.* 2013: Chapter 1, 1.5.3; see on the standardisation of HRM also Edwards *et al.* 2016). Nevertheless, seminar participants, notably from CEE countries, still recognised 'lean production' as a leading trend in various parts of Metal and electronics manufacturing.

Most of the evidence concerning home country effects has been based on (sets of) case studies. Additionally, some quantitative studies have articulated differences between MNEs of various origins. Pudelko and Harzing (2007) found strong dominance effects with US-based MNEs tending to stick more closely to their own HRM system, although these authors also – and in contrast - found that Japanese and German MNEs also aligned themselves with US practices, the Japanese even more so than the Germans. Krzywdzinski (2014a) concluded that US automotive companies tried to avoid countries with strong wage-bargaining coordination, but there was no similar observation for German companies. Conversely, German MNEs tried to avoid government intervention in collective bargaining whereas US firms did not. Against expectations, in Krzywdzinski's study neither German nor US FDI seemed to be negatively influenced by union density.

Looking next at home and host country differences, variations between industries reflecting the interplay of market forces and organisational structures are also quite relevant. HR and industrial relations practices seem to diverge continuously between MNEs with varying investment motives and production or servicing characteristics. Labour-intensive service industries, such as retail, hotels and catering with major MNE players and access to markets as a crucial driver, have globally displayed the rise of 'low quality' standardised and 'industrialised' processes. Participants in the Amsterdam project seminar confirmed that a number of supermarket and department store chains used benchmarking and monitoring as major management instruments to control labour input and labour costs, as underlined by the outcomes of our Industrial Relations survey, and mostly accompanied by low trust management–union relationships. In contrast, MNEs in more capital- and skill-intensive production or servicing areas seem less likely to impose centralised control on the HR and industrial relations practices of their subsidiaries. Instead, they have tended to focus more on the coordination of technological processes and innovation.

Either way, power relations between the actors at subsidiary and local levels have become crucial. Thus, any analysis of host-country institutions must also embrace the (confrontation of) strategies of management and workers' representatives at those

levels. In countries with weakly-developed industrial relations, as in a number of CEE countries, workers and their representatives in MNEs may, to quite some extent, be left to the discretion of local managers (Van Klaveren *et al.* 2013: Chapter 1, 1.5.4; Edwards *et al.* 2013; Meardi *et al.* 2013; Drahokoupil 2014).

3.7.2 Multinational enterprises and domestic firms compared

In the book from the WIBAR-2 project, we summarised the outcomes concerning the three industrial relations indicators we compared, using *WageIndicator* data for nine EU countries covering 2006-2011 and for MNEs and domestic firms (non-MNEs); namely, TUD, CBC and the incidence of workplace employee representation. On all three indicators, MNEs showed higher scores than domestic firms. For TUD, this advantage was the least marked, with our results showing that, in 23 out of 47 cells (country-industry combinations), union density was higher in MNEs than in domestic firms; in six cells it was on a par; and in 18 cells it was lower in MNEs. The MNE advantage was more marked for CBC, which was higher in MNEs in 34 out of 44 cells. Finally, workplace employee representation in MNEs was more widespread than in non-MNEs in 41 out of 45 cells. The combined results on all three indicators were not unequivocal but, in 18 out of 42 cells, the MNE scores were higher than those of domestic firms. Conversely, a three-fold advantage for domestic firms was the case in only two cells. These results were surprising, though the larger average size of MNE establishments may have played a key role in producing them (Van Klaveren *et al.* 2013: 297).

We are able to link these earlier findings with the information gathered in this current project. This allows us to explore the relationships embodied in the differences in the three core industrial relations indicators between MNEs and domestic (non-MNE) firms on the one hand, and TUD, CBC and MEB on the other, at the level of country/industry combinations (cells). In both cases, we can calculate averages for the values in the cells (see Table 3.6), expressing the differences between MNE and non-MNE values as percentages of the MNE values.

This correlation exercise carries with it a number of limitations, first related to the number of countries. The comparison covers nine countries for which we were able in the WIBAR-2 project to calculate MNE versus non-MNE differences: Belgium; Czech Republic; Finland; Germany; Netherlands; Poland; Spain; Sweden; and the UK. Also, as the Wholesale industry was not included in the WIBAR-2 project, the analysis here had to cover four industries. Finally, we used different research methods (WIBAR-2 was based on *WageIndicator* data from large numbers of individual respondents; WIBAR-3 on a large number of sources) and the time frames were also different (2006-2011 and 2013/14).

The results showed a mixed picture and were rather industry-specific. Consistently for Retail, and partly for Metal and electronics and ICT, the column 'TUD' exhibited negative coefficients. This indicated that relatively high union densities at industry level were linked with relatively small differences between MNEs and domestic firms insofar as TUD and CBC at company level and the incidence of workplace employee

representation were concerned. Clearly, Transport and telecoms was an exception, with all three coefficients pointing at positive relationships. Thus, in this industry, high TUD, CBC and MEB rates combined with large differences in TUD and CBC at company level and in the incidence of workplace employee representation.

The outcomes in the columns for 'CBC' and 'MEB' were rather similar concerning the differences between MNEs and non-MNEs in trade union density; however, they only partially matched as concerns CBC and did not match at all when considering workplace employee representation. Accordingly, relatively high CBC and MEB rates at country/industry level did not contribute to small(er) differences between MNEs and non-MNEs regarding CBC and workplace employee representation.

Table 3.6 **Correlations between MNE/non-MNE differences in three industrial relations indicators, 9 countries, 2006-2011 and 2013/14**

		TUD	CBC	MEB
MNE/non-MNE differences for trade union density				
Metal and electronics manuf.	Correlation	0.006	0.021	0.002
Retail	Correlation	-.463	-.323	-.381
ICT	Correlation	-.356	-.228	-.236
Transport and telecoms	Correlation	0.449	0.236	0.327
MNE/non-MNE differences for collective bargaining coverage				
Metal and electronics manuf.	Correlation	-.053	0.035	0.022
Retail	Correlation	-.231	0.071	-.126
ICT	Correlation	0.516	0.407	0.404
Transport and telecoms	Correlation	0.558	0.057	0.413
MNE/non-MNE differences for incidence of employee representation				
Metal and electronics manuf.	Correlation	-.012	0.395	0.459
Retail	Correlation	-.093	0.339	0.235
ICT	Correlation	-.260	0.377	0.414
Transport and telecoms	Correlation	0.446	0.355	0.564

Sources: MNE/non-MNE differences: *WageIndicator* survey, 2006-2011, selection: employees (TUD: N=154,264; CBC: N=136,540; employee representation in firm: N=105,455); TUD, CBC, MEB: see Table SA6.1

Wage differences were a second issue for which we compared multinational enterprises and domestic firms. In the WIBAR-2 project, we traced the wage advantages ascribed to working in an MNE for a majority of industry/country combinations. Again based on the *WageIndicator* wage data for 2006-2011, such 'MNE wage premia' were found in all nine EU countries studied. They were present to a substantial degree in Poland, Belgium, Czech Republic and Germany. The exceptions in some countries, notably Spain, Sweden and the UK, were Retail and Transport and telecoms, where the premia were negative.

The detailed data on TUD, CBC and MEB at country/industry level resulting from the WIBAR-3 project allows us to explore the relationship between these industrial relations indicators and the differences in wages between MNEs and non-MNE firms more precisely through correlation calculations. To this end, we used adjusted median

gross hourly wages calculated per cell with the MNE/non-MNE differences expressed as percentages of the MNE values and controlled for the influence of gender, firm size, years of work experience and educational level: see Table 3.7.

Metal and electronics manufacturing showed rather strong negative correlation coefficients, implying low and sometimes negative MNE premia for country/industry combinations with relatively high TUD, CBC and MEB rates. In particular, the correlation with CBC was strongly negative. For CBC and MEB, the ICT industry and Transport and telecoms showed the same picture, albeit with weaker coefficients. The Retail industry came out as the exception, with rather neutral results for CBC and MEB. The underlying statistics showed that, in some countries (Germany, Spain, Sweden), relatively high CBC and MEB values in Retail combined with considerable MNE premia.

Table 3.7 **Correlations between MNE/non-MNE differences in adjusted median gross hourly wages and industrial relations indicators, 9 (8) countries, 2006-2011 and 2013/14**

		TUD	CBC	MEB
MNE/non-MNE differences in percentage points, median gross hourly wages				
Metal and electronics manuf.	Correlation	-.524	-.685	-.581
	N	8	9	8
Retail	Correlation	-.256	0.048	-.019
	N	9	9	8
ICT	Correlation	-.011	-.498	-.531
	N	5	6	8
Transport and telecoms	Correlation	-.156	-.291	-.240
	N	9	9	9

Sources: MNE/non-MNE differences: *WageIndicator* survey, 2006-2011, selection: employees (TUD: N=154,264; CBC: N=136,540; employee representation in firm: N=105,455); TUD, CBC, MEB: see Table SA6.1

3.7.3 Multinational enterprises and collective bargaining: evidence

The limited evidence available from other research concerning collective bargaining coverage mainly supports our findings here. Our statistically underpinned outcomes are similar to the findings of Marginson and Meardi in their 2009 Eurofound report. Based on expert estimates from national EIRO centres, they concluded that CBC was higher for MNEs than for domestic companies in ten EU member states, whereas in nine countries it was about equal, and in only two countries (Estonia and Latvia) was it lower. However, they differed from us with their assessment that, where multi-employer bargaining dominated, CBC rates tended to be the same for MNEs and non-MNEs, although Ireland, the Netherlands, Slovakia, Spain and Sweden were all mentioned as exceptions.

Even so, the general overview of these authors on the role of MNEs related to multi-employer bargaining (Eurofound 2009b: 10), has held up well (even during the Great Depression):

— in much of continental western Europe, MNEs were included in multi-employer arrangements for 'their' sector. Partial exceptions were, most notably, found in the Netherlands and Spain, with a few examples in Germany, Portugal and Denmark;
— where MNEs were part of sector-based bargaining, second-tier negotiations at company level were common; these negotiations resulted in company-specific improvements to working conditions, if not also in pay levels, being specified in the sector agreement;
— in CEE countries, if multi-employer bargaining existed then MNEs were often relatively detached from its outcomes: second-tier company bargaining resulted in levels of pay and working conditions being significantly better than those specified in industry-level agreements; this was notably the case in Bulgaria, Romania and Slovakia.[24]

In Marginson and Meardi's report, home-based MNEs were regarded as an important source of change in industrial relations patterns in five countries: the Netherlands; Germany; Sweden; Finland; and Italy. No instances were reported where the outcome of these company negotiations breached the provisions of industry-wide agreements. Obviously, until 2009 there were rather few instances of MNEs opting out of multi-employer agreements by leaving (or not joining) the relevant employers' organisation in favour of making company-based arrangements. Examples of such action were, however, reported from Ireland, Slovenia and Slovakia. Italy should also be added to this list: after Fiat met stiff opposition against plant-level collective agreements signed in 2009-2010, it left the national employers' association (Leonardi and Sanna 2015). In contrast, the special form of membership created by German employers' associations, under which members or companies could choose no longer to be bound by collective agreements (see section 2.4), seems mainly attractive for SMEs and thus scarcely provides an 'opt-out' for MNEs (cf. Marsden 2015).

Marginson and Meardi noted that a slightly more common practice was agreement switching, where an MNE transferred all or some of its activities to the coverage of a different agreement specifying less favourable conditions and/or wage levels, and enabling greater flexibility. Examples of such 'switching' practices came from Austria, Belgium, Denmark, France, the Netherlands, Spain and Italy. In the 2010s, these examples often related to the restructuring of collective bargaining patterns in Metal and electronics manufacturing and in Transport and telecoms (cf. Schulten and Brandt 2012; Drahokoupil 2015).

Inputs from the participants in our project seminars underlined that outsourcing practices and the transformation of regular jobs into non-standard forms of employment have developed, in recent years, into a greater threat to wages and conditions negotiated under multi-employer arrangements than was the case in 2009. In this context,

24. In cases where pay levels and wage increases were negotiated at single-employer level under a delegation from higher-level MEB agreements, we have labelled this practice 'SEB': see section 4.8. We also traced this practice in N/W/S countries, notably in Belgium and Denmark. However, a comparison with MEB arrangements is impossible because, often in this country group, pay levels are only specified through wage scales set down in these lower-level agreements.

participants from Transport and telecoms particularly perceived the ongoing pressure towards privatisation as a major threat to multi-employer bargaining.

Concerning single-employer bargaining (SEB), Marginson and Meardi concluded that MNEs have often set the pace for other companies. In the Czech Republic, Estonia, Hungary and Lithuania, this has been reflected in the negotiation of higher wages and better working conditions in MNEs than those found among locally-owned companies, particularly in the manufacturing sector.

Conversely, these authors also presented indications that MNEs, while recognising trade unions for collective bargaining at existing operations, were not applying such recognition at more recently established sites, noting examples of such 'double breasting' practices in the UK, Ireland, Bulgaria, Hungary and Lithuania. Participants in our project seminars referred to similar cases in Portugal, Spain and, again, Hungary. Further, Marginson and Meardi presented a catalogue of 'innovations' in collective bargaining driven by MNEs, in particular concerning (variable) pay systems; (flexible) working time arrangements; restructuring arrangements; and the use of temporary agency workers (Eurofound 2009b: 14-17). Seminar participants, notably from the CEE country group, cited more recent examples in which MNEs had the lead in implementing arrangements on these four issues.

3.7.4 Transnational Company Agreements

One development that seems to have escaped the inertia surrounding the process of the Europeanisation of industrial relations was the arrival of Transnational Company Agreements (TCAs), concluded with MNEs and covering their activities in several countries. This 'Qualitatively new instrument for industrial relations at the regional (European) and global levels' (Eurofound 2009a: 63) had taken off in 1988, when the Danone International Framework Agreement was concluded. Increasing numbers of TCAs have been concluded between MNE (top) managements and one or more bodies representing workers, mainly the Global Union Federations, European Trade Union Federations and European Works Councils, in particular where they have been re-badged as European Framework Agreements where their scope was limited to Europe. We will see that the contents of TCAs vary, from very basic agreements ensuring fundamental labour rights to elaborate clauses on wages and benefits, as well as to agreements that also embrace careers and skills development, equal opportunities, restructuring, social dialogue and employee involvement.

A strand of literature produced between 2009 and 2012 identified the main driving forces behind the proliferation of TCAs as well as the main problem areas surrounding them (Eurofound 2009a; ILO 2010; Schömann *et al.* 2012; Leonardi 2012). It noted that the expansion of MNEs, combined with the emergence of a single 'regulatory space' in the European Union, were generally regarded as the main contextual driving forces behind TCAs. However, at a more political level, international trade unionism obviously also recognised the potential of TCAs as a vehicle to exert countervailing power against MNEs tempted to use restructuring processes to play national and regional authorities,

as well as workers and their representatives, off against each other ('regime competition' or 'regime shopping').

Other drivers on the management side stemmed from the growing public pressure for MNEs to comply with corporate social responsibility standards and to manage their relationship with civil society more carefully. In recent years, many MNEs have, for instance, been confronted with a variety of civil society initiatives (compliance with labour standards, eradication of child and bonded labour, the 'greening' of products, etc.). For them, concluding a TCA may conveniently fit into 'reputational management' strategies.

Next, and interestingly, a European Commission staff working document noted that 'The steady growth of TCAs confirms their relevance as instruments of social dialogue particularly when, in times of crisis, it appears more difficult for social partners at national or sectoral level to conclude successful negotiations' (European Commission 2012b: 5). Such 'bargaining competition' has to be seen against the conditions under which TCAs, up until now, have had to operate; that is, largely in a legal vacuum. They are, in the first instance, non-legally binding instruments that represent a bilateral and voluntarist form of self-regulation. It is hardly a surprise that the related issue of the legitimacy and the mandate of the negotiating agents takes a dominant role in the literature on TCAs.

A second issue is that of the transposition of TCAs at national and local levels, against the backdrop of widely different national systems. Conflicts with existing collective agreements or national regulations may easily arise, and examples show that employers have repeatedly used these to neutralise any worker influence.

From the mid-2000s until about 2012, the European Commission took an active stance on TCAs. In 2005, the Commission proposed the idea of an optional legal framework for company-based cross-border negotiations. Two staff papers, an expert group report, two studies commissioned by the Commission and a searchable online (EC/ILO) database later, its involvement resulted in the 2012 Communication *Towards a job-rich recovery*. That Communication announced that the Commission will 'Develop further action to disseminate good practice and promote debate with respect to TCAs' (European Commission 2012c). However, European employer organisations stuck to their objections to the facilitation of collective bargaining above national level, a deadlock emerged and the Commission felt forced to shelve its plans (Keune and Marginson 2013).

Despite this, negotiating TCAs has gained ground on trade union agendas which have a European dimension and currently all European Trade Union Federations have established mandates and negotiation procedures. In September 2016, the ETUC tried to force a further breakthrough and put forward a concept proposal for an Optional Legal Framework for transnational company negotiations (website ETUC/Transnational Company Agreements). In stark contrast, BUSINESSEUROPE has argued that, for employers, TCAs are simply additional commitments with no evidence of any concrete return. Consequently, the employers' umbrella has urged the Commission to refrain from promoting TCAs (Cilento 2012).

The available figures point to a continuing increase in the number of TCAs. By mid-2007, about 150 TCA texts were known, related to companies employing 7.5 million people. By early 2012, using a broad definition of TCAs, 224 such agreements could be accounted for in 144 MNEs, of which 100 were headquartered in Europe, in total employing at least ten million people worldwide (European Commission 2012b: 3-4). The 2010s has witnessed further growth. In the ILO/EC database on TCAs, containing agreements concluded up to 2015, we found 260 TCAs in 161 MNEs. Based on their 2014 employment figures,[25] these agreements covered 14.2 million employees. We traced 131 MNEs with collective agreements which were headquartered in Europe; 76 of these MNEs now had 133 agreements with scope applying only within Europe (i.e. as European Framework Agreements).

The European Trade Union Federations and the ETUC have adopted internal mandating procedures in order to negotiate and sign TCAs. This has resulted in a less dominant role for European Works Councils, at least as signatories. For example, by 2015, 86 (65 per cent) out of 133 agreements were (co-)signed on the part of labour by EWCs whereas in 2008 that share had been 83 per cent (Leonardi 2012: 41, 53).

Looking at the 2015 stock of TCAs for the five industries scrutinised here, we found that Metal and electronics manufacturing dominated the listing: 65 TCAs worldwide had been concluded in 32 Metal and electronics MNEs, covering 4.3 million employees in 2014. This compares with 12 TCAs for nine Commerce firms covering 1.55 million employees; six TCAs covering 328,000 employees in six MNEs in ICT; and 18 agreements for 11 firms in Transport and telecoms covering 780,000 employees. Thus, altogether we identified (from the EC/ILO database) 101 TCAs for 58 MNEs in 'our' industries who, between them, employed 6.96 million people in 2014. If we deduct the approximately 2.56 million people employed in these firms outside Europe in 2014-15,[26] we are left with some 4.4 million European employees covered by TCAs. This amount can be compared with the roughly 18.1 million employees working for all the MNEs we found in these five industries in the 23 countries in 2014, implying that nearly one in four (24 per cent) of all these employees had recently been covered by a TCA.[27] This outcome is important, but 58 MNEs remains a modest figure when set against the backdrop of the 900-odd MNEs in these industries who are obliged to have an EWC.

Finally, we explored the 12 topics coded in the ILO/EC database as covered by all TCAs. Among these topics, fundamental rights/trade unions stood out as the one most frequently included (239 topics[28]); followed by equal opportunities, diversity and anti-discrimination (124); health and safety/working environment (122); career and skills development (112); wages and benefits (95); transfers, subcontracting and outsourcing

25. Employment data from the ILO/EC database, checked with the AIAS MNE database and subsequently corrected for 14 MNEs.

26. Based on the AIAS MNE database, going back mainly to company annual reporting.

27. We might add that 87 TCAs covered the 44 MNEs that were headquartered in Europe, with 83 TCAs covering the 40 MNEs based in the 23 countries.

28. We counted the incidence of each of the topics addressed in the respective TCAs in the ILO/EC database, attaching a '2' for each topic addressed in this database as 'primary' and a '1' if addressed as 'secondary'.

(91); and, somewhat surprisingly only ranking seventh, social dialogue, employee involvement and governance (71).

Unfortunately, we have not come across a wider evaluation of the impact of TCAs on national or sectoral collective bargaining or on the policy and industrial relations characteristics of the MNEs covered. In section 4.3, we have attempted to set down a modest contribution towards such an evaluation.

4. The management – trade union relationship

4.1 Introduction

This chapter concentrates on the findings from the part of our Industrial Relations survey where we rated the management–union relationship in the five largest companies in the 23 countries and five industries. It is worth noting that we used these ratings as a company-level proxy for measuring employers' organisation density (EOD). Wherever possible, we connected the ratings with, first of all, information on the characteristics of (the development of) employment at country/industry (cell) level, as produced in Chapter 3 and mostly based on Eurostat data; secondly, information added in this chapter on the characteristics of (the development of) employment at company and parent firm level based our Industrial Relations survey; and, finally, information on the other industrial relations indicators – trade union density (TUD), collective bargaining coverage (CBC) and the share of employees covered by an industry agreement (MEB) – at cell level, going back to our reporting in Chapter 2.

In section 4.2, we explain our choice of the management–union relationship as a significant concept, the criteria for rating this relationship and the rating activities of the research team. We correlate the average ratings for the management–union relationship at country/industry level with TUD, CBC and MEB outcomes at that level, before presenting these average ratings in detail. Section 4.3 connects the management–union relationship with the ownership issue through confronting the relationship ratings with combinations of ownership categories and industries. As far as it concerns MNEs, we connect these ratings with their countries of origin. We devote special attention to the management–union relationship scores for 24 MNEs whose interests are most widespread among the 'top-5' throughout the 23 countries, before focusing on those MNEs for which Transnational Company Agreements (TCAs) have been concluded.

Section 4.4 covers the connection between industry concentration and all four industrial relations indicators, thus including TUD, CBC and MEB. Section 4.5 includes the outcomes of a similar exercise for employment size while differentiating between company and parent firm size. This is followed up by a response to the question as to whether management–union relations are better in industries with growing employment compared to industries with declining employment. Again, all four industrial relations indicators are taken into account here (section 4.6). Section 4.7 examines the same question at lower levels while combining data on growth and decline at company and parent firm level. Section 4.8 connects the four industrial relations indicators with collective bargaining practice; that is, whether companies were covered

by multi- or single-employer arrangements (or by no collective agreements at all). Section 4.9 explores the content of 181 agreements coded according to whether they were the product of multi- or single-employer bargaining.

We end the chapter by formulating some final thoughts on establishing 'coalitions of the willing' in industrial relations.

4.2 The management–union relationship: basics

4.2.1 The management–union relationship explained

We have indicated that we used the management–union relationship rating of the five largest companies (by employment) in each country/industry cell in place of EOD as a fourth indicator in our assessment of the opportunities for strengthening, or restoring, collective bargaining. Our research team traced employment figures for 2012, 2013 and 2014 including, where relevant, the number of employees in the (ultimate) parent firm for these years for the selected five companies in each country/industry cell. We then evaluated the predominant relationship between management and trade unions in these companies using a scale from 5 'Very cooperative' to 2 'Non cooperative' and 1 'Non existent'. When calculating the outcomes, ratings '1' and '2' proved difficult to separate and were combined to count as 1.5 points, '3' as three points, '4' as four points, and '5' as five points. Thus, our database holds data for 115 x 5 = 575 companies on employment and the relationship between management and trade unions.

We decided to look at the largest five employers in each country/industry cell for various reasons. First of all, their importance for employment is evident. In 2014, these 575 companies employed nearly 8.9 million employees out of the nearly 49.4 employees found in the five industries and 23 countries, and thus accounted for two in nine employees (18.0 per cent). In 2012, the same 575 companies employed 8.75 million, implying that they grew collectively by 1.6 per cent between 2012 and 2014. In the same period of time, total employment in the five industries and 23 countries increased by just 0.6 per cent – an indication that, in these years, employment and, most likely also, market power became more concentrated. In spite of wide variation across the largest firms, the sheer size they had reached in 2014 in terms of employment (an average 15,473 employees) was considerable.

Second, in many industries these large companies were leading ones in a variety of ways: in innovation; technological change; product strategy; marketing; location decisions (including offshoring); the shaping of work organisation; and in HRM strategies and practices. This was definitely the case in those situations where a few large companies dominated the industry in question and exerted an oligopolistic influence on prices and other market parameters, including wages and benefits. In most countries, (subsidiaries of) such dominant MNEs could be found, as our data on the category of ownership confirmed for four out of five of the industries and also for a minority of countries in Transport and telecoms (Appendix 2 and Table SA6.3).

Third, based on both the literature and on our own research results, the relationship between MNEs on the one hand and industrial relations and collective bargaining on the other merits further elaboration beyond the simple contention that such relationships are inevitably complex. For example, the findings of our earlier WIBAR-2 project showed higher scores on TUD, CBC and the incidence of workplace employee representation in MNEs overall compared to domestic firms. We will return to this outcome in the next section.

It was noted in Chapter 2 that (re)building multi-employer bargaining may be difficult where management and unions in large firms, and in particular in MNEs, do not find a basis for mutual trust and contact. However, it could be argued that, where 'Management negotiates/agrees on a collective agreement with above-average wage increases and/or other extras' and 'Management explicitly allows unions more room than laid down in labour law and/or the collective agreement' (our yardsticks for rating a company 'cooperative'), such positions could be indicative of a level of trust that might presage a dialogue on exploring how agreements at company level could also have the potential to cast multi-employer agreements in a more favourable light.

Furthermore, at the industry level, a starting point for efforts to challenge the primacy of decentralised collective bargaining might exist where cooperative conditions could be traced among the five largest companies – creating, in effect, a functional equivalent of an employers' organisation. That said, it should be emphasised that whether such a potential for multi-employer bargaining can be realised will, on the one hand, depend on the deployment of trade union power and, on the other, on the extent to which leading companies see such a move as being in their best interests. Moreover, supportive state policies, in particular through the mandatory extension of collective agreements, will often be highly relevant here.

Eight members of our research team, from the three participating institutes, were involved in mapping the prevailing bargaining structures and practices by industry, compiling employment data and rating the companies according to their management–union relationship. To this end, information was gathered through interviews with experts/trade union negotiators using a web-based questionnaire schedule for each country/industry cell. Also, a range of written sources was used, such as the monthly *Collective Bargaining Newsletter* of AIAS and ETUI, newspapers and other sources attained through desk research. This work was undertaken in July 2015-April 2016, with completion of the questionnaire schedule assigned to persons familiar with the languages of the countries studied. The information presented reflects the situation essentially for the second half of 2015 and the first four months of 2016. However, developments and events in the three preceding years (2012, 2013 and 2014) were also surveyed and subsequently taken into consideration.

The Box below sets out the criteria used for rating the companies according to their management–union relationship.

Box 7 **Criteria for rating the management–union relationship**

Preliminary remarks:
- if a subsidiary of an MNE is involved, the answer concerns the state of the relationship with local management;
- in countries where works councils exist, answers combining the relationship with both trade unions and works council(s) may be relevant.

The criteria used were the following:

1. **Non-existent:**
- no contact between management and trade union(s) whatsoever

2. **Non-cooperative:**
- management explicitly refuses to negotiate a collective agreement
- management agrees on a quite minimal agreement
- management allows trade unions less room than laid down in labour law and/or collective agreement (low compliance rate)
- strike(s) happened in 2012-2015; the relationship remains full of tension
- major tensions in 2012-2015, but in the absence of strike(s)

3. **Purely business-like:**
- management negotiates/agrees on a 'regular' collective agreement, without extras
- management does not allow unions more room than laid down in labour law and/or collective agreement
- if strike(s) happened in 2012-2015, relationships were normalised afterwards

4. **Cooperative:**
- management negotiates/agrees on a collective agreement with above-average wage increases and/or other extras
- management explicitly allows unions more room than laid down in labour law and/or the collective agreement
- if strike(s) happened in 2012-2015, relationships improved afterwards

5. **Very cooperative:**
- the same criteria as 4, but more clearly marked (agreements and/or statements)

4.2.2 The management–union relationship at country / industry level

Our first analysis that included the management-union relationship was at the level of country/industry combinations (cells), on the basis of averages calculated for the values in the cells and focusing on average ratings per country/industry cell based on the 575 ratings for individual companies. We have already noted that we succeeded in gathering, for 2013/14, CBC and MEB values for all 115 cells and TUD values for 101 of them (88 per cent).

To what extent, then, were the four industrial relations indicators related? Our correlation exercise showed that three findings were clear, straightforward – and as anticipated, namely:

— the higher the bargaining coverage, the higher the trade union density;
— the higher the bargaining coverage, the higher the share of multi-employer bargaining;
— the higher the trade union density, the higher the share of multi-employer bargaining.

For the averaged management-union relationship scores, we encountered a similar, although weaker, relationship with each of the other three indicators: the higher this relationship was rated, the higher the trade union density and bargaining coverage. The correlation of the management-union relationship with multi-employer bargaining was also positive, although it was not significant. Table 4.1 provides the statistical evidence.

Table 4.1 **Correlations between the four industrial relations indicators for the 115 cells (country/industry combinations), 2013/14-2015**

		EOD	CBC	MEB
Pearson Correlation	Management-union relationship, mean in 5 largest companies	0.217*	0.277**	0.173
Sig. (2-tailed)		0.032	0.003	0.064
N		101	115	115
Pearson Correlation	TUD		0.526**	0.414**
Sig. (2-tailed)			0.000	0.000
N			101	101
Pearson Correlation	CBC			0.892**
Sig. (2-tailed)				0.000
N				115

Note: (*) significant at 10%; (**) significant at 5%; (***) significant at 1%
Source: WIBAR-3 IR survey; Table SA6.1

4.2.3 The management–union relationship at company level

We now examine the evidence concerning the management–union relationship for individual companies. For these and subsequent calculations, we have combined data for Wholesale and Retail under the label 'Commerce'. Table 4.2 shows the country/industry cells with average ratings for the 25 companies we identified as 'top-5' in each of the industries we studied.

Some of the outcomes were somewhat surprising. For the 23 countries overall, the management–union relationship was highest rated in Transport and telecoms (average rating of 3.15), followed by Metal and electronics manufacturing (average of 3.11). The ratings gap found for the two other industries was quite large, since this relationship

averaged 2.85 for Commerce (2.89 for Wholesale, 2.81 for Retail), whilst by far the poorest average relationship was found in the ICT industry (2.64).

A first comparison of these outcomes with the employment figures discussed in Chapter 3 appears rather disquieting for the trade union movement. Transport and telecoms is an industry where employment in the 23 countries generally has been declining between 2008 and 2014, while employment in Metal and electronics has shown even worse developments. Yet it was these sectors that showed the highest management–union relationship ratings. In contrast for Commerce and ICT, where employment (except for Commerce in CEE countries) has mostly been expanding, much lower management–union ratings were recorded. However, these seemingly worrying outcomes (from a trade union point of view) may have been subject to composition effects and thus deserve the closer scrutiny which follows in sections 4.6 and 4.7.

Table 4.2 also reveals that, for four out of the five industries – namely, Metal and electronics manufacturing, Wholesale, Retail and ICT – the averages for W/N/S European countries were higher than those for CEE countries. The opposite was the case for Transport and telecoms. In the latter industry, relatively high ratings (average 3.00 or higher) prevailed in eight out of ten CEE countries, compared to seven out of 13 W/N/S European countries. In Metal and electronics, 11 W/N/S European countries and five CEE countries showed such high ratings. In Commerce and ICT, the differences between W/N/S and CEE countries were even sharper, with seven against three relatively high averages in Commerce and six against one (Hungary) in the ICT industry. The respective total averages for Wholesale and Retail were close but, for most countries, the average ratings for both industries varied considerably, in 13 cases by 0.5 points or more. A majority of eight W/N/S European countries showed higher averages for Wholesale, whereas the reverse picture was the case for CEE countries, with Retail scoring higher in six cases. The intra-industry variation in ratings, as indicated by the standard deviation figures in the last row, was clearly lowest in Metal and electronics manufacturing, followed by Transport and telecoms. The other three industries showed a considerably higher variation in ratings across countries.

Regarding individual countries, Denmark (at 3.50) clearly recorded the highest average rating for management–trade union relationships, followed by Slovenia (3.32) with Sweden and Latvia (3.22) jointly in third place and Spain and Hungary (3.18) next. The Czech Republic (3.14), Austria and the Netherlands (both 3.10) and Finland (3.02) could also be found in the upper half of the average ratings distribution. The lowest average ratings were found for Lithuania (2.10), Estonia (2.46) and Portugal (2.52).

It may be noted that the average rating for the nine countries and four industries (excluding Wholesale) that overlapped with those covered by the WIBAR-2 project was 3.04, or 0.12 percentage points higher than the overall 23-country average score (2.92).

Overall, the within-country variation in management-union ratings, as indicated by the standard deviations in the far right-hand column, was considerably higher in CEE countries than in the W/N/S European country group, with the standard deviations averaging respectively 0.40 and 0.62, resulting in an overall average of 0.49. In Italy,

as well as in Lithuania, Poland, Slovakia and Slovenia, the standard deviations showed substantial variation across the industries.

The standard deviation figures contained in the last row indicate the within-industry variation in ratings. Considerable differences emerged across the industries, from low figures for Transport and telecoms (0.31) to rather high for, notably, Wholesale (0.64) and ICT (0.61), while the overall average of these standard deviations (0.54) ended up somewhat higher than the average for countries. Thus, using management-union ratings as an indication of the state of industrial relations, our data confirm the conclusion of Bechter *et al.* (2011, see section 2.7) that industries vary more in their industrial relations specifics than countries.

Table 4.2 **Management-union relationship by country and industry, averages per cell, 2015**

	Metal & electronics manufacturing	Commerce			ICT	Transport & telecoms	Total	*Std. dev.*
		Tot.	W	R				
No. per cell	**5**	**10**	**5**	**5**	**5**	**5**	**25**	
Austria	3.40	2.90	2.90	2.90	3.60	2.70	3.10	*0.38*
Belgium	3.40	2.90	3.20	2.60	2.60	3.10	2.98	*0.36*
Denmark	3.30	3.80	4.00	3.60	3.60	3.00	3.50	*0.37*
Finland	2.90	3.10	2.60	3.60	2.90	3.10	3.02	*0.37*
France	3.40	3.05	3.40	2.70	2.70	2.70	2.98	*0.38*
Germany	3.60	2.65	2.90	2.40	2.60	2.70	2.84	*0.46*
Ireland	3.00	2.40	2.10	2.70	3.00	3.10	2.78	*0.41*
Italy	1.80	3.30	2.80	3.80	3.20	2.70	2.86	*0.73*
Netherlands	3.40	3.15	3.40	2.90	2.90	2.90	3.10	*0.27*
Portugal	3.00	2.10	2.40	1.80	2.40	3.00	2.52	*0.50*
Spain	3.20	3.20	3.60	2.80	3.20	3.10	3.18	*0.29*
Sweden	3.60	3.10	3.00	3.20	3.40	2.90	3.22	*0.29*
UK	3.40	2.95	3.20	2.70	2.40	3.10	2.96	*0.40*
Total W/N/S (13)	**3.18**	**2.97**	**3.04**	**2.90**	**2.96**	**2.93**	**3.00**	***0.40***
Bulgaria	2.90	2.80	3.20	2.40	2.80	2.60	2.78	*0.30*
Czech Republic	3.40	3.25	3.40	3.10	2.40	3.40	3.14	*0.43*
Estonia	2.40	2.35	2.20	2.50	1.80	3.40	2.46	*0.59*
Hungary	3.60	2.75	2.70	2.80	3.40	3.40	3.18	*0.40*
Latvia	2.50	3.50	3.70	3.30	2.90	3.70	3.22	*0.52*
Lithuania	2.20	1.65	1.50	1.80	1.80	3.20	2.10	*0.66*
Poland	3.40	2.25	1.80	2.70	1.50	4.40	2.76	*1.18*
Romania	2.70	2.80	2.90	2.70	1.80	2.60	2.54	*0.43*
Slovakia	3.60	2.25	2.00	2.50	1.80	3.40	2.66	*0.81*
Slovenia	3.60	3.40	3.60	3.20	2.00	4.20	3.32	*0.82*
Total CEE (10)	**3.03**	**2.70**	**2.70**	**2.70**	**2.22**	**3.43**	**2.82**	***0.62***
Total 23 countries	**3.11**	**2.85**	**2.89**	**2.81**	**2.64**	**3.15**	**2.92**	***0.49***
Std. Deviation	***0.49***		***0.64***	***0.49***	***0.61***	***0.31***	***0.54***	

Source: WIBAR-3 IR survey, N=575

4.3 Industrial relations and ownership

4.3.1 The management–union relationship and ownership

The question arises as to whether the management–union relationship might be differentiated according to the four ownership categories we distinguish, namely: foreign-owned MNEs; home-based MNEs; state-owned firms; and domestic firms (see Appendix 2).

Before answering that question, however, we set out the division of ownership categories over the 575 companies we studied. Table 4.3A shows that foreign-owned MNEs accounted for 289 of these 575 companies, or a slim majority of 50.3 per cent. According to the combined AIAS MNE database and the IR survey, these subsidiaries jointly employed 1.8 million people in 2014, implying a share of all employees across the 575 companies of 20.2 per cent and an average size of 6,222 employees per company.

The 162 subsidiaries of home-based MNEs, although less represented in the survey (28.2 per cent), posted 5.22 million employees – a 58.6 per cent share of total employment – and had an average 32,121 employees per company. The large subsidiaries of German and French MNEs in both home countries, in Metal and electronics manufacturing as well as in Retail, contributed in particular to such an impressive average size in this category.

We registered, in total, 231 MNEs as parent firms alongside 451 subsidiaries, implying an average number of subsidiaries per firm of 1.95.

We identified 54 state-owned firms (9.4 per cent of the total), with an average size of 25,403 employees, accounting for 1.37 million employees and comprising 15.4 per cent of the survey total of employees. State-owned firms appeared most frequently in Transport and telecoms, making up 43 per cent of these industries. Moreover, the large entities in post and telecoms meant that the average size of such firms was lifted considerably.

Finally, the 70 domestic firms we identified among the 575 companies (12.2 per cent) employed just over half a million people (511,800), giving a share of 5.8 per cent of employment and with a relatively modest average size of 7,311 employees. Overall, domestic firms were found to be rather scarce and showed a substantial presence only in Commerce (21 per cent).

In comparison with our estimates for the overall employment shares of MNEs in the 23 countries and five industries, the subsidiaries of foreign-owned MNEs were slightly under-represented among the ‘top-5’ companies as far as employment was concerned (20.2 per cent versus 22 per cent) whereas home-based MNE subsidiaries were clearly over-represented in the ‘top-5’ ranks (58.6 per cent versus 15 per cent). It may be of interest that about one in six of all those in FDI-related employment in the five industries in 2014 were employees of the foreign-owned MNE subsidiaries of these 575 companies.

The following three tables present the outcomes for combinations of ownership categories and industries, as well as for the ratings on the management–union relationship for the 575 companies. Table 4.3A shows the distribution of companies over the four ownership categories and four industries; Table 4.3B the average ratings per category/industry cell; and Table 4.3C the distribution of the rating categories 1-2, 3, 4 and 5.

Average ratings were clearly the highest for state-owned firms (3.48), although it should be emphasised again that the incidence of this category was almost completely limited to Transport and telecoms. In four CEE countries, there were five state firms in this industry which were rated '5', alongside one foreign-owned MNE and one home-based MNE. Overall, home-based MNEs came second (average rating of 2.93), followed by domestic firms (2.89) and finally foreign-owned MNEs (2.81). The joint rating for home-based and foreign-owned MNEs averaged 2.85 against an average of 3.15 for domestic and state-owned firms jointly.

Across the industries, the differences in ranking order were substantial. In Metals and electronics manufacturing, the management–union relationship for home-based MNEs was rated highest, whereas in Commerce and ICT this was the case for domestic firms. In Commerce, '5' ratings were attached to six companies – one small, foreign-owned MNE, two home-based MNEs and three domestic firms. In contrast, in this industry foreign-owned and home-based MNEs alike received a relatively large number of low ratings. In Transport and telecoms, state-owned firms were ranked highest followed by home-based MNEs. Home-based MNEs scored better than average ratings in three industries, but not in the Commerce sector.

Once again, we calculated average ratings for the nine countries and the four industries (excluding Wholesale) in line with the coverage of the WIBAR-2 project and now identifying the four ownership categories. The outcomes were: 2.81 for foreign-owned MNEs; 3.14 for home-based MNEs; 3.59 for state-owned firms; and 3.35 for domestic firms (of which there were only ten). The average rating for foreign-owned MNEs was at exactly the same level as in our overall calculation for the 23 countries and five industries, but the WIBAR-2 averages for the other three categories ended up considerably higher than the overall averages, by 0.21, 0.11 and 0.46 percentage points respectively.

It should be noted that average firm sizes in this sub-sample also differed substantially from those in our wider survey. In this smaller sub-sample, the subsidiaries of foreign-owned companies averaged 9,947 employees while home-based MNE subsidiaries had, on average, no fewer than 55,622 employees. Domestic firms averaged 11,955 whilst, with an average of 20,669 employees, state-owned firms were somewhat smaller than in our 'regular' sample. These different characteristics of the two samples explain, at least to some extent, the less favourable outcomes for MNEs in terms of TUD and CBC than were found in the WIBAR-2 project (see also the next section).

Table 4.3A **Distribution of ownership categories across industries, 2015**

	Metal and electronics manufacturing		Commerce		ICT		Transport & telecoms		Total	
	N	%	N	%	N	%	N	%	N	%
Foreign-owned MNE	71	*61.7*	108	*47.0*	82	*71.3*	28	*24.3*	289	*50.3*
Home-based MNE	35	*30.4*	73	*31.7*	22	*19.1*	32	*27.8*	162	*28.2*
State-owned firm	0	*0*	0	*0*	3	*2.6*	51	*44.3*	54	*9.4*
Domestic firm	9	*7.8*	49	*21.3*	8	*7.0*	4	*3.5*	70	*12.2*
TOTAL	**115**	***100.0***	**230**	***100.0***	**115**	***100.0***	**115**	***100.0***	**575**	***100.0***

Source: WIBAR-3 IR survey, N=575

Table 4.3B **Management-union relationship by ownership category and industry, averages per cell, 2015**

	Metal and electronics manufacturing	Commerce	ICT	Transport & telecoms	Total	Std. Deviation
Foreign-owned MNE	3.10	2.83	2.51	2.91	**2.81**	0.90
Home-based MNE	3.31	2.77	2.70	3.02	**2.93**	0.93
State-owned firm	0	0	(4.67)	3.41	**3.48**	0.97
Domestic firm	(2.39)	2.99	(3.00)	(2.50)	**2.89**	1.07
TOTAL	**3.11**	**2.85**	**2.64**	**3.15**	**2.92**	0.96
Std. Deviation	0.82	0.99	0.98	0.92	0.96	

Source: WIBAR-3 IR survey, N=575; () = based on fewer than 10 observations

Table 4.3C **Management-union relationship by ownership category and industry, numbers by rating categories, 2015**

	Metal and electronics manufacturing					Commerce					ICT					Transport & telecoms					Total				
	½	3	4	5	T	½	3	4	5	T	½	3	4	5	T	½	3	4	5	T	½	3	4	5	T
Foreign-owned MNE	8	45	17	1	71	31	50	26	1	108	34	37	11	0	82	5	19	3	1	30	78	151	57	3	289
Home-based MNE	4	14	17	0	35	23	34	14	2	73	7	11	4	0	22	5	20	6	1	28	39	79	41	3	62
State-owned firm	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	6	20	20	5	41	6	20	21	7	54
Domestic firm	5	2	2	0	9	13	20	13	3	49	2	3	3	0	8	2	1	1	0	3	22	26	19	3	70
TOTAL	17	61	36	1	115	67	104	53	6	230	43	51	19	2	115	18	60	30	7	115	145	276	138	16	575

Source: WIBAR-3 IR survey, N=575

4.3.2 The management–union relationship and countries of origin

We now turn to the management–union relationship for subsidiaries of MNEs by comparing the results for their respective home countries (i.e. countries of origin). We have limited our detailed comparisons to the nine home countries with the largest numbers of companies in our sample (eight EU member states and the US, see Table 4.4), and have grouped the results for companies based in other countries either as 'the other 15 of the 23 countries' studied, or as 'other European countries' or as 'outside Europe except US', depending on country of origin.

The column 'total' shows that (MNEs from) the Netherlands – although limited in number – had the highest overall average rating (3.53), followed by Sweden and, at some distance, Denmark, Spain and Finland; with Germany (2.91) and France (2.82), the two countries contributing the largest numbers of MNEs and subsidiaries, bringing up the rear together with UK-based companies (2.84). MNEs based in the other 15 of 'our' 23 countries had a quite low rating (average of 2.51). However, the standard deviation for this group (not shown) was relatively large implying that, across these MNEs, the management–union relationship ratings varied widely.

With a rating of 2.53, US-based firms showed the second-lowest average. This result of the American group – third-placed in terms of numbers after the German and French MNEs – may not be all that surprising for students of industrial relations in MNEs (cf. Van Klaveren *et al.* 2013: 38). Nevertheless, the gap to the average ratings of MNEs from other countries of origin might be seen as unexpectedly wide. In contrast, the average rating for companies based in European countries outside 'the 23' appeared to be surprisingly high.

It is also worthwhile comparing the average management–union relationship scores of subsidiaries of MNEs in their home countries in comparison with the averages for their subsidiaries (affiliates) abroad: see the two main right-hand columns of Table 4.4. We have to emphasise that this is only a partial statistical comparison relating to the same companies at home and abroad, since only 34 MNEs were included with such ratings both at home (implying being registered among the five largest companies in one of the 23 countries as 'home') and in at least one country abroad.

With average ratings respectively of 2.93 and 2.83, the ratings for MNEs in their home countries were higher than for their subsidiaries abroad. Whilst these differences varied across different home countries, the reader should keep in mind that, for most countries, the number of such observations is limited. Closer scrutiny here revealed that Danish, French, Spanish, Swedish and UK MNEs had a higher average rating at home, whereas Dutch MNEs did better abroad. The average scores for German firms, contributing by far the largest amounts of subsidiaries abroad, hardly differed, and neither did those for Finnish MNEs.

Concerning MNEs based in the other 15 EU countries, the right-hand columns show that the average for their subsidiaries abroad was quite low (2.21), even lower than the average found for US-based MNEs.

Table 4.4 **Management–union relationship ratings in MNE subsidiaries by home country, 2015**

	Total		In home country		Abroad	
Home country	N	mean	N	mean	N	mean
Denmark	14	3.11	9	3.67	5	2.10
Finland	19	3.03	13	3.04	6	3.00
France	63	2.82	18	3.00	45	2.74
Germany	93	2.91	19	2.89	74	2.92
Netherlands	17	3.53	8	3.38	9	3.67
Spain	13	3.08	12	3.08	1	3.00
Sweden	25	3.26	9	3.56	16	3.09
United Kingdom	22	2.84	11	3.05	11	2.64
Other 15 of 23 countries *)	80	2.51	63	2.60	17	2.21
Total 23 countries	**346**	**2.87**	**162**	**2.93**	**184**	**2.83**
Other European countries**)	23	3.30				
United States	56	2.53				
Outside Europe except US***)	26	2.90				
TOTAL	**451**	**2.85**				

*) Austria (total 7), Belgium (8), Bulgaria (2), Czech Republic (4), Estonia (5), Hungary (5), Ireland (10), Italy (6), Latvia (2), Lithuania (8), Poland (8), Portugal (8), Romania (1), Slovakia (1), Slovenia (5)
**) Croatia (3), Greece (1), Luxembourg (3), Norway (2), Russian Federation (3), Serbia (1), Switzerland (9), Ukraine (1)
***) Brazil (1), Canada (6), China (5), India (2), Japan (6), South Korea (2), Philippines (1), South Africa (2), United Arab Emirates (1)
Note: for this tabulation we made the following adjustments for companies with shared ownership across countries: ABB (CH/SE) to CH; Air France-KLM (FR/NL) to FR; Celesio AG (DE)/McKesson (US) to DE; COWI Group (DK/SE) to DK; PostNord (SE/DK) to SE; SAS (DK/NO/SE) to DK; TeliaSonera (SE/FI) to SE.
Source: WIBAR-3 IR survey, N=451

Table 4.5 shows the management–union relationship scores and their distribution across countries for the subsidiaries of major MNEs; that is, for those MNEs in our database who could be found in the 'top-5' of the respective countries and industries in at least four of the 23 countries. (Evidently, the countries included in Table 4.4 do not necessarily represent all countries among the 23 studied in which these companies were active in 2015.) Our information covered 162 subsidiaries of the 24 parent firms identified here or, on average, 6.8 subsidiaries per MNE. The overall average management–union relationship rating for this selection of companies (2.85) equalled the average for all MNEs – foreign-owned and home-based—covered by our survey.

The average ratings for the subsidiaries of the four MNEs in Metal and electronics manufacturing – three Germany- and one France-based – were relatively high and better than the industry average, with no '1-2' rating given anywhere.

Six of the eight MNEs in Commerce showed average ratings above the industry average, with only the averages for the German discounters Aldi and Lidl (Schwarz Gruppe) standing out as below that average. At the same time, these finished as the lowest ratings of all the 24 companies. Additional information on the industrial practices of these two discounters from countries where they have yet to join the largest five employers confirms this position. Nevertheless, trade union negotiators at our Amsterdam seminar pointed out that, even at Aldi and Lidl, they experienced differences across countries in

Table 4.5 **Management–union relationship in selected MNE subsidiaries (foreign-owned and home-based) by home country, 2015**

	Rating 1-2	Rating 3	Rating 4	No. countries	Mean rating
Metal and electronics manufacturing					
Robert Bosch (DE)		AT, CZ, PT	**DE**, HU	5	3.40
PSA (FR)		**FR**, PL, PT (2x)	SK	4	3.25
Siemens (DE)		**DE**, HU, PT, UK	CZ, DK	6	3.33
Volkswagen (DE)		HU, PT, SE	BE, CZ, **DE**, PL, ES, SK	9	3.67
Industry average					3.11
Commerce					
Aldi (DE)	AT, BE, PT, **DE**	IE	SI	6	2.17
Auchan (FR)	PT	**FR**, PL, RO	HU	5	2.90
Carrefour (FR)		AT, BG, **FR**, IT, RO	PL	6	3.17
ICA Gruppen (SE)	EE	EE, LT	LV, **SE**	4	3.10
Lidl (Schwarz Gruppe) (DE)	BE, **DE**, BG (2x), CZ, SK (2x), RO, SI	AT, FI, HU, IE		11	1.96
METRO Group (DE)	PT	AT, BE, BG, CZ, FR, HU, IT, PL, RO, **DE (2x)**	NL, ES, SK	14	3.10
REWE (DE)	LT	AT (2x), BG, CZ, **DE**, RO	SK	7	2.94
Tesco (UK)	HU	CZ, IE, PL, **UK**	SK	6	2.92
Industry average					2.85
ICT					
Accenture (IE)	LV, RO, UK	ES, NL, CZ		6	2.75
Atos (FR)		DE, **FR**	AT, NL	4	3.50
Capgemini (FR)	DE, **FR**, UK	AT, NL, PL, ES		7	2.36
CGI (CA)	EE	FI, FR, SE	DK	5	2.90
Hewlett-Packard (US)	BE, BG, CZ, DE, HU, RO	IE, IT, NL		9	2.33
IBM (US)	BG, SK, SI	CZ, FR, ES, SE, UK, IE	DK, HU	11	2.77
Microsoft (US)	FI	EE, IE, PT, RO, UK		6	2.75
SAP (DE)		HU	AT, BG, **DE**	4	3.75
Tieto (FI)	CZ, LV	**FI**	SE	4	2.50
Industry average					2.64
Transport and telecoms					
Deutsche Telekom (DE)	RO, SK	CZ, **DE**, SK	HU (2x)	6	2.86
Orange (FR)		AT, **FR**, PL, RO, SK		5	3.00
TeliaSonera (SE/FI)		DK, **FI**	**SE**, LT, EE(5)	5	3.80
Industry average					3.13
Totals					
24 MNEs with 162 subsidiaries	39	89	33(4), 1(5)		2.85
Average all MNEs (N=451)					2.85
Average all companies rated (N=575)					2.92

Bold = home country
Source: WIBAR-3 IR survey

management approaches towards trade unionism and human relations practices. This obviously underpins the variation in scores visible in Table 4.5.

In the ICT industry, three of the nine MNEs remained below the (low) industry average: France-based Capgemini; US-based Hewlett-Packard; and the Finnish firm Tieto. However, only the averages for Atos (France) and SAP (Germany) survived when taking the average rating for all companies (2.92) as the yardstick.

In Transport and telecoms, only the average rating for TeliaSonera (Sweden-Finland) was above the industry average; TeliaSonera was also the only MNE in this group with a subsidiary rated '5' (in Estonia).

Interestingly, the intra-company variation in the management-union ratings was rather high for a number of companies where there were ratings in all three categories. In Commerce, this was particularly the case for MNEs with rather low averages (Auchan, REWE and Tesco) but, at a higher level, this was also true for METRO Group. This outcome confirms the variation across countries in the industrial relations practices of Commerce MNEs.

In this respect, it is also relevant to note that the average home country rating of 3.01 for the 19 MNEs based in European countries[29] was higher than their overall average and, of course, their average rating abroad (2.93, over 104 subsidiaries). For a second group of 16 MNEs we traced to be in the employment 'top-5' in fewer than four of the 23 countries, the outcomes were just the opposite.[30] A considerably higher average rating was posted for their 21 subsidiaries abroad (2.95) compared to the average rating at home (2.76). Consequently, for the 34 MNEs overall where a direct comparison between management-union ratings at home and abroad was possible, the average scores hardly differed: 2.91 for the home-country subsidiaries and 2.93 for those abroad.

Nevertheless, the underlying variation within companies and across countries was substantial, in particular in the Commerce and ICT industries. We will return to the issue of country variation within MNEs in our concluding chapter.

4.3.3 Transnational Company Agreements on the test bench

Following up on our coverage of Transnational Company Agreements (TCAs) in section 3.7, we now return to the ILO/EC database on TCAs.

29. We counted Accenture as US-based.

30. These 16 MNEs were: in Metal and electronics manufacturing: ABB (CH/SE) and Ericsson (SE); in Commerce: Ahold (NL), CBA (HU), Delhaize (BE), DIA (ES), Globus (DE), H&M (SE), IKEA (SE), Maxima Grupe (LT), S-Group (FI) and Sonepar (FR); in ICT: Asseco (PL); and in Transport and telecoms: Altice (FR), International Airlines Group (IAG) and Schenker/DB (DE). The amount of MNEs in this category remains limited, in particular as some MNEs active in various of the 23 countries did not qualify for the 'top-5' in their respective home countries. These 16 MNEs were, on average, smaller (averaging 130,030 employees in 2014 with only six employing more than 100,000) than the 19 Europe-based MNEs more widely active in the 23 countries (averaging 238,900 employees with 14 being larger than 100,000 employees).

In this database, containing European and international agreements concluded by 2015, we found TCAs for 22 of the 'top-5' MNEs in our own database. Together, these 22 MNEs were the subject of 43 TCAs which included 17 European Framework Agreements; ten of these MNEs had concluded 17 EFAs, 15 of which featured the European Works Council as a (co-)signatory. The other 12 MNEs were subject to worldwide agreements. The 22 MNEs in question were mostly very large: together they employed 4.12 million people as of 2013, each averaging 187,300 employees, making them much larger than the average of 87,300 employees in all MNEs with TCAs.[31] With eight and six firms respectively, France- and Germany-based firms made up the majority in the group, which also included one MNE (Ford Motor Company) headquartered outside Europe.

It may be assumed that management–union relationships matter here, both in the negotiating processes leading to TCAs as well as in their contents. An Italian coordinator of research on TCAs has concluded: 'Mutual trust between group management and employee representatives is an essential driving force for the negotiation and conclusion of TCAs.' (Leonardi 2012: 9) An ILO working paper was even more outspoken, stating that: '(...) a majority [of TCAs] are entered into by companies with a long and strong culture of social dialogue.' (ILO/ITC 2010: 10)

We have tested the validity of this line of thought in three ways. First, we calculated the average management–union relationship rating in the group of 22 MNEs and compared this outcome with other average scores. Indeed, at 3.10, the average score of the 22 came out higher than the average both for all MNEs and for the selection of 24 parent firms set out in Table 4.5 (2.85).[32] Second, we tested whether broad TCAs, containing a relatively large number of topics, were concluded for the group of 22; and third, whether, if that was the case, these broad TCAs were connected with relatively high management–union relationship scores. The assumption behind the second test was confirmed: the average number of topics in the TCAs for the 22 firms was 8.9 (out of 12 at most), much higher than the average for all 260 TCAs identified for 2015 (6.5) or the average for the 101 TCAs concluded for the 58 MNEs in 'our' five industries (7.4). However, the third assumption must be rejected in view of the slightly negative coefficient (R=-.172) found for the correlation between the management–union relationship scores in the 22 MNEs and the number of topics included in their respective TCAs (see section 3.7 (and footnote 32) for the counting method used).

All in all, good management–union relationships do appear to have had positive effects in concluding TCAs, but this may not have been quite so decisive in terms of the contents of these agreements.

31. Both categories were, on average, much larger than all MNEs in the five industries covered by the EU EWC Directive. Based on ILO, Eurostat and ETUI data, we estimated that this last group in 2014 would have had, on average, close to 10,000 employees.

32. TCAs covered six of the 23 selected firms – Robert Bosch; Siemens; Volkswagen; Carrefour; METRO Group; and Orange – with a joint average management–union relationship rating of 3.28. Global Union Federations and/or European Trade Union Federations were signatories to the TCAs of these six firms; EWCs alone were involved in the TCAs of two out of the 23 and only the national trade unions in just one case.

4.4 Industrial relations and employment concentration

To assess the extent to which industrial relations was related to the level of economic concentration in the industry, we calculated concentration ratios by dividing the 2014 employment figures of the 'top-5' companies for the 115 country/industry cells by the total employment figures for 2014 in the country/industry combinations drawn from Eurostat data. We found that more than two in nine of all those employed in the five industries – or, more precisely, 18.2 per cent (unweighted average) or 18.0 per cent (weighted average) – worked for the five largest companies in each industry. With 29.1 per cent (unweighted) and 27.2 per cent (weighted) average, Transport and telecoms contributed the highest ratio of employment concentration. Retail, with an average of 23.8 per cent (weighted and unweighted) came next, while Metal and electronics manufacturing ranked third (15.3 per cent unweighted and 14.6 per cent weighted) and was followed by the ICT industry (15.6 per cent and 11.3 per cent, respectively). Wholesale had the lowest concentration ratio with, on average, the largest five companies taking 7.4 (unweighted) and 4.7 per cent (weighted) of employment (Table SA6.2).

Returning to the issue of whether or not our four industrial relations indicators would score higher in highly-concentrated industries with employment as the yardstick, we can see that the outcomes varied across ownership categories and indicators. Overall, Table 4.6 reveals that the higher the employment share of the five largest companies, the better the relationship between management and trade union in that cell although, overall, the significance of this result was not particularly high and the coefficient fluctuated across ownership categories.

More convincingly, our analysis showed that the larger the concentration ratio, the higher the trade union density across the 115 cells. In particular, the larger the employment shares of home-based MNE subsidiaries and domestic firms in the 'top-5' companies, the higher the union density. For foreign-owned MNEs and state-owned firms, we found a positive relationship, too, although at a lower significance level.[33] For state-owned firms and, to a lesser extent, for foreign-owned and home-based MNEs, we also found a positive and significant relationship between employment shares and collective bargaining coverage, whereas this relationship was non-significant for domestic firms. In contrast, for multi-employer bargaining our outcomes did not reveal any significant relationship with employment concentration, except for a slightly negative outcome for domestic firms.

33. If calculated for a sub-sample of nine countries and four industries similar to that of WIBAR-2 concerning (the employment shares of) foreign-owned firms, correlations for TUD and CBC based on 2013/14 turned out weaker and non-significant whereas those for the other three ownership categories remained at the same significance level. This outcome seems to confirm that a different sample composition explains, to a large extent, the different outcomes in WIBAR-2 and WIBAR-3 for MNEs in terms of the industrial relations indicators. However, the differences may also be due to diminishing TUD and CBC rates for a number of MNEs included in both samples between the two measurement periods; that is, between 2006-11 and 2013/14.

Table 4.6 **Correlations between the employment shares of the five largest companies in total by ownership category and industrial relations indicators, 2013/14-2015**

		Mean management-union relationship in 5 largest companies	TUD	CBC	MEB
Foreign-owned MNE	Correlation	0.034	0.243***	0.126**	0.051
	N	289	242	289	289
Home-based MNE	Correlation	0.105	0.338***	0.144*	0.014
	N	162	152	162	162
State-owned firm	Correlation	0.307*	0.208*	0.384***	0.209
	N	54	53	54	54
Domestic firm	Correlation	0.092	0.502***	0.138	-.024
	N	70	63	70	70
Total	Correlation	0.112**	0.307***	0.160***	0.034
	N	575	510	575	575

Note: (*) significant at 10% (**) significant at 5% (***) significant at 1%
Source: WIBAR-3 IR survey; Tables SA6.2 and SA6.3

4.5 Industrial relations and company size

4.5.1 The management–union relationship and company size

It is also useful to look at the management–union relationship ratings in connection with company size. We undertook this analysis at two levels: that of single companies or subsidiaries (affiliates); and that of (ultimate) parent firms. First, we analysed the size of the companies (for state-owned and domestic firms) or subsidiaries (affiliates) within countries (for foreign-owned and home-based MNEs[34]), as measured by the number of employees.[35] For this, we divided the respective companies/subsidiaries into three employment size categories, namely: 'smaller than or equal to 1,000 employees'; '1,001-5,000 employees'; and 'more than 5,000 employees'.

Table 4.7A shows the distribution of the three size groupings over the four ownership categories. The table reveals that the size distributions for the affiliates of foreign-owned MNEs and domestic firms were rather similar, with the shares of companies/subsidiaries with more than 5,000 employees at, respectively, 32 and 36 per cent. Large domestic firms could be found in particular in the Scandinavian countries, as well as in Italy and the UK. In line with the average company sizes presented in the preceding section, the share of such large companies was much higher among home-based MNEs (67 per cent), due notably to the presence of large subsidiaries in Germany and France. Not surprisingly, state-owned companies came first in this respect, with 76 per cent

34. We defined the total number of employees working for a multinational enterprise in a certain country in the same industry as working for one subsidiary (affiliate); similarly if they were employed in various establishments in that country (like *in extremis* in many supermarkets belonging to one retail chain). Subsidiaries have been counted separately if an MNE owned subsidiaries in different industries in one country, as in the case of METRO Group in retail and wholesale.

35. As far as possible (and indicated in the sources used) we have used headcounts and not FTE.

employing over 5,000 people. State companies below the 5,000-mark were found only in relatively small economies, like the Baltic countries, Portugal and Slovenia. Overall, the largest size category dominated, with 269 companies (46.8 per cent) employing over 5,000 people whereas just 104 (18.1 per cent) of the 575 companies/subsidiaries employed 1,000 or fewer.

Table 4.7B presents the results of our analysis of the connection between ownership category, employment size at company/subsidiary level and the management–union relationship. Except for state-owned firms (although here we have fewer than ten observations for the two smaller categories), a clear-cut relationship emerged: the larger the company in terms of employment, the higher the average ratings for the management–union relationship. Obviously, 'size' matters. This was most clearly the case for domestic firms but it was also pronounced for the subsidiaries of foreign-owned and home-based MNEs.

Table 4.7A **Distribution of company / subsidiary employment size by ownership categories, 2014**

	Foreign-owned MNE		Home-based MNE		State-owned firm		Domestic firm		Total	
	N	%	N	%	N	%	N	%	N	%
1,000 or fewer	59	*20.4*	18	*11.1*	6	*11.1*	21	*30.0*	**104**	***18.1***
1,001-5,000	136	*47.1*	35	*21.6*	7	*13.0*	24	*34.3*	**202**	***35.1***
More than 5,000	94	*32.5*	109	*62.3*	41	*75.0*	25	*35.7*	**269**	***46.8***
TOTAL	**289**	***100.0***	**162**	***100.0***	**54**	***100.0***	**70**	***100.0***	**575**	***100.0***

Source: WIBAR-3 IR survey, N=575

Table 4.7B **Management-union relationship by company/subsidiary employment size and ownership category, averages per cell, 2014–2015**

	Foreign-owned MNE	Home-based MNE	State-owned firm	Domestic firm	Total
1,000 or fewer	2.62	2.72	(4.00)	2.52	**2.70**
1,001-5,000	2.86	2.93	(3.71)	2.85	**2.90**
More than 5,000	2.87	2.96	3.37	3.22	**3.02**
TOTAL	**2.81**	**2.93**	**3.48**	**2.89**	**2.92**

Note: () = based on fewer than 10 observations
Source: WIBAR-3 IR survey, N=575

It is also worthwhile analysing the connection between employment size at company/subsidiary level and the management–union relationship grouped for the industries. To this end, Tables 4.8A and 4.8B denote, respectively, the distribution of the three size groups across the industries and the average management–union relationship ratings per size group/industry.

It can be observed that Metal and electronics manufacturing and Transport and telecoms contained very few companies in the smallest size group; and that the outcomes emerged as quite industry-specific. Overall, in Metal and electronics manufacturing and (albeit with minimal difference) also in Commerce, the largest category had the highest

Table 4.8A **Distribution of company/subsidiary employment size by industry, 2014**

	Metal and electronics manufacturing		Commerce		ICT		Transport & telecoms		Total	
	N	%	N	%	N	%	N	%	N	%
1,000 or fewer	15	*13.0*	46	*20.0*	39	*33.9*	4	*3.5*	104	*18.1*
1,001-5,000	39	*33.9*	72	*31.3*	58	*50.4*	33	*28.7*	202	*35.1*
More than 5,000	61	*53.0*	112	*48.7*	18	*15.7*	78	*67.8*	269	*46.8*
TOTAL	**115**	***100.0***	**230**	***100.0***	**115**	***100.0***	**115**	***100.0***	**575**	***100.0***

Source: WIBAR-3 IR survey, N=575

Table 4.8B **Management-union relationship by company/subsidiary employment size and industry, averages per cell, 2014–2015**

	Metal and electronics manufacturing	Commerce	ICT	Transport & telecoms	Total
1,000 or fewer	2.47	2.79	2.59	(3.50)	**2.70**
1,001-5,000	3.12	2.85	2.68	3.14	**2.90**
More than 5,000	3.26	2.87	2.61	3.13	**3.02**
TOTAL	**3.11**	**2.85**	**2.64**	**3.15**	**2.92**

Note: () = based on fewer than 10 observations
Source: WIBAR-3 IR survey, N=575

Table 4.8C **Management-union relationship by company/subsidiary employment size and industry, numbers by rating categories, 2014–2015**

	Metal and electronics manufacturing					Commerce					ICT					Transport & telecoms					Total				
	½	3	4	5	T	½	3	4	5	T	½	3	4	5	T	½	3	4	5	T	½	3	4	5	T
1,000 or fewer	8	4	2	1	15	15	20	9	2	46	18	12	7	2	39	0	2	2	0	4	41	38	20	5	104
1,001-5,000	3	27	9	0	39	22	29	20	1	72	19	29	10	0	58	5	18	8	2	33	49	103	47	3	202
More than 5,000	6	30	25	0	61	30	55	24	3	112	6	10	2	0	18	13	40	20	5	78	55	135	71	8	269
TOTAL	**17**	**61**	**36**	**1**	**115**	**67**	**104**	**53**	**6**	**230**	**43**	**51**	**19**	**2**	**115**	**18**	**60**	**30**	**7**	**115**	**145**	**276**	**138**	**16**	**575**

Source: WIBAR-3 IR survey, N=575

ratings for the management–union relationship. However, in the ICT industry and in Transport and telecoms, middle-sized companies/subsidiaries exhibited the highest scores. In the Commerce sector, the differences across the size groups were the least.

Table 4.8C presents detailed figures and provides some further differentiation. In Commerce, the large amount of companies with '1-2' ratings attached (67, or 29 per cent, against 25 per cent overall) was striking, although the share of these ratings in the ICT industry was even higher (37 per cent). In Commerce, the concentration of these low ratings among the largest size group was remarkable (30 out of 112 ratings, or 27 per cent, against an overall number of 55 from 269, or 20.5 per cent), albeit again that this concentration showed up relatively even more strongly in ICT (33 per cent).

4.5.2 The four indicators and company/subsidiary size

We can also relate all four industrial relations indicators to the employment size of companies/subsidiaries. In this respect, we calculated average sizes per cell, attaching a '1' to companies/subsidiaries smaller than or equal to 1,000 employees; a '2' to those with 1,001-5,000 employees; and a '3' to those with more than 5,000 employees.

Table 4.9 **Correlations between average company/subsidiary employment size of the five largest companies by industry and industrial relations indicators, 2013/14 - 2015**

		Mean management-union relationship in 5 largest companies	TUD	CBC	MEB
Metal and electronics manufacturing	Correlation	0.183*	0.222*	0.436**	0.338**
	N	23	21	23	23
Wholesale	Correlation	-0.024	0.342**	-.031	-.019
	N	23	23	23	23
Retail	Correlation	0.069	0.027	0.203	0.080
	N	23	23	23	23
ICT	Correlation	0.068	0.136	0.481**	0.534**
	N	23	11	23	23
Transport and telecoms	Correlation	-.233*	0.326*	0.139*	0.308**
	N	23	23	23	23
Total	**Correlation**	**0.136**	**0.241****	**0.336*****	**0.228****
	N	**115**	**101**	**115**	**115**

Note: (*) significant at 10% (**) significant at 5% (***) significant at 1%
Source: WIBAR-3 IR survey; Tables SA6.2 and SA6.3

Again, we can see that the outcomes vary across industries and indicators. For Metal and electronics manufacturing, the rule held that 'the larger the average size, the better the relationship between management and trade union'. However, the opposite was the case for Transport and telecoms. The other three industries showed no significant relationships except for Wholesale and ICT, where the TUD correlations with size were stronger, surprisingly so for Wholesale in particular. In contrast, this was not the case concerning CBC and MEB for this latter industry although, for these two indicators,

Metal and electronics manufacturing, ICT and Transport and telecoms showed significant positive relationships.

Overall, Table 4.9 confirms the varying correlations between company/subsidiary size and management–union relationship across industries, while adding the positive correlations that emerged with TUD, CBC and MEB for notably Metal and electronics manufacturing, ICT and Transport and telecoms and, in the case of TUD, for Wholesale as well.

4.5.3 The management–union relationship and parent firm size

The second way to examine the management–union relationship ratings in connection with firm size is to look at the numbers of employees in the parent firms as the ultimate responsible, or controlling, MNEs. For example, according to this classification the parent firm of Tata Steel Nederland and Tata Steel UK in 2014-15 was Tata Group, a huge India-based conglomerate, and not Tata Steel Limited.

For the purposes of this analysis, we divided the respective employment sizes found for the parent companies in 2014 into three groups: MNE companies smaller than or equal to 100,000 employees; those with 100,001-250,000 employees; and those with more than 250,000 employees. Similar to the earlier Tables 4.8A and 4.8B, Tables 4.10A and 4.10B show, respectively, the distribution of the three groups of MNE parent firms across the industries and the average management–union relationship ratings per MNE size group/industry. This information covers 328 subsidiaries of MNEs controlling at least one subsidiary/affiliate in one of the 23 countries we studied in the period 2012-2014 (and divided into 279 subsidiaries earlier noted under 'foreign-owned MNE' and 49 subsidiaries earlier noted under 'home-based MNE').

According to this classification, Table 4.10A shows that one-third of companies in three industries – Metal and electronics manufacturing, Commerce and the ICT industry – were related to MNEs with over 250,000 employees. However, in Transport and telecoms this was just 15 per cent and, insofar as MNEs played a role in this industry, the large majority of subsidiaries here was linked to MNEs with fewer than 100,000 employees. This small number of larger MNEs does not permit conclusions to be drawn about management-union relationship ratings in Transport and telecoms. The other industries showed a contrasting picture (Table 4.10B).

Once more, the outcomes showed considerable variation across the industries and partly different ones from those for company/subsidiary size. The rule 'the larger the parent firm, the higher the average management–union relationship rating' was evident in Metal and electronics manufacturing, but the opposite was the case in Commerce and ICT, where the largest parent firm group showed convincingly low averages. The outcomes for Metal and electronics manufacturing were quite in line with those from our earlier calculation concerning company/subsidiary size (Tables 4.8B and 4.9) but, for Commerce and ICT, the results were the opposite.

Companies related to Metal and electronics MNEs with over 250,000 employees reported by far the highest average rating (3.40), but those linked with ICT MNEs in the same size group had by far the lowest (2.33). The largest parent firm category in Commerce also had a low average rating (2.66).

Table 4.10A **Distribution of MNE parent firm employment size by industry, 2014**

	Metal and electronics manufacturing		Commerce		ICT		Transport & telecoms		Total	
	N	%	N	%	N	%	N	%	N	%
100,000 or fewer	22	*28.3*	47	*36.4*	37	*41.6*	20	*58.8*	126	*38.4*
100,001-250,000	30	*38.5*	37	*28.7*	21	*24.1*	9	*26.5*	97	*29.6*
More than 250,000	26	*33.3*	45	*34.9*	29	*33.3*	5	*14.7*	105	*32.0*
TOTAL	**78**	***100.0***	**129**	***100.0***	**87**	***100.0***	**34**	***100.0***	**328**	***100.0***

Source: WIBAR-3 IR survey, N=328

Table 4.10B **Management-union relationship by MNE parent firm employment size and industry, averages per cell, 2014–2015**

	Metal and electronics manufacturing	Commerce	ICT	Transport & telecoms	Total
100,000 or fewer	3.05	2.88	2.72	2.88	**2.86**
100,001-250,000	3.10	2.84	2.50	(3.11)	**2.87**
More than 250,000	3.40	2.66	2.33	(2.70)	**2.75**
TOTAL	**3.19**	**2.79**	**2.53**	**2.91**	**2.83**

Note: () = based on fewer than 10 observations
Source: WIBAR-3 IR survey, N=328

4.6 Industrial relations and the development of employment: industry level

4.6.1 The management–union relationship and employment, country-by-country

The influence which changes in employment might have on the four industrial relations indicators – TUD, CBC, MEB and the management–union relationship – is a pertinent issue for researchers and the social partners alike. The question as to whether or not management–union relations are better in industries with growing employment than in industries with declining employment can be examined at both industry and individual company level.

We start here at the industry level by exploring the possible connection between management–union relations and the development of employment on a country-by-country basis. For the calculation of the correlation coefficients, we measured

employment growth (or decline) per cell in two ways: for 2008-2014, according to Eurostat data, as summarised in Table SA6.5 (Table 4.11; 'A' columns); and, for 2012-2014, in the five largest companies as drawn from our Industrial Relations survey (Table 4.11; 'B' columns). For the management–union relationship data, we related the ratings per cell to the national average.

Table 4.11 **Correlations between employment growth (Eurostat statistics and WIBAR-3 IR survey) and management–union relationship ratings on a country-by-country basis, 2008-2014 and 2012-2014**

	A: Eurostat employment 2008-2014	B: employment in 5 largest companies 2012-2014
	R	*R*
Austria	0.755	-.373
Belgium	-.807	-.613
Denmark	0.175	0.615
Finland	0.306	-.483
France	-.532	-.402
Germany	-.580	0.420
Ireland	-.006	-.151
Italy	0.834	0.393
Netherlands	-.491	0.841
Portugal	-.199	-.627
Spain	-.058	-.008
Sweden	-.228	-.367
UK	-.889	0.577
Bulgaria	-.131	-.262
Czech Republic	-.848	-.961
Estonia	-.348	-.944
Hungary	0.419	0.630
Latvia	-.352	0.741
Lithuania	-.125	-.269
Poland	-.474	-.330
Romania	-.965	-.210
Slovakia	-.425	-.519
Slovenia	-.954	-.840
Total	**-.239**	**-.108**

Sources: A: based on employment growth 2008-2014 per cell: Eurostat, see Table SA6.5/distance of management-union relationship rating per cell from national average (see Table 4.2)
B: based on WIBAR-3 IR survey, N=575, employment growth 2012-2014 per cell/distance of management-union relationship rating per cell from national average

Measured along both lines, the correlations point convincingly to a negative relationship between employment growth and the management–union relationship for nine countries (Belgium, France, Portugal, Czech Republic, Estonia, Poland, Romania, Slovakia and Slovenia). We found weaker, although also consistently negative, correlations for another five countries (Ireland, Spain, Sweden, Bulgaria and Lithuania). However, the opposite

was clearly the case for three countries (Denmark, Italy and Hungary). Moreover, the results were contradictory for six countries (Austria, Finland, Germany, Netherlands, UK and Latvia). Contrasts in the direction of employment per cell measured according to Eurostat versus employment measured in the five largest companies (negative versus positive trends) may at least partly explain this variation in outcomes. Our database reveals that the six countries last mentioned showed contrasting signs in three of the five industries, whereas the other 17 countries had contrasting signs on average in slightly fewer than two industries.

Nevertheless, the total coefficients *(R*=-.239 and *R*=-.108) indicate some support for the conclusion that declining employment is related to relatively high management–union relationship ratings, although this relationship is weaker than might be expected due to considerable differences between countries.

4.6.2 The four indicators and employment growth or decline

We have explored the relationships between, on the one hand, the four industrial relations indicators, with TUD, CBC and MEB registered for 2013/14 and the management–union relationship for 2015; and, on the other, employment growth or decline in the respective country/industry cells, using only the 2008-2014 Eurostat employment data focusing on the five industries. Based on the analysis in Chapter 3, we have differentiated the latter data for the N/W/S Europe and CEE country groups.

Our analysis, set out in Table 4.12A, shows that the results varied so considerably across both industries and the two country groups that we could not draw a general conclusion.

For Wholesale, Retail and Transport and telecoms, the coefficients concerning TUD, CBC and MEB mostly had a positive sign. These outcomes suggested, to some extent, that countries with higher TUD, CBC and MEB rates in these industries also did better in terms of employment growth. The overall correlations for the management-union relationship in Retail, ICT and Transport and telecoms were slightly negative, but these outcomes did not allow the conclusion that declining employment was related to relatively high management–union relationship ratings. For Metal and electronics manufacturing, the coefficients for TUD, CBC and MEB were also slightly negative.

However, this was much more the case for the ICT industry, which seemed to suggest that the development of ICT employment across Europe may have been negatively influenced by relatively high TUD, CBC and MEB rates. However, an alternative explanation – that companies expanded their ICT activities in countries with relatively low TUD, CBC and MEB rates not by design but because other considerations had driven their expansion decisions – could also be valid. In these particular countries, ICT firms, including many start-ups, may have regarded their prospects as being so attractive that they tended to overlook any considerations concerning union organisation and collective bargaining.

In order to assess the economic internationalisation of the country/industry combinations in question, we explore here the relationship between the four industrial relations indicators and the development of FDI–related employment as charted in Chapter 3: see Table 4.12B. We based our calculations for the TUD, CBC and MEB correlations on the same data as before; for the management–union relationship data, we again compared these ratings per country/industry cell with the national average.

Table 4.12A **Correlations between employment growth (Eurostat statistics) and industrial relations indicators by industry and country group, 2008-2014 and 2013/14-2015**

			Metal & electronics manufacturing	Wholesale	Retail	ICT	Transport & telecoms
TUD	**Total**	**Correlation**	**-.126**	**0.222**	**0.069**	**-.372**	**0.212**
		N	21	23	23	11	23
	W/N/S countries	Correlation	0.013	-.046	-.223	-.181	0.316
		N	12	13	13	9	13
	CEE countries	Correlation	0.163	-.226	0.222	x	0.007
		N	9	10	10	x	10
CBC	**Total**	**Correlation**	**-.145**	**0.343**	**0.169**	**-.459**	**0.328**
		N	23	23	23	23	23
	W/N/S countries	Correlation	0.186	0.165	0.206	-.115	0.514
		N	13	13	13	13	13
	CEE countries	Correlation	-.286	0.034	-.189	-.356	-.038
		N	10	10	10	10	10
MEB	**Total**	**Correlation**	**-.112**	**0.219**	**0.381**	**-.480**	**0.033**
		N	23	23	23	23	23
	W/N/S countries	Correlation	0.251	-.145	0.363	-.287	0.036
		N	13	13	13	13	13
	CEE countries	Correlation	-.433	0.268	0.212	-.480	-.314
		N	10	10	10	10	10
Management-union relationship	**Total**	**Correlation**	**0.234**	**0.212**	**-.045**	**-.087**	**-.065**
		N	23	23	23	23	23
	W/N/S countries	Correlation	0.250	0.311	0.018	0.042	-.388
		N	13	13	13	13	13
	CEE countries	Correlation	0.218	-.236	-.239	0.483	0.217
			10	10	10	10	10

x = fewer than six countries
Sources: employment: Eurostat -- see Table SA6.5; TUD, CBC, MEB: see Table SA6.1; management-union relationship: WIBAR-3 IR survey, N=575

A comparison with Table 4.12A shows that, for the Wholesale and ICT industries, the outcomes hardly differed: the correlation coefficients for Wholesale remained positive and those for ICT were clearly negative. However, in the three other industries five of the 12 'total' cells showed a change of sign. In Metal and electronics manufacturing, the negative correlation value for TUD turned positive, whereas the same value in Retail turned negative. In Transport and telecoms, the change was most marked. In

this industry, the positive correlations for TUD, CBC and MEB turned negative, and the difference particularly in the TUD value was considerable when the growth in FDI-related employment was introduced. Thus, in Transport and telecoms, such growth seemed at odds in particular with trade union density. The change of sign in this industry originated in the N/W/S European country group.

Table 4.12B **Correlations between FDI-related employment growth (Eurostat statistics) and industrial relations indicators by industry and country group, 2008-2014 and 2013/14 - 2015**

			Metal & electronics manufacturing	Wholesale	Retail	ICT	Transport & telecoms
TUD	**Total**	**Correlation**	**0.221**	**0.331**	**-.114**	**–.401**	**-.435**
		N	21	23	23	11	23
	W/N/S countries	Correlation	0.469	0.060	-.371	-.263	-.576
		N	12	13	13	9	13
	CEE countries	Correlation	-.015	0.501	0.809	x	0.235
		N	9	10	10	x	10
CBC	**Total**	**Correlation**	**-.023**	**0.387**	**0.070**	**-.406**	**-.096**
		N	23	23	21	19	23
	W/N/S countries	Correlation	0.250	0.013	0.141	-.029	0.112
		N	13	13	11	13	13
	CEE countries	Correlation	0.204	0.548	0.492	0.288	-.625
		N	10	10	10	6	10
MEB	**Total**	**Correlation**	**-.035**	**0.170**	**0.236**	**-.494**	**-.031**
		N	23	23	21	19	23
	W/N/S countries	Correlation	0.180	-.274	0.396	-.272	0.014
		N	13	13	11	13	13
	CEE countries	Correlation	0.234	0.135	0.822	0.322	0.109
		N	10	10	10	6	10
Management-union relationship	**Total**	**Correlation**	**0.285**	**0.218**	**0.008**	**-.168**	**-.124**
		N	23	23	21	19	23
	W/N/S countries	Correlation	0.257	0.298	0.098	-. 089	-.404
		N	13	13	11	13	13
	CEE countries	Correlation	0.238	-.296	-.105	0.386	0.233
			10	10	10	6	10

x = fewer than six countries

Sources: employment: Eurostat -- (calculations based on) Tables SA2.1, SA3.2, SA3.5, SA4.2, SA5.1; TUD, CBC, MEB: see Table SA6.1; management-union relationship: WIBAR-3 IR survey

4.6.3 The four indicators and foreign investment

Another way of looking at the relationship between foreign investment and the four industrial relations indicators is to focus on the shares of FDI-related employment in total employment. We start this exercise in Table 4.13A with a static picture, relating the four indicators to the FDI-related employment shares per cell as of 2014, derived from Chapter 3.

It can be seen that all outcomes for TUD, CBC and MEB in Metal and electronics manufacturing and the Retail and ICT industries showed negative coefficients, suggesting a negative connection between a relatively high FDI share and the prerequisites for multi-employer bargaining. Again, the negative values were highest for the ICT industry, although the negative relationship between Metal and electronics and MEB was also rather strong. The connection with the management–union relationship stood out negatively again in ICT and Transport and telecoms, but not in the other industries. In Wholesale only positive relationships could be noted.

Table 4.13A **Correlations between the shares of FDI-related employment and industrial relations indicators by industry, 2014, 2013/2014 and 2015**

		Metal & electronics manufacturing	Wholesale	Retail	ICT	Transport & telecoms
TUD	Correlation	-.208	0.385	-.256	-.442	0.141
	N	21	23	23	11	23
CBC	Correlation	-.454	0.197	-.051	-.646	0.029
	N	23	23	23	19	23
MEB	Correlation	-.560	0.028	-.150	-.691	-.140
	N	23	23	23	19	23
Management-union relationship	Correlation	0.323	0.171	0.119	-.110	-.192
	N	23	23	23	23	23

Sources: employment: Eurostat -- calculations based on Tables SA2.1, SA3.2, SA3.5, SA4.1, SA5.1; TUD, CBC, MEB: see Table SA6.1; management-union relationship: WIBAR-3 IR survey, N=575

Table 4.13B **Correlations between the development of the shares of FDI-related employment and industrial relations indicators by industry, 2008-2014 to 2013/14 and 2015**

		Metal & electronics manufacturing	Wholesale	Retail	ICT	Transport & telecoms
TUD	Correlation	0.297	0.176	0.023	-.379	-.468
	N	21	23	23	11	23
CBC	Correlation	0.131	-.035	0.197	-.338	-.179
	N	23	23	23	19	23
MEB	Correlation	0.106	0.147	0.152	-.385	-.035
	N	23	23	23	19	23
Management-union relationship	Correlation	-.135	0.288	-.289	-.233	0.181
	N	23	23	23	23	23

Sources: employment: Eurostat -- calculations based on Tables SA2.1, SA3.2, SA3.5, SA4.1, SA5.1; TUD, CBC, MEB: see Table SA6.1; management-union relationship: WIBAR-3 IR survey, N=575

Table 4.13B shows the results of a dynamic approach, relating the four indicators to the growth/decline in the shares of FDI-related employment per cell between 2008 and 2014, expressed in percentages of FDI share as of 2008.

As regards the industries, comparing with Table 4.13A and also with Table 4.12B, the similarities between the coefficients as noted in these three tables show up quite strongly for ICT. For this industry, it did not matter whether we measured relative size in 2014 or the relative growth of FDI-related employment from 2008 to 2014: both times, the correlation coefficients for all four indicators remained negative. The similarities were also rather strong for Wholesale but, in the other three industries, a number of changes of sign could be seen. In Metal and electronics and in Retail, the negative signs for TUD, CBC and MEB indicated in Table 4.13A turned (slightly) positive, suggesting that developments in FDI-related shares were positively connected with the industrial relations indicators.

In contrast, and in particular concerning TUD for Transport and telecoms, both Tables 4.12B and 4.13B strengthened the suggestion of a substantial negative relationship between this and the increase in FDI-related employment. This result suggests that the foreign expansion of Transport and telecoms MNEs was aligned with falling trade union membership.

4.7 Industrial relations and the development of employment: company level

We turn now to the connection between the management–union relationship and employment growth or decline per company. According to our survey and the AIAS MNE database, employment grew between 2012 and 2014 by over five per cent in 228 companies (39.7 per cent), fell by over five per cent in 151 (26.3 per cent) and remained between these extremes in 196 (34.0 per cent) of the 575 companies scrutinised.

Table 4.14 shows the details of this development at company level as well as the ratings for the management–union relationship. The average relationship rating for the 'grower**s**' (2.84) was lower than that for those companies with substantially declining employment (3.05) and also for companies with moderate ('in between') employment development (2.90).Among the 'growers', the share of companies with the lowest (1-2, or 1.5 points) ratings for the management–union relationship was considerable (29 per cent) while a '4' rating was assigned to less than 22 per cent of growing companies. In contrast, among declining companies these shares were 21 per cent for '1/2' and 32 per cent for '4'. 'Mean growth', the last row of Table 4.14, indicates that the strongest employment growth (0.23 on a scale from -1 to 1; see footnote to Table 4.14) emerged in the category with the lowest management–union relationship rating and that minimal growth (0.01) was linked with an above-average '4' rating.

From a trade union viewpoint, these results seem both remarkable and disquieting. Since they are relevant for trade union policy-making, we have deepened the analysis, adding further refinement to facilitate some explanations.

Tables 4.15A and 4.15B detail the three employment growth/decline groups by industry, showing their distribution and the average management–union relationship rating per growth/decline category and industry.

Table 4.14 **Distribution of management- union relationship ratings per company by employment growth categories per company and mean employment growth per relationship category, 2012-14 to 2015**

	1-2		3		4		5		Total		Mean
	N	%	N	%	N	%	N	%	N	%	
Greater than +5%	66	*28.9*	106	*46.5*	49	*21.5*	7	*3.1*	228	*100*	**2.84**
In between	47	*24.0*	103	*52.6*	41	*20.9*	5	*2.6*	196	*100*	**2.90**
Greater than -5%	32	*21.2*	67	*44.4*	48	*31.8*	4	*2.6*	151	*100*	**3.05**
Total	**145**	***25.2***	**276**	***48.0***	**138**	***24.0***	**16**	***2.8***	**575**	***100***	**2.92**
Mean growth *)	0.23		0.14		0.01		0.19		0.13		

Note: in between – increase/decrease in employment of less than five per cent change between 2012 and 2014
1-2 up to 5: management-union relationship rating
*) based on calculation: -1.00 = decline of more than five per cent decline; 0 = in between; 1.00 = growth of more than five per cent
Source: WIBAR-3 IR survey, N=575

As could be expected, the ICT industry had the largest share of 'growers' (48 per cent) and Transport and telecoms (20 per cent) the lowest. Metal and electronics manufacturing and Commerce remained close to ICT and, with 23 and 16 per cent respectively, had even lower shares of declining companies (Table 4.15A).

In spite of these differences in composition, Table 4.15B confirms the outcomes we have called 'disquieting' for all four industries. In each industry, the 'grower' group had low average management–union relationship ratings, with ICT and Transport and telecoms posting the lowest; whereas, with the exception of Transport and telecoms, the declining group had the highest average relationship ratings. The differences were smallest in Commerce.

Looking at the differences between the average management–union relationship ratings across the 23 countries, it can be seen that the contradiction of relatively low averages for the 'growers' versus relatively high averages for companies with declining employment in 2012-2014 was at its most widespread in the ten CEE countries. In this country group, the average management–union relationship ratings for growing companies remained 0.54 percentage points below those of companies with employment under pressure. This disadvantage showed up in eight of these countries. The 'growers' had a higher average rating only in Hungary, while for Romania we found no difference.

Table 4.15A **Distribution of employment growth per company by industry, 2012-14**

	Metal and electronics manufacturing		Commerce		ICT		Transport & telecoms		Total	
	N	%	N	%	N	%	N	%	N	%
Greater than +5%	50	*43.5*	100	*43.5*	55	*47.8*	23	*20*	228	*39.7*
In between	39	*33.9*	93	*40.4*	26	*22.6*	38	*33*	196	*34.0*
Greater than -5%	26	*22.6*	37	*16.1*	34	*29.6*	54	*47*	151	*26.3*
TOTAL	**115**	***100.0***	**230**	***100.0***	**115**	***100.0***	**115**	***100.0***	**575**	***100.0***

Source: WIBAR-3 IR survey, N=575

Table 4.15B **Management-union relationship by employment growth per company and by industry, averages per cell, 2012-14 to 2015**

	Metal and electronics manufacturing	Commerce	ICT	Transport & telecoms	Total
Greater than +5%	3.13	2.84	2.55	2.91	**2.84**
In between	2.92	2.83	2.65	3.22	**2.90**
Greater than -5%	3.35	2.91	2.76	3.19	**3.05**
TOTAL	**3.11**	**2.85**	**2.64**	**3.15**	**2.92**

Source: WIBAR-3 IR survey, N=575

By contrast, for the 13 W/N/S European countries and calculated on a per country basis, the average ratings for growing companies were 0.14 percentage points above those of declining ones. In seven countries (Austria, Belgium, Denmark, Germany, Italy, the Netherlands and Spain), the difference favoured the 'growers'; in five (France, Ireland, Portugal, Sweden and UK) it was in favour of those in decline; and in Finland there was no difference.

Using the same growth/decline groups and timescale, Tables 4.16A and 4.16B show the extent to which the development of employment at company level coincided with that at parent MNE firms and, furthermore, how this related to the management–union relationship ratings. As in Tables 4.10A and 4.10B, this information covers 328 subsidiaries of MNEs over the period 2012-2014 where at least one subsidiary/affiliate operated in one of the 23 countries under scrutiny.

Table 4.16A **Distribution of employment growth per company and MNE parent firm, 2012-14**

Company	Greater than +5%		In between		Greater than -5%		Total	
MNE parent	N	%	N	%	N	%	N	%
Greater than +5%	74	*54.4*	42	*38.9*	26	*31.0*	142	*43.3*
In between	28	*20.6*	32	*29.6*	24	*28.6*	84	*25.6*
Greater than -5%	34	*25.0*	34	*31.5*	34	*40.4*	102	*31.1*
Total	**136**	***100.0***	**108**	***100.0***	**84**	***100.0***	**328**	***100.0***

Source: WIBAR-3 IR survey, N=328

Table 4.16B **Management–union relationship by employment growth per company and MNE parent firm, averages per cell, 2012-14 to 2015**

Company	Greater than +5%	In between	Greater than -5%	Total
MNE parent				
Greater than +5%	2.70	2.70	2.77	**2.71**
In between	2.95	3.05	3.07	**3.02**
Greater than -5%	2.81	2.79	2.93	**2.84**
Total	**2.78**	**2.83**	**2.92**	**2.83**

Source: WIBAR-3 IR survey, N=328

Table 4.16A shows that, in 74 out of the 328 cases (22.5 per cent), employment in both the parent MNE firm and the subsidiary grew by over five per cent; whereas the opposite scenario – a decline of over five per cent in both parent and subsidiary – happened in only 34 cases (10.5 per cent). Thus, 220 cases – or 66 per cent of the total – were covered by the other seven options.

When considering the average management–union relationship ratings shown in Table 4.16B, it is striking that, in expanding parent MNEs with subsidiaries that were also 'growers,' the relationship received the lowest average rating (2.70); while in parents and subsidiaries that were both in decline, the average rating (2.93) remained above the overall average (2.83). This result may, once more, confound the expectations of students of industrial relations and again deliver food for thought for the 'movers and shakers' of the trade union movement.

Finally, a comparison of Table 4.16B with Table 4.15B reveals some further noteworthy outcomes. The addition of parent firms led to lower average ratings for the 'higher than five per cent' and 'lower than minus five per cent' employment growth groups, whereas the combined ratings for the 'in between' group increased. Obviously, when parent firms are included in the equation, the management–union relationship does best when the parents are neither growing nor declining substantially.[36]

On the trade union side, a reliance on such conditions may not be without risks as these may turn out to be deceptively unstable. For example, we found that nine out of 52 parent firms (see footnote 40) switched from the 'higher than five per cent' to the 'lower than minus five per cent' growth category, or vice versa, when comparing their 2012-14 employment figures with those for 2014-16.

4.8 Collective bargaining in the five industries

4.8.1 The management–union relationship and collective bargaining

We gathered information for the selected 575 companies to determine whether in 2014[37] they were covered by an industry agreement (MEB), a single-employer agreement (SEB) or by no collective agreement (CLA) at all. As indicated earlier, when pay levels and wage increases are negotiated at single-employer level, we label this practice 'SEB'. We did so even if there were delegation processes from higher-level MEB agreements

36. This was confirmed when focusing on the development of employment in 2014-2016 in the 52 parent firms for which we presented such figures in Chapter 3. The (unweighted) average management–union rating for the 19 'growers' among them (over five per cent growth; 76 subsidiaries) was 2.91, while the average for the 16 parent firms with employment decreasing by over five per cent (73 subsidiaries) was 2.92. At an average rating of 3.07, however, the result for the 17 parents (61 subsidiaries) found in the 'in between' category ended up considerably higher.

37. We have tried to reconstruct the situation concerning the incidence of MEB/SEB/no CLA as at mid-2014 but, due to a lack of information, could not attain this goal consistently. Nevertheless, the reader may assume that, in at least 90 per cent of the 575 cases, the situation we traced reflected the situation in 2014 across the year.

in place.[38] We found that 256 companies (44.5 per cent) were covered by an industry agreement and 222 (38.5 per cent) by a single-employer agreement, whereas 97 (nearly 17 per cent) were governed by no collective agreement at all.

Table 4.17A provides an overview of the distribution of the three types of CLAs by industry. It shows that Wholesale, at just over 50 per cent, had the highest MEB share, closely followed by ICT (nearly 50 per cent) and Retail (47 per cent). At some distance was Metal and electronics manufacturing (42 per cent), while Transport and telecoms (34 per cent) brought up the rear. At 60 per cent, the latter industry had by far the highest share of single-employer agreements and, in contrast, also had the lowest 'no CLA' share (six per cent). At the other extreme, no less than 45 ICT companies (39 per cent) were not covered by a CLA. In addition to Transport and telecoms, Metal and electronics also posted more SEB- than MEB-based collective agreements.

Table 4.17B shows the distribution of the average management–union relationship ratings by type of agreement and industry. Overall, the average rating for SEB-covered companies was somewhat higher than for those covered by MEB: 3.13 versus 3.07. It is interesting to note that, in three industries – Metal and electronics manufacturing, Retail and ICT – companies covered by a MEB arrangement clearly had a higher average management–union relationship rating than those with SEB-based CLAs. However, the opposite was the case for Wholesale and Transport and telecoms. Relatively high management–union relationship averages were evident for three combinations: Metal and electronics/MEB, Wholesale/SEB and Transport and telecoms/SEB.

At this point, it is worthwhile recalling that the rating of the management–union relationship was scored '1' where there were 'no contacts between management and trade union(s) whatsoever' while 'management explicitly refuses to negotiate a collective agreement' was scored as a '2'. Yet, in certain circumstances, a higher rating than '1' or '2' (combined in our analysis) may also have been ascribed to companies not covered by a collective agreement in 2014.[39] This was most often the case in Metal and electronics manufacturing.

The role of ownership may also be relevant here. The distribution of the three types of agreement by ownership category shows that home-based MNEs, with 56 per cent, had the highest MEB share, followed directly by domestic firms (54 per cent) (Table 4.18A). In contrast, nearly three in four collective agreements in state-owned firms were bargained on a single-employer basis. This was particularly the case for railways, other public transport firms and state-owned postal services.

38. We found 23 'SEB' cases (4 per cent of 575 cases; 10.5 per cent of all 'SEB' cases) in which delegation processes from higher bargaining levels could be established or, with some certainty, be assumed. In view of their small amount, we abstained from analysing this sub-sample.

39. One possibility was that companies not covered by a collective agreement in 2014 were covered later, at the time of the IR survey when our team rated companies according to their management–union relationship (July 2015-April 2016). To a certain extent, this seemed to have happened more in Metal and electronics manufacturing and in ICT, notably in CEE countries.

Table 4.17A **Distribution of multi-employer/single-employer/no collective agreement by industry, 2014**

	Metal and electronics manufacturing		Wholesale		Retail		ICT		Transport & telecoms		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
MEB	48	*41.7*	58	*50.4*	54	*47.0*	57	*49.6*	39	*33.9*	256	*44.5*
SEB	56	*48.7*	37	*32.2*	47	*40.9*	13	*11.3*	69	*60.0*	222	*38.6*
No CLA	11	*9.6*	20	*17.4*	14	*12.1*	45	*39.1*	7	*6.1*	97	*16.9*
TOTAL	**115**	***100.0***	**115**	***100.0***	**115**	***100.0***	**115**	***100.0***	**115**	***100.0***	**575**	***100.0***

Source: WIBAR-3 IR survey, N=575

Table 4.17B **Management–union relationship by multi-employer/single-employer/no collective agreement and industry, 2014-2015**

	Metal and electronics manufacturing	Wholesale	Retail	ICT	Transport & telecoms	Total
MEB	3.28	2.99	2.96	2.99	3.18	3.07
SEB	3.10	3.27	2.90	2.77	3.24	3.13
No CLA	2.36	1.91	1.93	2.07	(2.08)	2.03
TOTAL	**3.11**	**2.89**	**2.81**	**2.64**	**3.15**	**2.92**

() = based on fewer than ten observations
Source: WIBAR-3 IR survey, N=575

The dominance of foreign-owned MNEs in the respective bargaining categories should not be overlooked here. They amounted to 45 per cent of all MEB-based agreements; nearly one-half (49 per cent) of SEB-based agreements; and over two-thirds (69 per cent) of all companies not covered by a collective agreement in 2014. About 60 per cent of the latter 'no CLA' group consisted of subsidiaries of MNEs in the ICT industry in CEE countries and Ireland; these MNEs were mostly US-based.

Table 4.18B provides the distribution of the average management–union relationship ratings by types of agreement and ownership categories. Here too, rating differences may be telling, and relevant for trade union policy-making. Clearly, home-based MNEs and state-owned firms with MEB-based agreements attained higher average ratings than their counterparts covered by single-employer bargaining. However, the opposite was the case for foreign-owned MNEs and domestic firms, with the averages for foreign-owned MNEs notably higher in companies covered by single-employer bargaining.

As regards the group not covered by agreements at all, it can be seen from the relatively high average value (2.19), evident mainly among foreign-owned MNEs, that a number of companies have, on the face of it, been rated higher than their 'no CLA' status would strictly permit.

Table 4.18A **Distribution of multi-employer/single-employer/no collective agreement by ownership category, 2014**

	Foreign-owned MNE		Home-based MNE		State-owned firm		Domestic firm		Total	
	N	%	N	%	N	%	N	%	N	%
MEB	113	*39.1*	91	*56.2*	14	*25.9*	38	*54.3*	256	*44.5*
SEB	109	*37.7*	54	*33.3*	39	*72.2*	20	*28.6*	222	*38.6*
No CLA	67	*23.2*	17	*10.5*	1	*1.9*	12	*17.1*	97	*16.9*
TOTAL	**289**	***100.0***	**162**	***100.0***	**54**	***100.0***	**70**	***100.0***	**575**	***100.0***

Source: WIBAR-3 IR survey, N=575

Table 4.18B **Management–union relationship by multi-employer/single-employer/no collective agreement and ownership category, 2014-2015**

	Foreign-owned MNE	Home-based MNE	State-owned firm	Domestic firm	Total
MEB	**2.91**	**3.11**	**3.54**	**3.13**	**3.07**
SEB	**3.09**	**3.01**	**3.47**	**3.25**	**3.13**
No CLA	**2.19**	**1.76**	**(3.00)**	**1.83**	**2.03**
TOTAL	**2.81**	**2.93**	**3.48**	**2.89**	**2.92**

() = based on fewer than ten observations
Source: WIBAR-3 IR survey, N=575

4.8.2 The other indicators and collective bargaining

Earlier, while calculating concentration ratios, we found that the five largest companies in 2014 covered some 18 per cent of all those in employment in our research, with ratios across industries varying from nearly 30 per cent in Transport and telecoms to five-seven per cent in Wholesale. We noted in Chapter 3 that the country variation within industries was also considerable, resulting in wide variations in the employment shares of the five largest companies per country/industry cell: see Table SA6.2. Thus, the outcomes we have just discussed regarding the prevalence of MEB- or SEB-based agreements, or the lack of a collective agreement at all, in the five largest companies in each cell do not determine *per se* the outcomes for the other three indicators – TUD, CBC and MEB – for the cells generally.

As a first step to gaining greater insight into the relationship between these two ranges of values, we calculated values for the MEB/SEB/no CLAs per cell by attaching a rating of '2' to companies covered by a MEB-based agreement, a '1' to those covered by a SEB-based agreement and a '0' to those without an agreement at all. The second step was to correlate these values with those for TUD, CBC and MEB.

Table 4.19 shows the outcomes. They indicate a consistent pattern across industries: the lowest correlation coefficients were those for the relationship with TUD, while there were higher coefficients for CBC and the highest for MEB. Intuitively, one might have

expected this last outcome. Nevertheless, it is worthwhile emphasising that, for Metal and electronics manufacturing and Wholesale, a close connection emerged between the incidence of MEB-based agreements in the five largest companies and the existence of MEB at industry level. The other correlation coefficients were somewhat weaker, except for Transport and telecoms with its 60 per cent share of single-employer bargaining agreements, but the connection between predominantly MEB-based arrangements in these companies and the incidence of CBC also remained strong.

These results confirm the weak connection between TUD and CBC we found earlier; in particular concerning the ICT industry, the term 'disconnect' may not be an exaggeration. Clearly, calculated along the lines sketched above, the overall strength of worker organisation as expressed by trade union density mattered only modestly in attaining and maintaining an industry agreement. In reviewing our wider evidence, however, two other determining factors come to the fore: the availability of strong employers' organisations willing to engage in MEB; and, to a lesser extent also, the existence of state intervention, notably through (the 'threat' of) mandatory extension.

Table 4.19 **Correlations between the average value attached to multi-employer/single-employer/no collective agreement in the five largest companies by industrial relations indicators, by industry, 2013/14-2014**

		TUD	CBC	MEB	Average value
Metal and electronics manufacturing	Correlation	0.475	0.798	0.877	1.31
	N	21	23	23	
Wholesale	Correlation	0.312	0.689	0.691	1.34
	N	23	23	23	
Retail	Correlation	0.485	0.699	0.739	1.33
	N	23	23	23	
ICT	Correlation	0.184	0.744	0.731	1.11
	N	11	23	23	
Transport and telecoms	Correlation	0.398	0.489	0.727	1.28
	N	23	23	23	

Sources: WIBAR-3 IR survey, N=575; TUD, CBC, MEB: see Table SA6.1

4.9 The content of collective agreements

As part of our research, we collected and coded 181 collective agreements covering the five industries in the 23 countries. Most of these agreements were found in Metal and electronics manufacturing, while the lowest number was in the ICT industry (53 and 11, respectively; see Table 4.20). The largest number of agreements was drawn from the Netherlands and the lowest from Ireland, Lithuania and United Kingdom (23 versus one each). This outcome is, in part, due to such agreements being much less likely to be publicly available in the latter countries and rarely to be found on the internet. It should be noted that five agreements covered more than one industry, specifically the wholesale and the retail industries.

Our Industrial Relations survey contained a couple of questions concerning the signatories to the agreements. This information was available for 173 of the agreements and showed that 60 per cent were based on MEB while the other 40 per cent had been concluded with a single employer. For eight agreements, this information was lacking, including the five covering more than one industry and which may also have covered just one employer. The reader should be aware that this collection of collective agreements does not at all constitute a representative sample of the totality of agreements concluded in the 115 country/industry combinations for the simple reason that many agreements were not accessible to the researchers.

Table 4.20 **Number of collective agreements coded by industry, 2015**

	Metal and electronics manufacturing	Wholesale	Retail	ICT	Transport & telecoms	Total
No. of agreements	53	30	37	11	50	**181**
Of which info about signatories	52	25	36	11	49	**173**
Of which MEB	60%	80%	67%	36%	51%	**60%**

Source: WIBAR-3 IR survey

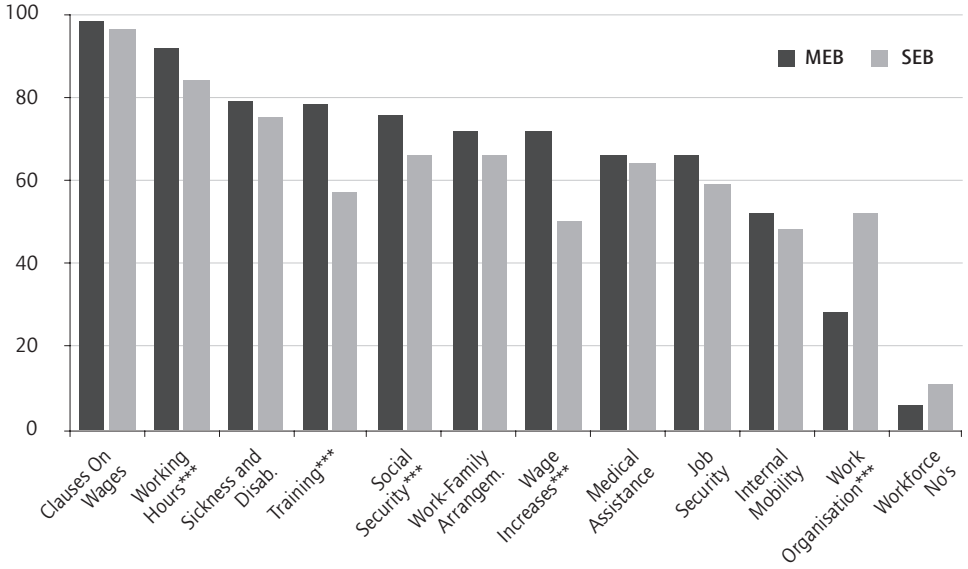
In order to establish which topics were negotiated in the collective agreements, these were coded according to 12 options: see Figure 4.1. The figure indicates – not surprisingly – that almost all agreements had clauses on wages (97 per cent). Yet, only two-thirds dealt with wage increases (65 per cent). Almost nine in ten agreements contained clauses on working hours, schedules and holidays (88 per cent). About one-half to three-quarters included clauses on sickness and disability (78 per cent); social security (72 per cent); training (70 per cent); work-family arrangements (69 per cent); medical assistance (65 per cent); job security (63 per cent); and internal mobility (50 per cent). Fewer agreements had clauses on work organisation (38 per cent) and very few contained clauses on agreed workforce numbers (eight per cent) – both being outcomes which could be expected.

The figure shows that agreements based on MEB more often included ten of the 12 topics, apart from those on work organisation and workforce numbers. This result may come somewhat as a surprise although, for most topics, the difference between MEB and SEB outcomes was not that big. The incidence of clauses on working hours (MEB: 92 per cent; SEB: 84 per cent), training (MEB: 78 per cent; SEB: 57 per cent), wage increases (MEB: 72 per cent; SEB: 50 per cent) and social security (MEB: 76 per cent, SEB: 66 per cent) was, however, significantly higher in agreements based on MEB, whereas the incidence of regulations related to work organisation was significantly higher in agreements based on SEB (SEB: 52 per cent; MEB: 28 per cent – see *** in the Figure). The seven other differences were not significant.[40]

40. The number of collective agreements containing clauses on workforce numbers was too small to carry out a significance test.

That our collection of agreements – whilst not representative – revealed for MEB a higher incidence of some specific issue clauses in collective agreements than was the case for SEB suggests that the scope (at least) for wider-ranging negotiations at MEB level should not be missed by union negotiators seeking to find new legitimacy for agreements reached on an industry basis.

Figure 4.1 **Distribution of 12 topics in collective agreements by MEB and SEB arrangements, 2015**



Source: WIBAR-3 IR survey, 173 CLAs (MEB = 104, SEB = 69)

4.10 Final thoughts on establishing 'coalitions of the willing'

The following points taken from this chapter are noteworthy when considering the options for the development of collective bargaining generally in the EU and the prospects for a shift towards industry bargaining in particular.

First of all, our data revealed that the strongest management–union relationships tended to be evident in sectors that had recently struggled in terms of employment. Both Transport and telecoms and Metal and electronics manufacturing have seen employment declines between 2008 and 2014 in nearly all 23 countries. Yet these sectors showed the highest management–union relationship ratings. In contrast, for Commerce and ICT, where employment (except for Commerce in CEE countries) has mostly been growing, we observed much lower management–union ratings.

There are many possible explanations for such findings, but it may be that trade unions have proved to be rather more useful to management in helping to mitigate the effects of falling labour demand compared to the role they can play where the demand for labour

is high. Conventional wisdom holds that opportunities for unions to gain power and influence tend to be greater when labour markets are tight (i.e. there is strong demand for labour), so it is at least plausible to suggest that the relatively low levels of union density and collective bargaining coverage found in expanding sectors, such as ICT, are linked to quite deliberate policies designed to pre-empt unions from exploiting high labour demand. The implications of this for the potential revival of collective bargaining are not promising, irrespective of whether multi- or single-employer arrangements are being considered.

That said, support for collective bargaining appears to be holding up amongst workers despite the continuous decline of collective bargaining coverage. Outcomes from the *WageIndicator* web survey suggest that being covered by a collective labour agreement still commands widespread support among wage-earners across Europe. In a *WageIndicator* sample of ten countries covering the five industries we scrutinised, respondents expressed a high preference to be covered by a collective agreement. In almost all countries and all industries, this preference was higher than 50 per cent, with exceptions to be found mainly in the ICT industry. Similarly, we observed that, in eight countries, a significantly higher preference was shown by respondents actually covered by a collective agreement than by those who were not – irrespective of whether that country had a high or a low collective bargaining coverage rate. Indeed, the lower the actual level of collective bargaining coverage, the higher the gap with the percentage of those who thought it important to be covered (section 2.8, Table 2.13).

In view of the diverse composition of the ten-country sample, it is unlikely that the full sample of 23 countries would contradict these results. Such findings confirm that, from a worker point of view, the collective agreement continues to be broadly supported throughout Europe as an instrument for regulating industrial and employment relations.

In line with these outcomes, and because of its considerable potential advantages, multi-employer bargaining should, in particular, be regarded as a process worthy of being maintained and expanded. In the project seminars, many presenters and discussants, notably from CEE countries, held the potential of multi-employer bargaining in high esteem. However, given the dominant trends towards decentralisation, trade unions plainly need to find creative ways to re-establish the attractions of a multi-employer scenario. The same is likely to be true for both employers' organisations and (when it comes to the extension of collective agreements and maintaining labour standards) for labour market authorities keen on shaping 'coalitions of the willing' regarding collective bargaining.

To the extent that developing 'coalitions of the willing' ought to be a high priority for the revival of collective bargaining, it is worthwhile revisiting the management–union relationship ratings we came up with for the 575 individual companies we scrutinised. This provides a rudimentary indication of those sectors where better than average management-union relations were found, giving an indication at least of where these 'coalitions of the willing' might be attempted first of all.

As far as our industries were concerned, these ratings were highest in Transport and telecoms (3.15 average), followed by Metal and electronics manufacturing (3.11) and then, at some distance, by Commerce (2.85 average: 2.89 for Wholesale, 2.81 for Retail), with the ICT industry at the bottom of the list (2.64). Other than for Transport and telecoms, the industry averages for the 13 W/N/S European countries were higher than those for CEE countries (Table 4.2).

Meanwhile, looking at ownership categories, considerable differences were again apparent. Average management–union relationship ratings were highest for state-owned firms (3.48), although it should be noted that this category was almost completely limited to Transport and telecoms. At a noticeably lower level, the subsidiaries of home-based MNEs came second in the ratings (2.93), followed by domestic firms (2.89), with the subsidiaries of foreign-owned MNEs at the bottom of the list (2.81) (Table 4.3).

Digging deeper into the management–union relationship for MNEs, and comparing first of all their respective home countries (Table 4.4), we found rather high average ratings for MNEs from the Netherlands, Sweden, Denmark, Spain and Finland, with these being considerably higher than those for Germany and France, the two countries which exhibited the largest numbers of MNEs and subsidiaries.

Furthermore, the average ratings for MNEs based in the 23 countries were higher in their home countries (2.93) than for their subsidiaries abroad (2.83). Danish, French, Spanish, Swedish and UK MNEs had a higher average rating at home, whereas Dutch MNEs did better abroad. For German and Finnish firms, the average 'home' and 'abroad' ratings hardly differed. The low average found for the subsidiaries of US-based MNEs was perhaps no surprise, although the gap with the averages for MNEs from other countries of origin was substantial.

On the positive side, the divergence within MNEs across countries may imply a greater policy space for local representatives of workers than has hitherto been suggested in most of the industrial relations and management literature. There is growing support for this position. For instance, a comparative study of Lidl found that this 'hard discounter', whilst professing a global standardisation and cost leadership strategy, in effect employed a country-specific interpretation of the 'employment-related rules of the game' derived from the industrial relations systems of its host countries. The authors here concluded that, at Lidl in Finland and, to some extent, in Spain, national systems provided opportunities for local actors, including organised labour to: 'Build robust toolkits [as to] promote the development of counter-arguments (…)' (Geppert *et al.* 2015: 255). Lidl employees in Germany, Ireland and the UK, however, appeared to have much less opportunity for such local action.

On the negative side, it can be argued that, in countries where industrial relations systems are less sophisticated, workers' representatives in MNEs may frequently be subject to the discretion of local managers. In consequence, they have much less opportunity to develop strong countervailing union power to resist downward pressures on pay and conditions. In these conditions, drafting 'coalitions of the willing' to revitalise collective bargaining are not a realistic option.

Before leaving behind the concept of creating 'coalitions of the willing', it is worthwhile considering the influence that size of organisation has here. We produced evidence for the importance of size in the management–union relationship showing, with the exception of state-owned firms, a clear-cut relationship: the larger the company or subsidiary in terms of employment, the higher the average management–union relationship ratings (Tables 4.7A and B). The effects of size in this respect were most clearly visible in Metal and electronics manufacturing, followed by Commerce (Tables 8A, B and C).

We expanded our analysis of the relationship with size to include TUD, CBC and MEB and confirmed a positive, although not particularly strong, correlation between company/subsidiary employment size and the management–union relationship. Somewhat stronger positive correlations showed up here with TUD, CBC and MEB. Larger company size was correlated positively with TUD for Wholesale in particular but also, albeit to a lesser extent, for Metal and electronics manufacturing and Transport and telecoms. The same was true for CBC and MEB in Metal and electronics manufacturing and Transport and telecoms, and also for ICT; it was, however, not the case for Wholesale and scarcely so for Retail (Table 4.9).

We also examined the effects of size by looking at the numbers of employees in parent firms. We found in the context of the management-union relationship the rule that 'the larger the parent firm the higher the average rating' was evident in Metal and electronics manufacturing but the opposite was the case in Commerce and ICT, where the largest parent firm category showed quite low averages. The findings for Metal and electronics manufacturing were mostly in line with those for company/subsidiary size; however, for Commerce and ICT the results were quite the opposite (Tables 4.10A and B). Once more, this provides some clues as to where 'coalitions of the willing' may be reasonably likely to be found.

5. Conclusions and recommendations

5.1 Conclusions

The central question remaining for trade unions right across the EU is how to arrest the declining influence of collective bargaining and what strategies will be appropriate to ensure an expanding and sustainable future for collective bargaining? This is, of course, an easier question to frame than to answer and, in any case, it has to be seen against the backdrop of the decentralising pressures that, latterly in many countries and industries, have reshaped and reduced the influence of collective bargaining. Nevertheless, our data in the foregoing chapters have shown that higher trade union density is correlated with a higher share of multi-employer bargaining which is, in turn, positively linked to higher collective bargaining coverage. Thus, union campaigning for greater emphasis on collective bargaining efforts at industry-wide, or sectoral, multi-employer level looks to be a better approach than simply focusing on company-level collective agreements.

It is clear that organisational conditions 'on the ground' will be critical for strengthening and revitalising collective agreements, particularly through industry-wide bargaining. Moreover, the scope for revitalising and promoting greater multi-employer bargaining activity will be influenced one way or another by established industrial relations and business models at national level. Chapter 2 elaborated that research from the 2000s has already questioned the extent to which any convergence in this field has taken place within the EU.

Initially, our statistical analysis seemed to point to relationships that were valid for the 23 countries we studied. Exploring the relationship between the four industrial relations indicators – trade union density (TUD), employer organisation density (EOD), collective bargaining coverage (CBC) and industry-wide bargaining (MEB) – based on national data for the three base years, 2001, 2007 and 2013/14, we found confirmation of the strong correlation between bargaining coverage and the presence of industry-wide bargaining that other researchers had traced.

However, our findings also confirmed that, under the surface, a sharp division lurked between developments in the two groups of countries where either multi-employer or single-employer bargaining prevailed. The first group embraced the 'old' EU-15 countries, minus the UK and Ireland ('MEB countries'), whilst the second group consisted of CEE countries excluding Slovenia but with the addition of UK and Ireland ('SEB countries'). Between 2001/02 and 2013/14, CBC, TUD and EOD all fell considerably further in 'SEB countries' than in 'MEB countries' (Table 2.8). This

suggests that, in the long-run, multi-employer bargaining offers better conditions for the survival of collective bargaining practices.

In this respect, however, one has to acknowledge that the growing divergence of industrial relations in the EU has the potential to undermine the recovery of trade union influence and constrain the redistributive power of collective bargaining, particularly if it continues to favour the growth of single-employer activity (cf. Glassner 2012: 77). We should also note that the existence of mandatory (or administrative) extension procedures in their current shape do not appear to restrain such divergence and that they may even actually support it.

As for the role of employers' organisations, our first statistical exercise, limited though it was to the national level and to comparative-static conditions, revealed their role to be more important than had perhaps been realised. Compared to TUD, EOD was, for example, considerably stronger and, over time, more consistently connected with both CBC and MEB (Table 2.6). A dynamic analysis, correlating the mutual linkages between TUD, EOD and CBC during two periods, 2001/02-2007 and 2007-2013/14, underlined the connection between the development of EOD and that of CBC. This connection was particularly strong between 2001/02 and 2007, but was also visible between 2007 and 2013/14. For TUD, by contrast, such a connection was lacking. A regression analysis covering the second period confirmed these findings: EOD 2007 had a significant positive effect on CBC 2013/14, whereas TUD 2007 did not have such an effect (Table 2.7).

As we have noted, the decline of EOD has not been as sharp as that of TUD. Indeed other research findings confirm that lower collective bargaining coverage and multi-employer bargaining rates throughout Europe over a longer period of time have contributed to a decrease in employers' organisation density. Nevertheless, for the most part these organisations have retained their representativeness rather better than trade unions have (Brandl and Lehr 2016). However, weak or non-existent employer organisations were frequently referred to by participants in our seminars, and plainly the existence of a co-ordinating body on the employers' side is a prerequisite for any multi-employer process.

We also undertook a statistical analysis of the relationships between TUD, EOD, CBC and MEB at the level of country/industry combinations (cells). Finding data for the 23 x 5 = 115 cells required a major effort. We were able to trace all relevant CBC and MEB values for 2013/14, and 88 per cent of the TUD values, but could not find sufficiently reliable data on employers' organisation density at country and industry level for the majority of the countries in our study.

We filled this information gap in two ways. First, by exploring the presence of trade unions and employers' organisations at country/industry level in 2015 in terms of their numbers. Our findings were largely in line with those based on national figures. At country/industry level, the number of trade unions and employers' organisations correlated positively with TUD, CBC and MEB, except for the number of trade unions as regards TUD and CBC in Transport and telecoms (Table 2.10), and for the number

of employers' organisations as regards TUD in Metal and electronics manufacturing (Table 2.12).

A second approach in our research used the management–union relationship as a company-level proxy for EOD. Rather uniquely, our expert survey enabled us to attach a management–union relationship rating to the five largest companies in each of the 115 cells. In total, these 575 companies in 2014 employed 8.9 million people out of the nearly 49.4 million across the five industries and 23 countries (18.0 per cent). Supported by the overview in Chapter 3 of developments in employment and competition in the five industries, Chapter 4 extensively explored the connections between the management–union relationship, TUD, CBC and MEB at various levels, and these developments. The presentations and debates in the three seminars provided guidance via the formulation of questions and assumptions.

After correlating country/industry data for TUD, CBC, MEB and the management–union relationship averages per cell for the latest available period (2013/14-2015), we found as follows (see also Table 4.1):

— the higher the CBC, the higher the TUD;
— the higher the CBC, the higher the MEB share;
— the higher the TUD, the higher the MEB share;
— the higher the management–union relationship rating, the higher the TUD.

Correlations between the management–union relationship and both CBC and MEB were also positive, but not significant. Of course, this correlation calculation was static and the outcomes cannot simply be transplanted into the dynamics of industrial relations and collective bargaining at industry level. Nevertheless, with reference to the industrial relations literature, and in the light of the experience of the trade union negotiators who contributed to the project seminars, our outcomes seemed to imply that relatively high union density rates might promote (a return to) high multi-employer bargaining once a high enough rate of collective bargaining coverage was in place. In turn, higher coverage rates could stimulate greater union density. However, as emphasised, an essential precondition for getting such dynamics in motion and restoring collective bargaining coverage and multi-employer scenarios is the availability of employers' organisations willing and able to negotiate binding collective agreements at industry level. Here, of course, the scale of employers' organisation density is likely to play a crucial role.

It proved far from easy to generalise about the effects that the foreign direct investment strategies deployed by MNEs may have had on the industrial relations indicators we used. Our results suggest that this form of internationalisation has produced a certain degree of convergence, although not necessarily towards one single industrial relations type. It would appear that the potential for increasing cohesion in industrial relations within existing country clusters continues to be limited, and may be further constrained by the pressure of foreign investment. In this respect, the outcomes of our research seem to have ended up rather close to those of Bechter *et al.* (2011), as cited in section 2.7.

Our data allowed us to gain new insights into the relationship between industrial relations, represented by TUD, CBC and MEB rates at country/industry level, and the differences between industrial relations characteristics across company types and industries. The trends towards divergence that we traced in our earlier WIBAR-2 project seem to have continued. In that project, MNEs during 2006-2011 scored higher than domestic firms on TUD, CBC and the incidence of workplace employee representation. In spite of some constraints, we were able to calculate most TUD, CBC and MEB values at country/industry level for the nine countries and four industries (excluding Wholesale) covered by WIBAR-2 that enabled meaningful comparisons with the WIBAR-3 outcomes to be made.

The results of such comparisons were rather industry-specific. In three industries, we could see relatively high industry-level union densities combined with relatively small differences between MNEs and domestic firms for TUD, CBC and the incidence of workplace employee representation. Transport and telecoms was the exception here (Table 3.6).

We undertook a similar correlation exercise to check the relationship we had observed in WIBAR-2 for 2006-2011 between the wage advantages ('wage premia') linked to working in an MNE with the more recent TUD, CBC and MEB rates we found at country/industry level. Rather surprisingly, in Metal and electronics manufacturing, high TUD, CBC and MEB rates were related to low, and sometimes negative, MNE wage premia. Such a negative relationship was particularly strong for CBC. For ICT and Transport and telecoms, this held true for CBC and MEB rates (Table 3.7).

It is possible that industry-wide bargaining and/or strong trade unions in Metal and electronics manufacturing and, to a lesser extent, in ICT and Transport and telecoms, have managed to level the playing field for MNEs and smaller firms and have also seemingly succeeded in creating wage spill-overs from MNEs, although in the Retail industry such a mechanism seems to be largely absent. As we observed regarding the outcomes of WIBAR-2, the latter finding may be associated with the 'low road' strategies pursued by retail MNEs in their expansion throughout Europe, including wage pressure policies (Van Klaveren *et al.* 2013: 277).

Finally, but importantly, we tackled the relationship between the development of TUD and CBC across the 23 countries on the one hand, and wage inequality within these countries on the other. We found statistical evidence (set out in Appendix 1) that high TUD, CBC and MEB values were rather effective in combating inequality in that they co-existed with a low incidence of low pay. As far as we could calculate – that is, for TUD and CBC – this was even more convincing for 2013/14 than for 2001. It also held true for the relationship of these values with income inequality, as measured by the Gini coefficient in the 23 countries, although these correlations were weaker (Tables A1 and A2).

We did not find much support for the assumption that changes in membership composition of the trade unions might have caused greater wage inequality, either through unions becoming more representative for high-skilled workers or by those

workers disproportionately leaving unions. Based on *WageIndicator* data for 2015 and for 13 countries, we were able to calculate TUD and CBC rates per quintile of the wage distribution of respondents (Figures A1 and A2). The results varied considerably across countries, with the highest rates noted for Denmark, Finland, Belgium and Italy. In the first three countries, CBC rates were the highest in the lowest two quintiles – that is, in the lowest 40 per cent of the wage distribution; however, for these countries the highest level of TUD rates also varied across quintiles.

5.2 Strategic considerations

We now highlight two sets of outcomes. The first set relates to the national and industry levels of industrial relations and collective bargaining:

1. relatively high TUD rates may prompt (a return to) high MEB once a higher CBC rate is in place;
2. in turn, rather high CBC rates may stimulate TUD;
3. EOD, and the availability of employers' organisations as willing bargaining partners, has a positive effect on CBC, more so than TUD;
4. a proliferation of employers' organisations willing and able to negotiate industry collective agreements is crucial for restoring or enlarging CBC and MEB;
5. the number of trade unions bargaining at country and industry level correlates positively with TUD, CBC and MEB (except for Transport and telecoms), as did (except for TUD in Metal and electronics manufacturing) the number of employers' organisations;
6. high TUD, CBC and MEB rates turn out to be rather effective in combating wage inequality.

These outcomes prompt the following strategic considerations. A relatively high collective bargaining coverage rate turns out to be a crucial factor in restoring or maintaining multi-employer bargaining. If extension mechanisms were in place, for a certain period of time a modest TUD may suffice – although, in the longer run, the issue of union representativeness could emerge and also be subject to public debate. The finding that rather high bargaining coverage rates may stimulate trade union density is challenging. It suggests that, in spite of the large differences between density and bargaining coverage rates, with many 'free riders' in the countries where such differences occur, there may be room to break the vicious circle often suggested in the industrial relations literature. Also, with the exception of Transport and telecoms, the negative effects of fragmentation in many unions and employers' organisations on bargaining coverage and multi-employer arrangements were obviously limited.

Nevertheless, as argued, the availability of employers' organisations willing to engage in multi-employer bargaining remains a crucial factor. The lack of such organisations may continue to hamper the development of multi-employer bargaining and, to some extent, collective bargaining overall. We should remind the reader that, by 2013/14, employers' organisation density rates at national level in seven of the 23 countries (Bulgaria, Estonia, Hungary, Lithuania, Poland, Romania and Slovakia) had fallen to

cover less than one-third of all employers in the private sector and in only nine other countries did employer organisations cover more than two-thirds of employees.

Clearly, there are pressing needs to revitalise, or even create, employers' organisations in a number of countries and industries, and to have these organisations invested with bargaining power. It is to be hoped that the 'new start for social dialogue' agreed at EU level in June 2016 may provide an impetus in this respect to the employer side. It must also be hoped that the national authorities, in particular those in the countries just cited, have understood the 'new start' message and will act accordingly. For the time being, the experiences related by participants in the project seminars suggest some scepticism in this particular regard.

Our second set of outcomes is concentrated on the company level, with the management–union relationship as the central concept, and eventually opening out to bargaining at industry or national levels (or international in case of MNEs):

1. the higher the average management–union relationship rating per country/industry cell, the higher the union density;
2. average management–union relationship ratings were highest for state-owned companies (mainly in Transport and telecoms), followed by the subsidiaries of home-based MNEs and domestic firms while those for the subsidiaries of foreign-owned MNEs were the lowest;
3. on average, the most internationalised MNEs did not score better on the management–union relationship than any other MNEs;
4. MNEs subject to transnational company agreements (TCAs) showed, on average, a high management–union relationship rating but that rating did not have a connection with the qualitative aspect of TCAs;
5. within MNEs, the variation in management–union relationship ratings related to their subsidiaries in host countries was considerable, particularly in the Wholesale, Retail and ICT industries;
6. the higher the economic concentration per country/industry cell, the lower the management–union relationship rating, but also the higher the trade union density;
7. the larger the company or subsidiary, the higher the average rating for the management–union relationship and, in the majority of industries, also the higher the union density and the rates of bargaining coverage and multi-employer bargaining;
8. only in Metal and electronics manufacturing did the rule apply that the larger the parent firm, the higher the average rating for the management–union relationship;
9. for nine countries, a negative relationship between employment growth at industry level and the management–union relationship emerged, although that relationship was not clear for union density, bargaining coverage and the existence of multi-employer bargaining;
10. the relationship between industrial relations indicators and FDI-related employment growth at industry level was hardly any different from that for overall employment growth, except for Transport and telecoms where positive correlation values for union density, bargaining coverage and the existence of multi-employer bargaining changed into negative ones;

11. average management–union relationship ratings were lowest for those companies with employment growth of over five per cent in 2012-14 whereas companies declining by over five per cent had the highest such ratings;
12. average management–union relationship ratings were lowest in those subsidiaries and parent MNEs where both grew by over five per cent in 2012-14, while the 'both decline' category also scored above average ratings;
13. in Metal and electronics manufacturing, Retail and ICT, companies covered by an industry collective agreement had a higher average management–union relationship rating than those governed by a single-employer agreement, whereas the opposite was the case for Wholesale and Transport and telecoms;
14. home-based MNEs and state-owned firms with industry-based agreements attained higher average management–union relationship ratings than those in single-employer arrangements, whereas the opposite was the case for the other two ownership categories (i.e. foreign-owned MNEs and domestic firms).

This second set of outcomes also suggests a number of strategic considerations. It may be reasonable to assume that the restoration of collective bargaining might have the company level as its starting point. In any event, strengthening company-level bargaining will be most appropriate in countries with little or no multi-employer traditions or current practice, such as UK, Ireland and most CEE countries. This logic has also grown in countries such as Spain, where legal constraints have, since 2008, hollowed out multi-employer bargaining. Company-level bargaining also offers some positive considerations for the trade union movement on which a restoration of industry-wide bargaining could be built. Single-employer bargaining has the potential to bring the negotiations (and union negotiators) closer to the membership, thereby improving knowledge of the competitive position of firms. Single-employer bargaining may also facilitate creativity among union negotiators and permit a widening of traditional bargaining agendas, notably towards work organisation issues. If these are then built on and translated to the larger scale, they could stimulate a broader union call for quality of work and for health and safety aspects to be integrated in industry-wide arrangements.

Based on management–union relationship ratings, together with data on trade union densities and the input of participants in the project seminars, the greatest potential for developing single-employer arrangements to the point where they could provide a basis for (the revitalisation of) industry-wide bargaining practices may be found in (subsidiaries of) home-based and foreign-owned MNEs in Metal and electronics manufacturing, as well as in large state-owned firms in (Transport and) telecoms. This applies not only to most N/W/S European countries but also to some CEE nations. Significantly, we found that the larger the concentration ratio (that is, the employment share of the largest five companies), the higher the trade union density. However, it will not be easy to find leading companies willing to develop collective agreements with potential 'spread effects' where industries and firms exhibit lower degrees of concentration.

Taken together, these outcomes imply that trade unions in expanding companies and industries across Europe will often find themselves in a defensive position. The opportunities for advancing collective agreements, possibly starting at company level

and subsequently expanding to industry level, are likely to be constrained in these companies and in these industries. Our analysis suggests that, even under conditions of employment growth, if unions have a potential basis of power in terms of union density and the existence of a collective agreement, they may often face problems in translating such a position to provide lasting tangible results and good management–union relationships. We have to conclude that the trade union movement in Europe must obviously invest heavily not just in capacity building but also in ways and means that can lead to sustainable improvements in their relationships with management, in particular where employment is growing.

Moreover, thorough preparation for negotiations is plainly crucial for the revitalisation of collective bargaining. In order to be effective, workplace union representatives should be closely connected with the formulation and negotiation of wage claims. At this juncture, it is worth reminding ourselves that trade union workplace representation across Europe has been seriously eroded. Our WIBAR-2 research covering 2006-2011 showed that only 55 per cent of respondents working in MNEs in nine EU member states reported some employee representation at their workplace, with even lower shares reported in domestic firms (Van Klaveren *et al.* 2013). In postal surveys conducted between 2005 and 2010 in 12 EU countries, over 30 per cent of union members reported that no shop stewards or works councillors were present in their workplace (Waddington 2014). Furthermore, it seems likely that, during and after the Great Depression, such shares will have fallen even further.

5.3 Recommendations

The conclusions and considerations just presented, together with the important inputs from the project seminars, give rise to the following practical recommendations:

Across Europe, trade unions need to invest considerably in the whole process of collective bargaining. As well as continually building their internal strengths and refreshing their own capacity, they should also make increased use of external resources including employee consultants, labour lawyers and researchers who are able to cooperate effectively and add valuable insights. Where appropriate, lay trade unionists and works councillors should also be encouraged to use such resources.

It is essential to develop trade union demands, in particular with regard to MNEs and other leading companies, that are soundly-based on informed social dialogue and meaningful access to management decision-making and strategic planning. Union officials should recognise that these are continuous processes which can, to a significant extent, be based on the insights of lay trade unionists and works councillors. In these processes, union officials, lay unionists and works councillors have to be(come) aware of the various policies and positions of parent firms and subsidiaries regarding their relationships with the trade unions, and act accordingly.

It is equally essential that, in developing bargaining demands, trade union negotiators intensify their contacts with workers belonging to vulnerable groups in the labour

market and take on board their input. Such activity should be focused particularly on those whose wages, conditions and work security are acutely endangered by dismissal, segmentation, outsourcing and other forms of marginalisation.

Trade unions must exert greater pressure on employers for information disclosure in order to build strong information and knowledge positions in leading companies, enabling the ongoing analysis of their competitive positions. Improving the social aspects of company reporting is also urgently needed. Hence revisiting, refreshing and, if needed, renegotiating information disclosure agreements to ensure that bargaining is evidence-based should be a continuing priority for union negotiators and their counterparts at company and industry levels. Related to improved information disclosure, trade unions need to find more effective ways to ensure employers' compliance with their collective agreement arrangements and obligations.

Trade unions have to find ways to connect the standards set in multi-employer bargaining with the potential and achievements of single-employer bargaining, in particular where the latter is the dominant practice. Viable options in this respect may be the development of sectoral framework agreements specifying the main substantive standards but leaving scope for variation in their implementation at company level; or, otherwise, two-tier bargaining arrangements in which multi-employer and single-employer scenarios are more or less equivalent.

Trade unions dealing with MNEs should continue to step up their efforts to co-ordinate and harmonise their bargaining activities. For specific MNEs operating throughout the EU, this might involve unions taking the lead in negotiating transnational company agreements (TCAs) and making better use of the information flows that surround European Works Councils. Also, if MNE managements resist the conclusion of TCAs, union negotiators might intensify negotiation campaigns at MNE level aimed at transcending national boundaries by harmonising bargaining objectives, for example in non-wage areas such as working time and work organisation.

Union negotiators might regularly evaluate whether the results of national, notably multi-employer, collective bargaining can be integrated in the negotiation of TCAs – and the other way around: whether the results and experiences regarding the negotiation of TCAs can be used in national bargaining at various levels.

Trade unions have to invest substantially in creative and appealing public campaigns, focusing on the use of social media wherever possible in combination with member surveys, and advertising positive collective bargaining results in particular to young people.

Detailed information about breakthrough agreements and bargaining innovations[41] should be more widely exchanged across countries within and between union

41. For example, the pioneering work of Nautilus International in developing single MNE agreements that cover employees from a wide range of countries.

negotiating bodies. To this end, greater use of databases of collective agreements should in particular be encouraged, such as *WageIndicator*'s Collective Bargaining Agreements (CBA) database.

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All links were checked on 12.09.2018

Appendix 1
Inequality, trade union density and collective bargaining coverage

Recently, various studies have become available that confirm the positive relationship between labour market institutions and either overall income equality (mostly measured by the Gini coefficient) or wage equality within countries. The latter is often measured either through the ratio between the upper and lower ten percentiles of the wage distribution or, alternatively, by the incidence of low pay – which, in turn, is usually measured by the percentage of wage-earners earning less than two-thirds of the national median gross hourly wage.

As the ILO notes in the Global Wage Report 2014/15: 'Collective bargaining is another labour market institution that has long been recognized as a key instrument for addressing inequality in general and wage inequality in particular (…) In practice, countries where a large proportion of workers are covered by collective agreements tend to have lower wage inequality.' (p. 59) This ILO report provides a further refinement of this latter conclusion, noting that: '(…) the extent to which unionization and collective bargaining affect the wage distribution also depends on whether the collective bargaining system is narrow (where collective bargaining takes place at the company or workplace level) or more inclusive and encompassing (where collective bargaining takes place at the national, industry and/or branch level in multi-employer settings with coordination across levels).' (p. 60)

Earlier studies that supported this position, like those of Visser and Checchi (2009) and Hassel *et al.* (2009), have more recently been confirmed by the findings of Garnero *et al.* (2013), Grimshaw *et al.* (2014), Fernández-Macías and Vacas-Soriano for Eurofound (2015c) and Visser *et al.* (2015) for the ILO. In particular, the studies of Grimshaw *et al.* and Visser *et al.* showed statistical proof for the significant effects of relatively high collective bargaining coverage on pay equity in highly-developed countries, with Visser *et al.* and Visser (2016b) concentrating on the decisive impact across countries of the existence, in particular, of multi-employer bargaining. Most recently, OECD research using country-level data on the labour market performance of 35 OECD countries between 1980 and 2015 has refined these outcomes, showing that co-ordinated collective bargaining systems in particular were associated with less wage inequality than fully decentralised systems. National bargaining systems identified as 'organised decentralized and co-ordinated' scored best in this respect. In 2015, Austria, Denmark, Germany, the Netherlands and Sweden belonged to the country group with such characteristics (OECD 2017: Chapter 4).

Garnero *et al.* (2013) and Grimshaw *et al.* (2014) also covered the pay equity effects of statutory minimum wages (SMWs) and discussed possible causal relations with high

bargaining coverage. Grimshaw *et al.* seemed inclined towards a trade-off here but, in contrast, Garnero *et al.*, using both national and sectoral data, concluded that SMWs (or sectoral wage floors), combined with high collective bargaining coverage, had been quite effective in reducing earnings inequality (see also Kampelmann *et al.* 2013).

On the negative side, there is evidence that, between 1980 and 2011 in advanced economies, the decline of unionisation and less (and less inclusive) collective bargaining has, in particular, been related to the rise of inequality at the top of the income distribution; that is, enlarging the share of the top ten per cent of earners (Jaumotte and Osorio-Buitron 2015; ILO 2015).

For the period 1980-1995, Pontusson (2013) also found a significant positive effect of the change in union density on the redistribution of income in OECD countries, but no such effect for 1995-2010. This author concluded that 'Union decline seems to have become a less powerful explanation of inegalitarian labour market trends and retreat from redistribution over time.' (p. 814) Pontusson hypothesised that trade unions had become more representative of high-waged workers, referring to the finding, based on the 2006-08 ESS (European Social Survey), in which, in 13 of 15 countries, union density in the top 20 per cent of income earners was higher than union density in the bottom 20 per cent – and assuming that this would have been different in, say, the 1970s. Such a changing composition would have left more room in national union movements to accept rising wage differentials (Pontusson 2013: 816-818) – in other words, the acceptance of less inclusive collective bargaining.

Earlier, Acemoglu *et al.* (2001) had put this argument more or less upside down by linking decreasing unionisation and increases in wage inequality for the US and the UK with skills-based technical change. Such a change would allow skilled workers to seek wage increases without trade unions, undermining the coalition among skilled and unskilled workers in support of unions. We return to this issue after our next calculations.

It is worthwhile investigating whether the relations noted above hold true if we correlate the data we found for our TUD, CBC and MEB indicators with data on income and wage inequality in the 23 countries we scrutinised. To measure income inequality, we used data on the Gini coefficient (available for 2000 and 2014) and for wage inequality data on the incidence of low pay (available for 12 countries (the 13 W/N/S European countries other than Sweden) for 2000, and for all 23 countries for 2014): see Table A1 below.

To calculate the correlation coefficients, we used information on TUD and CBC for 2001 and 2013/14, and on MEB solely for 2013/14. Table A2 shows the outcomes.

As could be expected, a low incidence of low pay correlated negatively with relatively high TUD and CBC; or, in other words, high TUD and CBC values lessened the chances of low pay rates. To some extent, this was already the case for 2000-2001, in respect of the 12 countries with low pay data as of that date. However, for these 12 countries the correlation had grown stronger when using 2013/14 data, and it appeared convincing as regards both TUD and CBC. When applying 2013/14 data across all 23 countries, the correlation coefficients were even higher, in particular related to the incidence of

low pay, for both TUD and CBC (R=-.739 and R=-.707 respectively). Contrary to other calculations (Grimshaw *et al.* 2014), the correlation coefficient remained high for MEB (R=-.719), although for this indicator we were not able to compare coefficients over time.

When returning to the basic statistics, the stronger correlations for the 12 countries shown in more recent years appear to be caused mainly by developments in two country groups: in Belgium, Denmark and Finland, the registered incidence of low pay decreased considerably between 2000 and 2014, whereas between 2001 and 2013/14 TUD and CBC remained at the same level or fell only slightly; while in Ireland and the UK the incidence of low pay grew while TUD and CBC fell.

Table A1 **Inequality (low pay incidence and Gini coefficient) in 23 EU member states, 2000 and 2014**

	Low pay incidence		Gini coefficient	
	2000	2014	2000	2014
Austria	11.2	14.8	0.269	0.305
Belgium	12.2	3.8	0.288	0.293
Bulgaria		18.2	0.327	0.374
Czech Republic		18.7	0.260	0.259
Germany	15.7	22.5	0.257	0.288
Denmark	10.8	8.6	0.226	0.285
Estonia		22.8	0.349	0.346
Finland	10.8	5.3	0.249	0.268
France	17.2	8.8	0.295	0.323
Hungary		17.8	0.273	0.309
Ireland	18.7	21.6	0.324	0.319
Italy	9.7	9.4	0.333	0.347
Latvia		25.5	0.363	0.351
Lithuania		24.0	0.319	0.377
Netherlands	16.6	18.5	0.292	0.286
Poland		23.6	0.316	0.321
Portugal	10.9	12.0	0.369	0.356
Romania		24.4	0.303	0.275
Slovakia		19.2	0.265	0.261
Slovenia		18.5	0.241	0.257
Spain	15.6	14.6	0.331	0.360
Sweden		2.6	0.313	0.272
UK	19.4	21.3	0.353	0.341

Notes:
- Low pay incidence: the percentage of wage-earners earning less than two-thirds of the national median gross hourly wage.
- Gini coefficient: inequality measure calculated net (i.e. after taxation and social transfers) = (equivalent) disposable household income of the total population.

Sources: Low pay incidence, 2000: European Commission (2004) Employment in Europe: Recent trends and Prospects, Brussels, 168; 2014: Eurostat SBS database [earn_ses_pub1s], except France: data from D. Demailly (2012) Les bas salaires en France entre 1995 et 2011, Dares Analyses 068, Octobre.

Gini coefficients, 2000: A.B. Atkinson and S. Morelli (2016) *The Chartbook of Economic Inequality* (https://www.chartbookofeconomicinequality.com/); 2014: World Bank Poverty database (https://data.worldbank.org/indicator/SI.POV.GINI); Germany: 2012 data; Romania: 2013 data.

Finally, we note that our correlations relating TUD and CNC to income inequality as represented by the Gini coefficient pointed in much the same direction and remained at the same level between 2000-2001 and 2014. Although slightly lower, for 2014 the connection between MEB and the Gini coefficient was also clearly negative.

Table A2 **Correlations between wage / income inequality indicators and industrial relations indicators, 12 and 23 (22) countries, 2000-2001 and 2013/14 or 2014**

Indicator	Years	corr./N	TUD	CBC	MEB
Low pay incidence	2000 (Low pay)	*R*	-.342	-.116	
	2001 (TUD, CBC)	N	12*)	12*)	
Low pay incidence	2014 (Low pay)	*R*	-.609	-.553	
	2013/14 (TUD, CBC)	N	12*)	12*)	
Low pay incidence	2014 (Low pay)	*R*	-.739	-.707	-.719
	2013/14 (TUD, CBC, MEB)	N	23	23	22**)
Gini coefficient	2000 (Gini)	*R*	-.429	-.431	
	2001 (TUD, CBC)	N	23	23	
Gini coefficient	2014 (Gini)	*R*	-.416	-.421	-.355
	2014 (TUD, CBC, MEB)	N	23	23	22**)

*) Austria, Belgium, Denmark, Germany, Finland, France, Ireland, Italy, Netherlands, Portugal, Spain and UK
**) Excl. Slovenia
Sources: Low pay incidence, Gini coefficient: see Table A1; TUD, CBC, MEB: see Tables 2.2 and 2.5

Following the contributions of Pontusson (2013) and Acemoglu *et al.* (2001), it is relevant to trace how the trends towards declining TUD and CBC affect the various layers of wage earners. To this end, we used data from the *WageIndicator* web survey on work and wages. *WageIndicator* data for 2015 enabled us to calculate TUD and CBC per quintile of the wage distribution of respondents; that is, for each 20 per cent of that distribution, from the top 20 per cent (the fifth quintile) to the lowest 20 per cent (the first quintile). We did so for the 13 countries for which sufficient data was available. Figure A1 shows the distribution of TUD rates across the wage quintiles and countries and Figure A2 that for CBC rates.

When looking at the TUD scores per country, the pattern varied substantially. In three countries – Denmark, the Netherlands and Portugal – the highest union density was in the top wage quintile whereas the fourth quintile was the highest in four countries: Czech Republic, Germany, Italy and Spain. In three countries (Finland, Slovakia and UK) the middle quintile showed the highest density and in another three (Belgium, Bulgaria and Hungary) it was the second quintile. In none of the countries did we find that the lowest wage quintile coincided with the highest TUD.

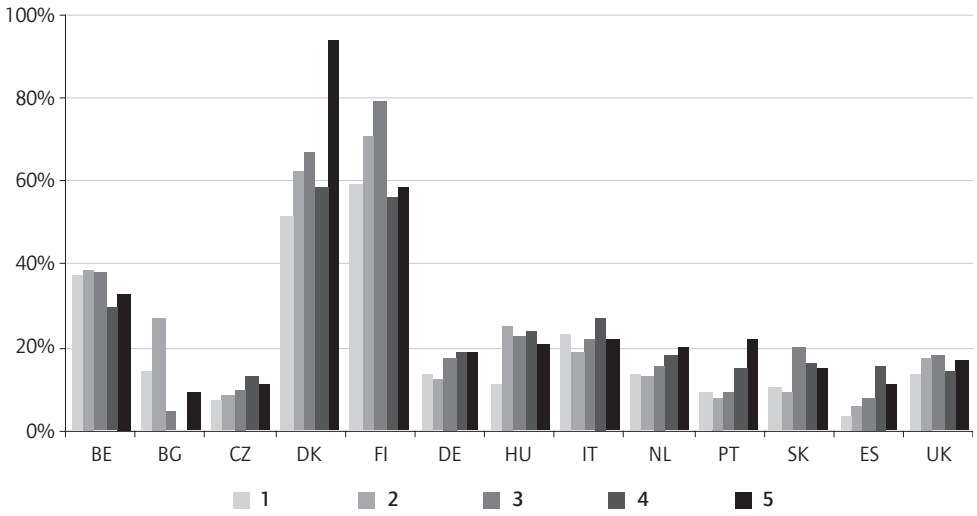
The CBC scores also varied widely across countries. Again, in three countries (Germany, Portugal and Spain), CBC increased with the wage level and here the highest bargaining coverage was clearly in the highest quintile; in four (Italy, Netherlands, Slovakia and UK), CBC was highest in the fourth quintile; whereas in three CEE countries (Bulgaria, Czech Republic and Hungary), CBC was highest in the middle segment. Interestingly, in Belgium, Denmark and Finland, three of the four countries out of 13 with the

highest TUD and CBC rates (the fourth being Italy), CBC was highest in the lowest two quintiles.

The correlations between the TUD and CBC outcomes per quintile emerged with the highest coefficients for the first (lowest) quintile (R=0.848) and lowest for the fifth quintile (R=0.446), with the other three values in between. However, a country-by-country comparison of the linkages between TUD and CBC revealed a more nuanced picture, with coefficients varying from positive and very high (for Germany, Portugal and Spain) to slightly negative (for the Czech Republic, Denmark and Finland). Obviously, when studied at country level, the intricate relationship between these two key indicators is shaped by the established patterns and norms of national industrial relations and employment systems.

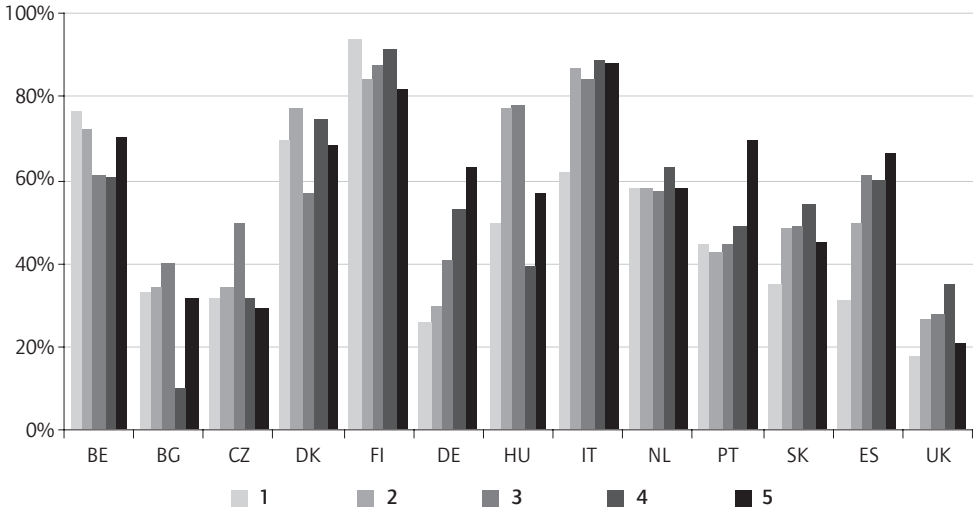
Due to the lack of comparable data, we can neither decide whether the hypotheses of Pontusson (2013) and Acemoglu *et al.* (2001) hold – that major changes in the composition of union membership were related to the wage distribution spanning some decades – nor whether similar changes in bargaining coverage have taken place. Yet, based on our long-standing experience, the available literature and the data we gathered for TUD and CBC rates by industry, we judge it unlikely that such changes have occurred at least for Germany, the Netherlands, Italy and the UK.

Figure A1 **Trade union density per quintile of the wage distribution, 13 EU member states, 2015**



Source: *WageIndicator* data 2015 (N=20,727)

Figure A2 **Collective bargaining coverage per quintile of the wage distribution, 13 EU member states, 2015**



Source: *WageIndicator* data 2015 (N=18,592)

Appendix 2
Employment shares of multinational enterprises

The first part of this Appendix focuses on the ownership structure of the 575 companies which together make up the 'top-5' of the five industries in the 23 countries. Table SA6.3 presents the distribution of employment across countries and industries for 2014 according to the shares in these companies by category of ownership. Four ownership categories have been distinguished: foreign-based multinational enterprises (MNEs); home-based MNEs; state-owned firms; and domestic firms. We define an MNE as an enterprise with subsidiaries in more than one country. By contrast, a domestic company has locations within one country alone and is either wholly- or majority-owned domestically. Taking into account the number of employees within each company, we have computed the employment share of each ownership category in the five companies per country/industry cell.

First, we explored the employment share of foreign-owned MNEs in the five largest companies within each cell. Table SA6.3 shows that, overall, in a total of 14 cells all five companies were subsidiaries of foreign-owned MNEs, resulting in a 100 per cent score. The same was true for five cells in each of Metal and electronics manufacturing and Retail, as well as four in the ICT industry. The five 100 per cent scores in Metal and electronics manufacturing were found in Ireland, Poland, Portugal, Romania and Slovakia. There were no such scores in Wholesale or in Transport and telecoms. Indeed, in 12 cells none of the five companies were foreign-owned MNEs. This was the case for three cells in Wholesale and four cells in each of Retail and Transport and telecoms, but only one in Metal and electronics and none in the ICT industry. Germany, home of many large MNEs, was the leader with three such scores, in Metal and electronics, Retail, and Transport and telecoms.

Second, we focused on the employment share of the (subsidiaries of) home-based MNEs in the five largest companies. In Metal and electronics manufacturing and in the Retail industry, all five firms in Germany were home-based MNEs. On the other hand, in 36 cells none of the companies were home-based MNEs. These cells were found across all industries (including eight in Wholesale and seven in Retail) and in almost all countries except for the large economies of Germany, France, Spain and the UK.

Third, we traced the employment share of state-owned firms in the five largest companies within each cell. In no cell were all five companies state-owned, and in 92 cells none of the five companies were state-owned. In the remaining cells, one or more companies were state-owned and – not surprisingly – these were only found in Transport and telecoms, excepting in the ICT industry in Latvia and Slovenia. A presence of state-

owned firms was the case for 22 countries, with the sole exception of the UK. In Metal and electronics manufacturing, no state companies were found among the 'top-5' firms.

Fourth, we explored the respective employment shares of domestic firms. In only two cells, both in the wholesale industry in Latvia and Sweden, were all five of the largest companies domestic firms. In contrast, in 69 cells none of the five companies were in this category.

The last row in Table SA6.3 indicates (through the unweighted averages for the 23 countries) that, in 2014, the employment share of foreign-owned MNEs among the largest five companies was highest in the ICT industry (unweighted average of 71 per cent over the 23 cells), followed by Metal and electronics manufacturing (58 per cent), Wholesale (46 per cent) immediately followed by Retail (45 per cent), and, with a much lower share (13 per cent), Transport and telecoms.

Employment in home-based MNEs was most prominent among the 'top-5' employers in Retail (41 per cent), with Metal and electronics manufacturing ranked second (32 per cent), followed by Transport and telecoms (28 per cent) and Wholesale (27 per cent), with the ICT industry (18 per cent) bringing up the rear.

As noted, with the exception of Transport and telecoms, where state-owned firms had the largest employment share (58 per cent), such firms hardly played a role in the other four industries.

Finally, the employment shares of domestic firms were quite modest. They were most prominent in Wholesale (27 per cent), but less so in Retail (14 per cent) and in Metal and electronics manufacturing and ICT (both 10 per cent), and were at a very low level in Transport and telecoms (1 per cent).

In the second part of this Appendix, we offer estimates of the employment shares for *all* the affiliates of foreign-owned multinational enterprises (MNEs) in the 23 countries and five industries. In addition, for four industries (excluding Wholesale) and ten countries we provide the total MNE shares in employment. Both sets of figures are for 2014. In one respect, this second part has a broader scope as it shows the employment shares of all MNEs active in country/industry cells and not just those of the MNEs among the 575 selected companies. However, our estimates do not cover state-owned and domestic firms.

We can rely only partly on official data; there is no overview available of employment in MNEs differentiated by countries and industries across Europe. Recently, the ILO (webpage: Multinational Enterprises) stated that some 50,000 MNEs and their 450,000 affiliates employed over 200 million people throughout the world. In addition, UNCTAD (2017: 26) have estimated that, by 2016, 82.1 million people were employed worldwide by affiliates of foreign firms, implying that around 40 per cent of total MNE staff were employed abroad, i.e. outside MNEs' respective home countries.

To date, neither the ILO nor UNCTAD have provided disaggregated information at country or industry level on employment in MNEs or foreign MNE affiliates. Moreover,

the figures cited above tend systematically to under-estimate the numbers of those whose employment is controlled by MNEs, as they only consider companies that are majority foreign-owned. This excludes companies under other forms of control, like the so-called Non-Equity Modes (NEMs) of international production under which control is exerted through contract manufacturing, services outsourcing, franchising, licensing and management contracts within global value chains (Van Klaveren *et al.* 2013: Chapter 1). In the global value chains for clothing and footwear production, for example, direct control by major MNE buyers through FDI plays hardly any role (Van Klaveren and Tijdens 2018).

Against this backdrop, we were compelled to augment the available Eurostat FDI data with *WageIndicator* data and data from the AIAS MNE database. We selected those *WageIndicator* respondents who, in 2006-11, were employed in MNEs. These were the respondents who ticked 'yes' in response to the survey questions that asked whether their employer had more than one location and, if so, whether at least one location was abroad. In this way, we were able to capture data from foreign-owned MNEs that included all companies with foreign ownership, fully or partly. The resulting samples were large enough to contribute estimates for ten EU member states, namely: Belgium; Czech Republic; Finland; Germany; Hungary; Netherlands; Poland; Spain; Sweden; and UK. It is also sufficient to provide breakdowns for Metal and electronics manufacturing, Retail, ICT, and Transport and telecoms (Van Klaveren *et al.* 2013: Chapter 2). For these ten countries and four industries, we added data from the AIAS MNE Database, updating the original 2008 information to 2014 wherever possible. This exercise was based on employment figures from the annual reports of large MNEs, the EurWORK database and EMCC factsheets, recent *Fortune Global 500* and *Forbes Global 2000* overviews and various pieces of information from the press.

Table SA6.4 shows the outcomes of our estimates. Metal and electronics manufacturing showed the highest estimated shares of employment concentrated in MNEs, particularly in Hungary (69 per cent), Czech Republic (63 per cent), Spain (58 per cent) and Germany (57 per cent). ICT followed suit with relatively high MNE employment shares, across countries between 32 and 51 per cent (the latter again in the Czech Republic). With regard to Retail, the level of MNE employment shares was substantially lower, the exceptions being the Czech Republic (53 per cent) and, to some extent, the UK (41 per cent). With 36 per cent of Retail employment in MNEs, Germany ranked third. The MNE shares in Transport and telecoms were also lower than those in Metal and electronics and in ICT, although in Transport and telecoms the shares for the Netherlands and the UK (both 43 per cent) remained considerable.

Based on these – admittedly, far from complete—figures, a rough estimate puts the recent employment share of home-based MNEs in the five industries and 23 countries at 15 per cent: about 17 per cent in W/N/S European countries and about six per cent in CEE countries. Together with the employment shares of foreign-owned MNE affiliates, these figures bring the total employment share of MNEs in these industries and countries to an estimated 37 per cent, for both country groups. W/N/S European countries accounted for shares of employment stretching to 20 per cent in foreign-owned MNEs and 17 per cent in home-based ones; whilst CEE countries garnered 31 and six

per cent respectively. These shares would imply that MNEs in the 23 countries and five industries employed, in 2014, approximately 18.1 million people of whom 7.4 million were in MNEs' home countries and 10.7 million in affiliates located abroad.

From the figures presented in Table SA6.4, it would appear that, in Germany, the shares of those employed by home-based (i.e. majority German-owned) MNEs were about double the shares of FDI-related employment of foreign companies in three industries: Metal and electronics manufacturing; Retail; and Transport and telecoms. In the German ICT industry, the employment shares of foreign-owned and home-based MNEs were about equal. The only other cell with larger home-based MNE employment concerned Retail in Finland, although Retail in the UK and Transport and telecoms again in Finland came close. In the large majority of cells in the seven W/N/S countries for which data were available, employment in home-based MNEs accounted for only about 30 to 70 per cent of the employment related to foreign investment. For instance, this was the case in Transport and telecoms in Belgium, Netherlands, Sweden and the UK. In the three CEE countries scrutinised, and with the exception of ICT in Poland, this share was even smaller.

Taken together with the results of the WIBAR-3 survey, these outcomes confirm the weak development of MNEs based in CEE countries and, consequently, of outwards FDI from these countries – although in Commerce and in Transport some MNEs, based notably in Hungary and Lithuania, were expanding as were ICT companies based in Poland.

We end this Appendix by noting that Marginson and Meardi for Eurofound (2009), using estimates from EIRO national centres, presented a rather different picture, suggesting that in 2006 in most west European countries' home-based MNEs employed more workers than foreign-owned companies. This contradictory outcome may partly be explained by a larger growth of FDI-related employment compared to home-based MNE employment after 2006. Also, Eurostat's registration of employment in foreign-owned MNEs from 2008 onwards for all EU member states has been a massive improvement compared to the scattered data upon which Marginson and Meardi had to rely. Even so, our findings suggest that these researchers may have underestimated the extent of foreign ownership in many EU member states.

Statistical appendix

Table SA1.1 **The industries covered in the WIBAR-3 project and their NACE 2.0 codes**

NACE	Industry/sub-sector
24-30	**Metal and Electronics Manufacturing**
24	Manufacture of basic metals
25	Manufacture of fabricated metal products, except machinery and equipment
26	Manufacture of computer, electronic and optical products
27	Manufacture of electrical equipment
28	Manufacture of machinery and equipment n.e.c.
29	Manufacture of motor vehicles, trailers and semi-trailers
30	Manufacture of other transport equipment
46	**Wholesale Trade, except of motor vehicles and motorcycles**
46.1	Wholesale on a fee or contract basis
46.2	Wholesale of agricultural raw materials and live animals
46.3	Wholesale of food, beverages and tobacco
46.4	Wholesale of household goods
46.5	Wholesale of information and communication equipment
46.6	Wholesale of other machinery, equipment and supplies
46.7	Other specialised wholesale
46.9	Non-specialised wholesale trade
47	**Retail Trade**
47.1	Retail sale in non-specialised stores (supermarkets and department stores)
47.2	Retail sale of food, beverages and tobacco in specialised stores
[47.3]	[Retail sale of automotive fuel in specialised stores]
47.4	Retail sale of information and communication equipment in specialised stores
47.5	Retail sale of other household equipment in specialised stores
47.6	Retail sale of cultural and recreation goods in specialised stores
47.7	Sale of other goods in specialised stores (clothing, footwear and leather goods; dispensing chemist in specialised stores; retail sale in specialised stores: sale of medical and orthopaedic goods; cosmetic and toilet articles; flowers, plants, seeds etc; watches and jewellery)
47.8+9	Other retail sale (via stalls and markets; via mail order houses or via internet)
	Transport and Telecommunications
49	Land transport and transport via pipelines
50	Water transport
51	Air transport
52	Warehousing and support activities for transportation
53	Postal and courier activities
61	Telecommunications
	Information and Communication Technology (ICT)
62	Computer programming, consultancy and related activities
63	Information service activities

Source: Eurostat 2008

Table SA1.2 **Comparative statistics on trade union density (TUD), employers' organisation density (EOD), collective bargaining coverage (CBC) and multi-employer bargaining (MEB) in 23 EU member states by country clusters, 2013/14 and 2007-2013/14**

	TUD	EOD	CBC	MEB	TUD	EOD	CBC	MEB
	2013/14	2013/14	2013/14	2013/14	2007-2013/14	2007-2013/14	2007-2013/14	2007-2013/14
Denmark	67	68	83	60	Decrease	Increase	Stable	
Finland	69	65	90	86	Stable	Decrease	Stable	Increase
Sweden	67	82	89	80	Decrease	Decrease	Stable	Stable
Average Scand-3	**67.7**	**71.7**	**87.3**	**75.3**				
Italy	33	56	80	68	Stable	Decrease	Stable	Stable
Portugal	21	34	8	13	Stable	Decrease	Decrease	Decrease
Spain	17	36	57	39	Increase	Decrease	Decrease	Decrease
Average South-3	**23.7**	**42.0**	**48.3**	**40.0**				
Ireland	28	68	32	0	Decrease	Increase	Decrease	
United Kingdom	25	35	27	1	Decrease	Stable	Decrease	Decrease
Average Anglo-2	**26.5**	**51.5**	**29.5**	**0.5**				
Austria	27	100	98	97	Decrease	Stable	Stable	Stable
Belgium	55	82	96	94	Stable	Stable	Stable	Increase
France	11	75	98	86	Stable	Stable	Stable	Decrease
Germany	18	58	58	52	Decrease	Decrease	Decrease	Stable
Netherlands	18	85	80	71	Decrease	Stable	Stable	Decrease
Average MW-5	**25.8**	**80.0**	**80.6**	**80.0**				
Bulgaria	18	14	26	8	Stable	Decrease	Decrease	
Czech Republic	13	64	47	14	Decrease	Increase	Decrease	Decrease
Estonia	6	25	20	2	Decrease	Increase	Decrease	Decrease
Latvia	13	41	13	2	Decrease	Increase	Decrease	
Lithuania	8	19	11	1	Decrease	Stable	Decrease	Stable
Hungary	11	21	23	12	Decrease	Decrease	Decrease	Stable
Poland	12	20	15	1	Decrease	Stable	Decrease	Stable
Romania	30	25	35	0	Decrease	Decrease	Decrease	
Slovakia	13	31	25	16	Decrease	Increase	Decrease	Stable
Slovenia	23	60	65		Decrease	Decrease	Decrease	
Average CEE-10	**14.7**	**32.0**	**28.0**	**6.2 (9c)**				
Total average	**26.4**	**50.6**	**54.0**	**36.5 (22c)**				
Increase					**1**	**6**	**0**	
Stable					**6**	**7**	**8**	
Decrease					**16**	**10**	**15**	

Sources: see Tables 2.2, 2.3, 2.4

Table SA1.3 **Comparative statistics on trade union density (TUD), employers' organisation density (EOD), collective bargaining coverage (CBC) and multi-employer bargaining (MEB) in 23 EU member states by country clusters, 2013/14 as percentage of 2001 or 2002**

	TUD	EOD	CBC	MEB
	2013/14 as % of 2001	2013/14 as % of 2002	2013/14 as % of 2001	2013/14 as % of 2001
Denmark	91	113	98	
Finland	93	98	99	110*)
Sweden	86	99	95	107
Average Scand-3	**90.0**	**103.3**	**97.3**	
Italy	98	90	100	99*)
Portugal	93	59	67	17
Spain	103	50	70	53
Average South-3	**98.0**	**66.3**	**79.0**	
Ireland	74	113	77	
United Kingdom	87	100	77	14
Average Anglo-2	**80.5**	**106.5**	**77.0**	
Austria	75	100	100	102
Belgium	98	100	100	109*)
France	102	101	102	92
Germany	74	92	85	85
Netherlands	84	100	86	96
Average MW-5	**86.6**	**98.6**	**94.6**	
Bulgaria	76	25*)	65	
Czech Republic	53	183	111	117
Estonia	44	71	70	
Latvia	57	205	72	
Lithuania	48	95*)	88	0
Hungary	54	53*)	60	240
Poland	80	100*)	59*)	33*)
Romania	88	31	42	
Slovakia	44	94	73	100
Slovenia	52	60	65	
Average CEE-10	**59.6**	**91.7****)	**70.5*****)	

*) as per cent of 2007(/08)
**) as per cent of 2007/08 for BG, HU, LT, PL
***) as per cent of 2007 for PL
Sources: see Tables 2.2, 2.3, 2.4

Table SA1.4 **Country clusters of national and sectoral industrial relations in 23 EU member states and five sub-sectors (2009 situation)**

Type national cluster	1 Organised corporatism	2 Social partnership	3 State-centred	4 Liberal	5 Mixed
	DK, FI, SE	**AT, BE, DE, NL, SI**	**ES, FR, IT, PT**	**IE, UK**	**BG, CZ, EE, LV, LT, HU, PL, RO, SK**
Type sectoral cluster	**1 'Dense'**	**2 'Political'**	**3 'Lean'**	**4 'Fragile'**	**5 'Empty'**
Steel industry (NACE 24.1-3)*	BE, **DK, FI,** DE, PL, RO, SK, SI, **SE**	**AT**, CZ, IT, FR, **NL**, ES	LV, **PT**, UK	BG, HU, LT	
Railways (NACE 49.1, 49.2)	AT, CZ, **DK, FI**, DE, IT, PL, RO, SK	FR, **NL, SI**, SE, UK	BE, EE, HU, IE, LV, LT, **PT, ES**	BG	
Sea & coastal water transport (NACE 50.1, 50.2) **	BE, **DK, FI,** IT, IE, NL, **SE**	FR**, DE**	LV, LT	BG, EE, **IE**, SI, ES, **UK**	PT
Air transport (NACE 51)	BE, **DK, FI**, IT, NL, SI, **SE**	**AT**, CZ, FR, **DE**, LT, RO	BG, LU, PL, **PT**, SK, **ES**, UK	HU, **IE**	**LV**
Telecoms (NACE 61) ***	**DK, FI**, FR, **SE**	**AT**, EE, IT, **NL**, SK, ES	BE, HU, LV, LT, RO	DE, PL, SI, **UK**	**BG, CZ**, PT

* Lacking: EE, IE
** Lacking: AT, CZ, HU, PL, SK
*** Lacking: IE
Bold: sector typology close to national typology
Key (Bechter *et al.* 2011: 36-38):
'Dense' Strong actors, at many levels, with extensive levels of engagement in collective bargaining and consultation with the public authorities
'Political' Medium trade union and employers' organisation density, very high collective bargaining coverage; source of regulation likely to rely at least in part on the state
'Lean' Similar to 'Dense' (1) in many respects, yet low degree of involvement of social partners in policy-making
'Fragile' High collective bargaining coverage, social partner organisations not strong, no bargaining at central level
'Empty' Low trade union and employers' organisation density, low collective bargaining coverage, little or no involvement of social partners in policy-making
Source: Bechter *et al.* 2012: 193, 196

Metal and electronics manufacturing

Table SA2.1 **Total industry employment (employees) and number of persons employed in affiliates of foreign-owned MNEs, Metal and electronics manufacturing, 23 EU member states, 2008-2014 (thousands; and in %)**

	Total employment (employees)			Foreign-owned affiliates (persons employed)			*% employed in foreign-owned affiliates*		
Host country	2008	2010	2014	2008	2010	2014	*2008*	*2010*	*2014*
W/N/S									
Austria	290.0	288.1	287.8	102.6	98.5	103.7	*35.4*	*34.2*	*36.0*
Belgium	220.4	207.5	173.8	78.3	84.0	75.8	*35.5*	*40.5*	*43.6*
Denmark	166.3	159.4	150.8	36.9	36.4	47.1	*22.2*	*22.8*	*31.2*
Finland	203.3	189.2	163.4	46.2	40.2	46.4	*22.7*	*21.2*	*28.4*
France	1,299.6	1,253.3	1,196.2	436.0	341.7	316.0	*33.5*	*27.2*	*26.4*
Germany	3,881.4	3,951.8	3,985.8	674.1	596.0	797.0	*17.4*	*15.1*	*20.0*
Ireland	61.0	45.2	41.6	34.7	20.5	27.0*)	*56.9*	*45.4*	*64.9*
Italy	1,684.3	1,546.3	1,430.4	259.1	234.1	225.4	*15.3*	*15.1*	*15.8*
Netherlands	281.8	274.0	263.0	77.2	74.1	82.4	*27.4*	*27.0*	*31.3*
Portugal	192.5	178.6	150.2	51.4	42.6	47.0	*26.7*	*23.9*	*31.2*
Spain	878.5	747.8	607.4	212.0	214.0	211.2	*24.1*	*28.6*	*34.8*
Sweden	367.1	355.3	309.2	118.0	117.2	115.3	*32.1*	*33.0*	*37.3*
UK	1,155.0	1,064.0	1,045.5	418.1	382.3	386.1	*36.2*	*35.9*	*37.0*
Sub-total	**10,681.2**	**10,260.5**	**9,805.1**	**2,544.6**	**2,281.6**	**2,480.4**	***23.8***	***22.2***	***25.3***
% growth		**-3.9%**	**-4.4%**		**-10.4%**	**+8.7%**			
CEE									
Bulgaria	164.4	148.7	145.7	40.3	36.4	48.0	*24.5*	*24.5*	*32.9*
Czech Rep.	656.7	615.1	603.0	364.4	316.1	334.6	*55.5*	*51.4*	*55.5*
Estonia	35.1	32.0	32.4	16.3	13.2	14.7	*46.4*	*41.4*	*45.4*
Latvia	27.9	25.8	24.0	8.0	5.9	8.8	*28.6*	*22.9*	*36.7*
Lithuania	38.6	35.2	33.7	9.4	6.5	10.4	*24.3*	*18.7*	*30.9*
Hungary	349.0	318.4	315.1	214.0	190.4	208.3	*61.3*	*59.8*	*66.1*
Poland	828.4	812.3	806.8	329.8	329.6	358.5	*39.8*	*40.6*	*44.4*
Romania	424.1	418.0	418.0	255.1	231.6	280.7	*60.1*	*55.5*	*67.2*
Slovakia	228.9	224.1	225.5	146.3	130.6	149.5	*63.9*	*58.3*	*66.4*
Slovenia	103.4	95.2	86.2	23.2	19.5	26.0	*22.4*	*21.1*	*30.2*
Sub-total	**2856.5**	**2724.8**	**2690.4**	**1406.8**	**1279.8**	**1439.5**	***49.2***	***49.7***	***53.5***
% growth		**-4.7%**	**-1.2%**		**-9.0%**	**+12.5%**			
All total	**13537.7**	**12985.3**	**12495.5**	**3951.4**	**3561.4**	**3919.9**	***29.2***	***27.4***	***31.4***
% growth		**-4.2%**	**-3.8%**		**-9.9%**	**+10.1%**			

*) authors' estimate based on AIAS MNE database
Sources: Eurostat, *Annual Enterprise Statistics* [sbs_na_ind_r2] and *FATS statistics* [fats_g1a_08]

Table SA2.2 **Employment in Metal and electronics manufacturing by sub-sector, 23 EU member states, 2014 (thousands)**

	C24 Basic metals	C25 Fabricated metal products	C26 Computer etc.	C27 Electrical equipment	C28 Machinery and equipment	C29 Motor vehicles	C30 Other transport	Total
W/N/S								
Austria	35.2	71.3	20.6	*45.0*	78.3	*30.7*	6.7	287.8
Belgium	*25.4*	50.3	10.2	14.2	32.3	*34.8*	6.6	173.8
Denmark	*5.7*	39.2	20.0	13.4	65.3	4.4	2.8	150.8
Finland	14.7	39.5	26.9	17.9	49.0	6.9	8.5	163.4
France	*90.4*	315.1	124.7	107.6	175.4	230.1	152.9	1196.2
Germany	261.9	844.9	318.8	502.8	1,092.7	836.5	*128.2*	3985.8
Ireland*)	*1.7*	*8.7*	*13.9*	*3.4*	9.5	2.8	1.6	*41.6*
Italy	115.2	416.2	93.4	145.8	423.1	156.6	80.1	1430.4
Netherlands	*19.4*	81.9	26.2	19.8	79.8	*18.3*	17.6	263.0
Portugal	8.0	71.8	*8.9*	*17.6*	20.9	*19.3*	3.7	150.2
Spain	57.4	*197.2*	23.5	56.3	95.1	*134.8*	43.1	*607.4*
Sweden	30.1	70.2	37.4	24.3	69.0	*63.2*	15.0	309.2
UK	71.0	299.2	126.0	81.8	181.4	*149.6*	136.5	1045.5
Sub-total	**736.1**	**2,505.5**	**850.5**	**1,049.9**	**2,371.8**	**1,688.0**	**603.3**	**9805.1**
CEE								
Bulgaria	11.4	52.2	8.5	*20.6*	30.6	*17.6*	4.8	145.7
Czech Republic	43.9	143.6	*39.2*	*88.9*	119.1	*146.5*	21.8	*603.0*
Estonia	0.5	12.7	*5.8*	*5.6*	3.7	*3.5*	0.6	32.4
Latvia	1.0	11.0	1.7	*2.9*	3.5	*1.7*	*2.2*	24.0
Lithuania	0.6	13.0	3.4	5.0	6.4	*3.7*	*1.6*	33.7
Hungary	*17.1*	69.1	*42.9*	*39.4*	*59.1*	*82.5*	*5.0*	*315.1*
Poland	60.4	265.3	*55.7*	*96.6*	116.5	*170.0*	*42.3*	806.8
Romania	*30.4*	87.8	*29.2*	*38.1*	*52.2*	*149.8*	*30.5*	*418.0*
Slovakia	*23.2*	51.2	*14.8*	*30.0*	*40.9*	*61.2*	4.2	*225.5*
Slovenia	7.8	27.8	4.9	20.0	12.9	12.2	0.6	86.2
Sub-total	***196.3***	**733.7**	***206.1***	***347.1***	**444.9**	***648.7***	**113.6**	***2,690.4***
All total	**932.4**	**3,239.2**	**1,056.6**	**1,397.0**	**2,816.7**	**2,336.7**	**716.9**	**12,495.5**

*) 2012
In *italics*: FDI-related employment share >= 50 per cent
Source: Eurostat, *Annual detailed enterprise statistics – industry* [sbs_na_ind_r2]

Table SA2.3 **Growth of employment in Metal and electronics manufacturing by sub-sector, employees, 23 EU member states, 2008-2014, in %**

	C24 Basic metals	C25 Fabricated metal products	C26 Computer etc.	C27 Electrical equipment	C28 Machinery and equipment	C29 Motor vehicles	C30 Other transport	Total
W/N/S								
Austria	0.8	-0.4	2.7	3.6	7.3	7.4	-19.1	-3.1
Belgium	-9.0	-9.4	10.2	4.1*)	-40.8	-17.1	-6.1	-23.7
Denmark	-10.5	-10.7	0.3	26.3	-10.4	-31.6	-46.1	-12.3
Finland	-25.1	-13.6	-40.3	-10.5	-10.9	-15.8	-26.7	-19.4
France	-13.1	-3.1	-21.6	-15.7	17.2	-11.3	14.7	-5.9
Germany	-4.3	3.4	-2.0	6.6	0.9	5.1	8.9	2.8
Ireland	-51.4*)	-45.6*)	-30.1*)	-2.2*)	-14.5*)	-15.3*)	-78.1*)	-43.6*)
Italy	-17.3	-22.0	-21.1	-12.5	-5.7	-15.1	-22.1	-16.8
Netherlands	-14.2	12.2	-6.3	-15.7	-1.6	-30.6	7.2	-5.4
Portugal	16.3	-15.8	-15.6	-3.8	-7.1	-48.3	-55.9	-19.7
Spain	-31.4	-42.1	-40.4	-22.5	-25.6	-17.4	-15.7	-31.6
Sweden	-17.1	-9.7	-11.1	-7.9	-18.1	-12.9	1.9	-16.9
UK	-16.3	-9.3	-11.9	-11.2	-12.4	-18.3	11.1	-10.8
Sub-total *)	**-12.6**	**-12.5**	**-11.6**	**-7.5**	**-4.9**	**-5.0**	**-4.3**	**-8.6**
CEE								
Bulgaria	-67.5	-14.2	-9.8	18.6	16.4	62.9	-33.2	-2.2
Czech Republic	-16.9	-5.1	-22.4	-17.8	-12.6	-7.0	28.7	-10.3
Estonia	-3.9	-8.6	-9.8	-19.6	-22.6	-12.3	-25.1	-11.7
Latvia	275.4	-4.2	0.4	21.8	-21.9	21.4	-26.5	-14.0
Lithuania	121.7	-19.5	-16.1	51.4	-7.9	-21.1	-57.7	-15.3
Hungary	-36.3	-6.8	-30.8	-3.7	-3.1	6.4	-42.9	-10.9
Poland	-11.4	7.6	-14.4	-4.9	-21.5	18.3	-20.9	-3.1
Romania	-42.5	4.3*)	8.6	-21.6	-24.3	32.3	-25.3	-3.4
Slovakia	15.9	14.8	-32.2	28.6	2.7	6.6	-10.1	-5.7
Slovenia	37.8	22.5	3.8	15.6	-24.1	-17.6	-59.3**)	-16.2
Sub-total	**-32.8**	**2.1**	**-18.0**	**-7.4**	**-13.8**	**9.9**	**-21.4**	**-5.4**
All total	**-15.7**	**-9.1**	**-13.1**	**-7.5**	**-6.7**	**-0.9**	**-7.5**	**-7.9**

x no data provided by Eurostat
*) 2009-2014
**) 2008-2013
Source: Eurostat, *Annual detailed enterprise statistics – industry* [sbs_na_ind_r2]

Table SA2.4 **Five largest companies in Metal and electronics manufacturing in 23 EU member states, 2014, names (in alphabetical order), employment and ownership**

Austria	Böhler-Uddeholm	Bosch	FACC	Magna Steyr	Plansee Group
	Voestalpine	Robert Bosch (DE)	Aviation Industry Corp. of China (CN)	Magna International (CA)	Plansee Group
	20,525	2,800	2,633	12,600	6,253
Belgium	ArcelorMittal Belgium	Audi Brussel	Van Hool	Volvo Cars Belgium	Volvo Europa Truck
	ArcelorMittal (LU)	Volkswagen Group (DE)	Van Hool	Zhejiang Geely (CN)	Volvo AB (SE)
	4,715	2,528	2,100	5,000	3,500
Bulgaria	ABB Bulgaria	EPIQ EA	IMI Bulgaria	Liebherr Domestic Appliances Marica	Yazaki Bulgaria EOOD
	ABB (CH/SE)	EPIQ Systems (US)	Integrated Microelectr. (PHL)	Liebherr Group (CH)	Yazaki Corporation (JP)
	2,900	1,400	1,850	1,590	4,597
Czech Rep.	ArcelorMittal Ostrava	Bosch Diesel	Siemens	Škoda Auto	Třinec Iron and Steel Works
	ArcelorMittal (LU)	Robert Bosch (DE)	Siemens (DE)	Volkswagen Group (DE)	Moravia Steel Group
	9,060	4,200	6,773	25,889	5,600
Denmark	Danfoss	NKT Holding	Siemens Wind Power	Vestas Wind Systems	William Demant Holding
			Siemens (DE)	Vestas	
	5,300	9,078	5,872	17,905	9,799
Estonia	BLRT Grupp	Ericsson Eesti AS	HANZA Mechanics Tartu	Norma AS	PKC Eesti
	BLRT Grupp	Ericsson (SE)	HANZA Group (SE)	Autoliv (SE)	PKC Group (FI)
	2,300	1,350	500	750	1,100
Finland	ABB	KONE	Nokia	Outokumpu	Wärtsilä
	ABB (CH/SE)	KONE	Nokia	Outokumpu	Wärtsilä
	5,327	4,500	6,886	12,540	3,441
France	Airbus	Alstom	PSA Peugeot Citroën	Renault sas	Thales
	Airbus Group (-2014: EADS) (SE EU Firm)	Alstom	PSA Peugeot Citroën	Groupe Renault	Thales Group
	54,000	18,069	71,708	31,887	33,292
Germany	BMW Group	Daimler Group	Robert Bosch	Siemens	Volkswagen Group
	BMW Group	Daimler AG	Robert Bosch	Siemens	Volkswagen Group
	116,324	168,909	128,400	114,000	265,274
Hungary	Audi Hungaria Motor	Bosch	Flextronics Int'l	Mercedes-Benz Manuf. Hungary	Videoton
	Volkswagen Gr. (DE)	Robert Bosch (DE)	Flextronics Int'l (FLEX) (SGN)	Daimler AG (DE)	Videoton Holding
	11,274	9,600	8,600	3,544	8,389

Ireland	Apple Ireland	Dell Ireland	HP Ireland	IBM	Intel
	Apple (US)	Dell (US)	Hewlett-Packard (US)	IBM (US)	Intel (US)
	4,000	783	4,700	3,000	5,200
Italy	Fiat	Finmeccanica	Gruppo Riva Forni Elettrici	Indesit	Marcegaglia
	Fiat Chrysler Automobiles (EXOR)		Gruppo Riva	Whirlpool (US)	Marcegaglia
	61,289	54,380	5,043	4,200	4,900
Latvia	Axon' Cable	East Metal	KKV Liepajas Metalurg	Riga Electric Machine Building	Riga Shipyard
	Axon' Cable (FR)	East Metal (DK)	KVV Group (UA)		
	380	550	500	520	565
Lithuania	UMEGA	Kitron	Mechel Nemunas	Ryterna	Schmitz Cargobull
		Kitron (NO)	Mechel (RU)		Schmitz Cargobull (DE)
	728	409	326	400	330
Netherlands	ASML	DAF	Philips	Tata Steel	VDL Groep
	ASML	Paccar (US)	Kon. Philips	Tata Group (IN)	VDL Groep
	14,031	5,503	12,769	11,300	7,435
Poland	Faurecia Automotive Polska	Fiat Auto Poland SA	Philips Lighting (Lumileds) Poland	Valeo Poland	Volkswagen Poznań
	PSA Peugeot Citroën (FR)	Fiat Chrysler Automobiles (IT)	Philips (NL)	Valeo Group (FR)	Volkswagen Group (DE)
	7,010	3,300	4,454	4,028	6,800
Portugal	Volkswagen AutoEuropa	Faurecia Automot. Portugal	OGMA	Peugeot Citroën Automoveis	Siemens Portugal
	Volkswagen Group (DE)	PSA Peugeot Citroën (FR)	Embraer (BR)	PSA Peugeot Citroën (FR)	Siemens (DE)
	3,572	3,720	1,574	780	1,264
Romania	Autoliv Romania	Automobile Dacia	Continental Autom. Romania	LEONI Wiring Systems Romania	Sumitomo Electric Wiring Systems
	Autoliv (SE)	Groupe Renault (FR)	Continental Group (DE)	LEONI Group (DE)	Sumitomo Electric Industries (JP)
	7,800	14,063	13,600	11,750	7,254
Slovakia	Kia Motors Žilina	PSA Peugeot Citroën Trnava	Samsung Slovensko	U.S. Steel Kosice	Volkswagen Slovakia
	Kia Motors (KR,67%) Hyundai(KR,33%)	PSA Peugeot Citroën (FR)	Samsung (KR)	U.S. Steel (US)	Volkswagen Group (DE)
	3,550	2,718	1,462	10,368	8,938
Slovenia	Gorenje	Impol Group	LTH Group	Revoz	Slovenian Steel Industry
	Gorenje Group			Groupe Renault (FR)	SIJ Group
	4,121	1,826	1,350	2,870	3,220

Spain	Acerinox	ArcelorMittal Espana, S.A.	Ford Espana SL	Renault Espana S.A.	SEAT S.A.
	Acerinox Group	ArcelorMittal (LU)	Ford Motor Cy. (US)	Groupe Renault (FR)	Volkswagen Group (DE)
	6,701	6,210	9,794	10,312	14,045
Sweden	ABB	Ericsson	Scania	Volvo Cars	Volvo Trucks
	ABB (CH/SE)	Ericsson	Volkswagen Group (DE)	Zhejiang Geely (CN)	Volvo AB
	19,188	17,580	13,061	15,850	21,416
UK	BAE Systems	Ford Motor	Tata Steel UK	Rolls-Royce plc	Siemens UK
	BAE Systems	Ford Motor Cy. (US)	Tata Group (IN)	Rolls-Royce Holdings plc	Siemens (DE)
	34,800	9,244	11,300	24,500	14,000

Notes:
- Foreign MNE owner indicated by country code after company name; home-based MNE ownership indicated by not indicating country code after company name; domestic firm indicated by not including company name in second country row.
- Where possible, employment indicated in headcounts (though often unclear in annual reports and press messages).
Source: WIBAR-3 Industrial Relations survey

Commerce

Table SA3.1 **Employment in Commerce (Wholesale and Retail), 23 EU member states, 2014 (thousands), and share of Wholesale in all Commerce**

	G46 Wholesale	G47 Retail (excl. 47.3 – fuel)	All Commerce	% Wholesale
W/N/S				
Austria	185.4	312.3	497.7	37.3
Belgium	190.9	241.1	432.0	44.2
Denmark	179.6	162.6	342.2	52.8
Finland	82.7	154.6	237.3	34.9
France	1,019.4	1,644.5	2,663.9	38.2
Germany	1,712.3	3,065.8	4,778.1	35.8
Ireland*)	81.7	180.7	262.4	31.1
Italy	698.5	1,008.2	1,706.7	40.9
Netherlands	454.4	706.3	1,160.7	39.1
Portugal	188.2	310.6	498.8	37.7
Spain	854.6	1,108.8	1,963.4	43.5
Sweden	217.6	261.9	479.5	45.4
UK	1,120.6	3,005.1	4,125.7	27.2
Sub-total	**6,985.9**	**12,162.5**	**19,148.4**	**36.5**
CEEs				
Bulgaria	137.9	208.6	346.5	39.8
Czech Republic	210.9	224.0	434.9	48.5
Estonia	27.2	44.7	71.9	37.8
Latvia	45.5	88.7	134.2	33.9
Lithuania	75.6	109.0	184.6	40.9
Hungary	155.7	227.1	382.8	40.8
Poland	572.1	856.1	1,428.2	40.1
Romania	305.3	429.8	735.1	41.5
Slovakia	95.9	124.9	220.8	43.4
Slovenia	35.6	49.1	84.7	42.0
Sub-total	**1,661.7**	**2,362.0**	**4,023.7**	**41.3**
All total	**8,647.6**	**14,524.5**	**23,172.1**	**37.3**

*) No data provided by Eurostat, data based on AIAS MNE database
Source: Eurostat, *Annual detailed enterprise statistics for trade* [sbs_na_dt]

Table SA3.2 **Total industry employment (employees) and number of persons employed in affiliates of foreign-owned MNEs, Wholesale, 23 EU member states, 2008-2014 (thousands; and in %)**

	Total employment (employees)			Foreign-owned affiliates (persons employed)			*% employed in foreign-owned affiliates*		
Host country	2008	2010	2014	2008	2010	2014	*2008*	*2010*	*2014*
W/N/S									
Austria	183.1	177.1	185.4	59.8	60.1	62.2	*32.7*	*33.9*	*33.5*
Belgium	191.6	195.3	190.9	38.3	47.6	42.0	*20.0*	*24.4*	*17.6*
Denmark	162.0	143.0	179.6	51.8	44.3	57.9	*32.0*	*30.9*	*32.2*
Finland	89.8	86.0	82.7	27.9	26.1	26.7	*31.1*	*30.3*	*32.3*
France	878.9	1,027.8	1,019.4	258.8	271.1	273.4	*29.4*	*26.3*	*26.8*
Germany	1,316.0	1,704.0	1,712.3	374.9	297.0	346.8	*28.5*	*17.4*	*20.6*
Ireland	90.9	82.0	81.7	23.7	21.3	23.8*)	*26.1*	*26.0*	*29.1*
Italy	718.1	709.3	698.5	114.0	111.9	113.2	*15.9*	*15.8*	*16.2*
Netherlands	471.3	456.3	454.4	111.6	128.8	141.2	*23.7*	*28.2*	*31.1*
Portugal	232.6	221.7	188.2	32.6	35.0	28.5	*14.0*	*15.8*	*15.1*
Spain	1,016.5	920.4	854.6	127.5	132.1	138.5	*12.5*	*14.3*	*16.4*
Sweden	210.3	210.8	217.6	79.7	79.4	80.0	*37.9*	*37.7*	*36.8*
UK	1,119.1	1,071.1	1,120.6	306.3	291.4	317.0	*27.3*	*27.2*	*28.3*
Sub-total	**6,680.2**	**7,004.8**	**6,985.9**	**1,606.9**	**1,546.1**	**1,651.2**	***24.1***	***22.1***	***23.6***
% growth		**+4.9%**	**-0.3%**		**-3.8%**	**+6.8%**			
CEEs									
Bulgaria	154.9	152.6	137.9	25.4	28.6	25.4	*16.4*	*18.7*	*18.4*
Czech Republic	201.2	196.4	210.9	56.9	57.3	55.2	*28.2*	*29.2*	*26.2*
Estonia	34.7	25.3	27.2	5.9	3.6	4.0	*17.0*	*14.2*	*14.7*
Latvia	59.5	44.0	45.5	15.0	12.0	14.6	*25.2*	*27.3*	*32.1*
Lithuania	84.2	69.7	75.6	16.4	13.4	13.0	*19.5*	*19.2*	*17.2*
Hungary	174.2	159.8	155.7	47.5	47.9	43.2	*27.3*	*30.0*	*27.7*
Poland	652.6	599.4	572.1	101.1	103.1	101.0	*15.5*	*17.2*	*17.7*
Romania	335.7	307.6	305.3	68.7	72.5	75.9	*20.5*	*23.6*	*24.9*
Slovakia	105.5	104.6	95.9	20.5	18.3	17.6	*19.4*	*17.5*	*18.4*
Slovenia	42.9	41.0	35.6	7.0	7.2	8.6	*16.3*	*17.6*	*24.2*
Sub-total	**1,845.4**	**1,700.4**	**1,661.7**	**364.4**	**363.9**	**358.5**	***19.7***	***21.4***	***21.6***
% growth		**-7.9%**	**-2.3%**		**-0.2%**	**-1.5%**			
All total	**8,525.6**	**8,705.2**	**8,647.6**	**1,971.3**	**1,910.0**	**2,009.7**	***23.1***	***21.9***	***23.2***
% growth		**+2.4%**	**-0.7%**		**-3.1%**	**+5.2%**			

*) authors' estimate, based on AIAS MNE database
Sources: Eurostat, *Annual Enterprise Statistics* [sbs_na_dt] and *FATS statistics* [fats_g1a_08]

Table SA3.3 **Employment in Wholesale by sub-sector, 23 EU member states, 2014 (thousands)**

	G46.1 Fee / contract basis	G46.2 Agricultural raw materials	G46.3 Food, beverages and tobacco	G46.4 Household goods	G46.5 ICT equipment	G46.6 Other machinery and equipment	G46.7 Other specialised wholesale	G46.9 Non-specialised wholesale	Total
W/N/S									
Austria	9.3	15.9	27.4	40.3	8.2	34.4	46.0	3.8	**185.4**
Belgium	6.1	4.0	30.6	52.3	11.8	37.1	44.1	4.8	**190.9**
Denmark	6.2	4.4	22.8	47.7	16.4	34.3	39.9	8.4	**179.6**
Finland	5.4	2.1	8.7	17.8	6.2	20.0	18.4	4.1	**82.7**
France	83.9	43.2	146.4	214.9	49.2	208.2	234.5	39.2	**1,019.4**
Germany	65.8	60.0	246.0	458.9	118.5	261.3	435.1	91.6	**1,712.3**
Ireland*)	5.0	2.3	20.7	16.1	10.1	8.7	13.6	5.2	**81.7**
Italy	33.1	16.9	141.2	200.3	38.9	75.1	160.7	32.3	**698.5**
Netherlands	18.5	30.3	72.4	106.9	51.9	83.1	77.9	13.1	**454.4**
Portugal	9.4	6.8	47.6	45.4	7.4	22.3	35.3	13.9	**188.2**
Spain	31.7	24.6	291.3	194.8	51.5	104.0	152.2	4.6	**854.6**
Sweden	9.3	4.0	32.3	61.4	18.1	39.3	51.9	1.3	**217.6**
UK	69.8	18.3	201.5	272.0	76.1	178.9	244.9	59.3	**1,120.6**
Sub-total	**353.4**	**232.8**	**1,288.9**	**1,728.8**	**464.3**	**1,106.7**	**1,554.5**	**281.6**	6,985.9
CEEs									
Bulgaria	3.8	7.1	37.9	26.4	4.1	10.6	35.4	12.6	**137.9**
Czech Republic	22.5	5.9	30.6	43.8	10.5	21.9	52.6	23.2	**210.9**
Estonia	0.7	0.6	5.5	5.4	0.9	4.1	7.9	2.1	**27.2**
Latvia	2.4	1.2	9.3	9.5	2.6	5.5	12.7	2.4	**45.5**
Lithuania	1.4	3.4	14.0	17.3	3.3	11.8	23.6	0.8	**75.6**
Hungary	15.7	9.8	30.9	31.8	6.7	11.7	30.6	18.4	**155.7**
Poland	37.6	19.1	90.2	90.1	15.0	32.4	146.4	141.2	**572.1**
Romania	32.2	11.2	71.6	61.0	11.6	17.8	70.5	29.4	**305.3**
Slovakia	17.6	1.7	11.0	14.0	3.0	5.1	13.8	29.6	**95.9**
Slovenia	11.0	0.4	2.9	7.1	0.9	2.1	5.9	5.5	**35.6**
Sub-total	**144.9**	**60.4**	**303.9**	**306.4**	**58.6**	**123.0**	**399.4**	**265.2**	1,661.7
All total	**498.3**	**293.2**	**1,592.8**	**2,035.2**	**522.9**	**1,229.7**	**1,953.9**	**546.8**	8,647.6

*) 2012
Source: Eurostat, *Annual detailed enterprise statistics for trade* [sbs_na_dt]

Table SA3.4 **Growth of employment in Wholesale by sub-sector, employees, 23 EU member states, 2008-2014, in %**

	G46.1 Fee / contract basis	G46.2 Agricultural raw materials	G46.3 Food, beverages and tobacco	G46.4 Household goods	G46.5 ICT equipment	G46.6 Other machinery and equipment	G46.7 Other specialised wholesale	G46.9 Non-specialised wholesale	Total
W/N/S									
Austria	14.8	-0.1	10.4	-5.0	-1.2	3.6	1.8	-7.6	**1.3**
Belgium	--3.3	-3.4	8.9	-1.9	-15.6	2.5	-0.3	-11.3	**-0.4**
Denmark	15.1	-5.5	15.2	14.1	12.4	4.9	9.8	29.8	**10.9**
Finland	0.1	-21.1	0.8	-8.0	-19.8	-2.6	-6.3	-30.2	**-7.9**
France	8.3	131.7	9.8	3.5	5.4	20.7	15.1	114.2	**16.0**
Germany	106.6	25.1	19.8	26.4	22.5	52.9	24.9	25.1	**30.9**
Ireland*)	-15.0	9.5	-5.6	-10.6	48.3	-9.1	-32.3	-20.6	**-10.1**
Italy	-9.6	6.1	6.3	-1.3	-11.2	-2.1	-7.4	-10.0	**-2.7**
Netherlands	-5.1	-2.0	-0.7	-0.9	-5.5	-8.0	-10.8	42.8	**-3.6**
Portugal	-35.2	-4.9	-16.8	-22.5	-7.5	-15.3	-18.0	-15.9	**-18.9**
Spain	-15.2	-6.5	-4.8	-13.1	-23.2	-23.4	-30.0	58.4	**-16.0**
Sweden	-17.7	-5.2	9.4	12.5	-11.3	8.9	-1.5	-8.6	**3.4**
UK	33.0	-20.2	1.0	1.0	-6.1	14.0	-6.9	-20.0	**0.1**
Sub-total	**6.5**	**3.8**	**7.9**	**3.6**	**-3.2**	**7.9**	**2.7**	**5.4**	**4.6**
CEEs									
Bulgaria	23.8	29.4	-7.8	-5.7	-38.5	-15.2	-25.4	18.7	**-11.0**
Czech Republic	106.4	15.7	2.4	-1.8	4.4	7.7	-8.8	2.9	**4.8**
Estonia	-69.9	-18.4	6.7	-22.3	-43.3	-8.3	-22.6	-38.1	**-21.4**
Latvia	40.1	20.6	-13.4	-28.6	-26.1	-18.8	-36.8	-0.9	**-23.5**
Lithuania	-1.1	28.7	-8.4	-23.5	11.6	-0.7	-9.9	-35.1	**-10.2**
Hungary	-6.5	-7.4	-13.4	-16.1	-0.8	20.6	-17.8	-4.6	**-10.6**
Poland	1.3	47.3	-9.9	-18.3	84.0	-2.9	-4.0	-14.6	**-11.9**
Romania	-17.8	-7.5	-28.1	-26.5	26.0	7.3	-18.6	-13.1	**-9.0**
Slovakia	-9.3	-2.9	1.1	1.0	-0.2	-19.4	-33.3	-4.5	**-9.1**
Slovenia	-14.3	-48.0	6.4	-2.5	-18.6	-4.3	-38.5	-17.5	**-17.0**
Sub-total	**17.4**	**11.1**	**-13.0**	**-18.7**	**11.6**	**-1.4**	**-14.8**	**-16.0**	**-10.0**
All total	**7.4**	**5.3**	**4.9**	**-0.6**	**-1.2**	**6.0**	**-1.9**	**1.8**	**1.4**

*) 2008-2012
Source: Eurostat, *Annual detailed enterprise statistics for trade* [sbs_na_dt]

Table SA3.5 **Total industry employment (employees) and number of persons employed in affiliates of foreign-owned MNEs, Retail, 23 EU member states, 2008-2014 (thousands; and in %)**

	Total employment (employees)			Foreign-owned affiliates (persons employed)			*% employed in foreign-owned affiliates*		
Host country	2008	2010	2014	2008	2010	2014	*2008*	*2010*	*2014*
W/N/S									
Austria	296.7	293.6	312.3	97.1	99.7	115.7	*32.7*	*34.0*	*37.1*
Belgium	230.4	238.8	241.1	13.1	38.4	37.8	*5.7*	*16.1*	*15.7*
Denmark	211.9	202.4	162.6	24.5	24.1	22.6	*11.6*	*11.9*	*13.9*
Finland	142.2	145.1	154.6	18.6	18.6	24.8	*13.1*	*12.8*	*16.0*
France	1,518.1	1,657.5	1,644.5	198.9	186.1	206.0	*12.9*	*11.2*	*12.5*
Germany	2,554.4	2,901.9	3,065.8	147.3	141.9	253.6	*5.8*	*4.9*	*8.3*
Ireland	198.5	180.8	180.7	44.8	52.6	54.6*)	*22.5*	*29.1*	*30.2*
Italy	986.5	1,001.2	1,008.2	152.9	167.7	168.5	*15.4*	*16.8*	*16.7*
Netherlands	688.9	695.1	706.3	88.0	84.5	131.1	*12.8*	*12.2*	*18.6*
Portugal	338.3	341.9	310.6	34.6	38.8	60.1	*10.2*	*11.3*	*19.3*
Spain	1,282.0	1,189.6	1,108.8	180.6	184.2	183.6	*14.1*	*15.5*	*16.5*
Sweden	245.7	250.7	261.9	47.6	36.2	55.0	*19.3*	*14.4*	*21.0*
UK	2,962.2	2,826.2	3,005.1	575.2	515.0	615.8	*19.4*	*18.2*	*20.5*
Sub-total	**11,655.8**	**11,924.8**	**12,162.5**	**1,623.2**	**1,587.8**	**1,929.2**	***13.9***	***13.3***	***15.9***
% growth		**+2.7%**	**+2.0%**		**-2.2%**	**+21.5%**			
CEEs									
Bulgaria	198.8	214.1	208.6	14.4	20.7	24.1	*7.2*	*9.7*	*11.6*
Czech Republic	248.3	232.6	224.0	99.5	104.3	110.4	*40.1*	*44.8*	*49.3*
Estonia	46.9	43.5	44.7	11.5	12.4	14.1	*26.4*	*28.5*	*31.5*
Latvia	103.0	86.4	88.7	23.0	21.8	24.4	*22.3*	*25.2*	*27.5*
Lithuania	120.8	102.5	109.0	18.5	16.9	24.6	*15.3*	*16.5*	*22.6*
Hungary	278.5	262.1	227.1	74.4	78.9	76.3	*26.7*	*30.1*	*33.6*
Poland	895.0	855.3	856.1	180.5	201.0	248.2	*20.2*	*23.5*	*29.0*
Romania	511.2	425.5	429.8	67.6	81.4	97.1	*13.2*	*19.1*	*22.6*
Slovakia	100.7	107.5	124.9	26.2	29.5	37.4	*26.0*	*27.4*	*29.9*
Slovenia	50.5	49.6	49.1	10.3	11.7	24.4	*20.4*	*26.8*	*49.7*
Sub-total	**2,553.7**	**2,379.1**	**2,362.0**	**525.9**	**595.5**	**681.0**	***20.6***	***25.0***	***28.8***
% growth		**-6.8%**	**-0.7%**		**+13.2%**	**+14.4%**			
All total	**14,209.5**	**14,303.9**	**14,524.5**	**2,149.1**	**2,183.3**	**2,610.2**	***15.1***	***15.3***	***18.0***
% growth		**+0.7%**	**+1.6%**		**+1.6%**	**+19.6%**			

Sources: Eurostat, *Annual Enterprise Statistics* [sbs_na_dt] and *FATS statistics* [fats_g1a_08]

Table SA3.6 **Employment in Retail by sub-sector (excl. 47.3 – automotive fuel sales), 23 EU member states, 2014 (thousands)**

	G47.1 Super-markets & dept stores	G47.2 Food, beverages and tobacco	G47.4 ICT equipment	G47.5 Other household equipment	G47.6 Cultural & recreational goods	G47.7 Other specialised goods	G47.8 + 47.9 Various	Total (excl. G47.3)
W/N/S								
Austria	106.8	18.0	9.0	50.3	18.7	102.8	6.7	**312.3**
Belgium	93.6	19.5	6.1	33.7	8.8	76.5	2.9	**241.1**
Denmark	72.8	6.3	3.1	21.3	9.9	45.5	3.7	**162.6**
Finland	81.5	5.5	3.7	20.6	6.5	31.0	5.8	**154.6**
France	680.8	89.3	14.4	198.7	70.5	492.0	98.8	**1,644.5**
Germany	1,086.7	220.4	91.7	357.5	122.2	943.6	243.7	**3,065.8**
Ireland**)	81.6	9.4	3.6	15.6	8.7	59.9	1.9	**180.7**
Italy	416.2	68.2	16.6	109.6	40.0	329.0	28.6	**1,008.2**
Netherlands	318.0	39.5	16.0	75.7	28.1	206.0	23.0	**706.3**
Portugal	114.9	23.7	10.0	39.0	13.8	103.8	5.4	**310.6**
Spain	427.4	127.4	37.7	129.2	49.5	318.0	19.6	**1,108.8**
Sweden	93.7	15.3	12.2	38.5	16.8	72.3	13.1	**261.9**
UK	1,426.4	168.9	39.1	248.6	139.8	852.8	129.5	**3,005.1**
Sub-total	**5,000.4**	**811.8**	**263.2**	**1,338.3**	**533.3**	**3,633.2**	**582.7**	12,162.5
CEEs								
Bulgaria	88.0	17.9	6.4	24.0	7.9	59.8	4.6	**208.6**
Czech Republic	106.7	11.1	3.5	27.1	11.5	54.7	9.4	**224.0**
Estonia	20.3	1.1*)	0.8	5.7	2.1	11.4	4.4	**44.7**
Latvia	39.7	3.0	1.9	10.1	2.8	23.3	7.9	**88.7**
Lithuania	51.6	2.3	2.2	17.1	3.7	26.7	5.4	**109.0**
Hungary	117.6	27.5	7.2	26.8	7.6	25.3	15.1	**227.1**
Poland	446.0	40.7	16.9	79.2	20.1	219.4	33.8	**856.1**
Romania	230.2	20.0	8.9	42.6	9.9	98.2	20.0	**429.8**
Slovakia	70.1	5.1	1.9	12.1	3.4	23.8	8.5	**124.9**
Slovenia	27.1	1.1	0.8	5.9	2.3	9.5	2.4	**49.1**
Sub-total	**1,197.3**	**129.8**	**50.5**	**250.6**	**71.3**	**552.1**	**111.5**	2,362.0
All total	**6,197.7**	**941.6**	**313.7**	**1,588.9**	**604.6**	**4,185.3**	**694.2**	14,524.5

**) 2012

Sources: Eurostat, *Annual detailed enterprise statistics for trade* [sbs_na_dt]; except *): based on AIAS MNE database

Table SA3.7 **Growth of employment in Retail by sub-sector, employees, 23 EU member states, 2008-2014, in %**

	G47.1 Super-markets & dept stores	G47.2 Food, beverages and tobacco	G47.4 ICT equipment	G47.5 Other household equipment	G47.6 Cultural & recreational goods	G47.7 Other specialised goods	G47.8 + 47.9 Various	Total (excl. G47.3)
W/N/S								
Austria	13.0	-3.1	-11.2	2.9	0.5	4.4	14.0	**5.3**
Belgium	4.8	-7.1	8.3	-2.2	-11.4	3.5	37.3	**3.7**
Denmark	-29.3	-35.0	-30.8	-16.2	-23.8	-21.3	77.8	**-23.3**
Finland	12.7	19.1	-24.2	-7.1	-4.2	30.1	-9.2	**6.4**
France	10.2	10.8	-49.1	-5.4	-7.0	18.8	6.1	**8.3**
Germany	20.1	34.4	14.7	2.7	13.8	10.7	64.8	**20.0**
Ireland*)	-8.9	-11.6	-11.9	-28.8	-27.9	-0.4	-6.3	**-9.0**
Italy	-2.4	29.9	-1.2	-9.7	-8.9	-2.7	4.1	**2.2**
Netherlands	19.1	-12.4	-19.5	-11.7	-16.6	-5.2	34.8	**2.5**
Portugal	4.6	-12.2	-3.3	-37.0	-18.8	-9.7	8.3	**-8.2**
Spain	-5.9	-5.2	-29.6	-30.2	-7.1	-12.3	-12.4	**-13.6**
Sweden	15.0	19.4	-17.0	-6.0	-0.7	2.1	45.6	**6.6**
UK	5.2	8.3	-24.8	12.4	-4.2	-2.2	8.4	**1.8**
Sub-total	**7.4**	**2.6**	**-9.6**	**-11.9**	**-2.8**	**-0.7**	**34.3**	**4.3**
CEEs								
Bulgaria	18.8	50.8	-49.0	-23.3	2.4	11.0	2.8	**4.9**
Czech Republic	-2.9	-17.8	-45.9	-27.8	-16.8	-4.8	11.9	**-9.8**
Estonia	-3.7	17.4**)	-51.2	-23.7	-21.2	5.2	87.2	**-8.9**
Latvia	-11.8	49.4	-49.3	-34.9	-38.8	-6.4	-15.4	**-13.9**
Lithuania	-15.9	68.0	-30.9	-3.4	-15.1	-11.1	-4.3	**-11.1**
Hungary	-7.6	87.1	-29.9	-29.8	-16.6	-8.8	7.5	**-18.5**
Poland	1.9	-48.4	-26.3	7.1	-13.9	-15.1	-11.9	**-4.3**
Romania	-18.0	-33.4	1.2	-16.4	-26.1	-12.2	16.1	**-15.9**
Slovakia	42.2	43.4	-26.9	-4.7	-1.8	57.4	139.1	**24.2**
Slovenia	-8.7	-8.2	-28.9	12.7	-6.3	1.8	69.6	**-2.8**
Sub-total	**-2.1**	**-0.6**	**-34.1**	**-13.3**	**-16.2**	**-9.4**	**9.2**	**-7.5**
All total	**4.9**	**2.1**	**-14.8**	**-12.1**	**-5.6**	**-2.2**	**28.6**	**2.2**

*) 2009-2014
**) 2008-2013
Source: Eurostat, *Annual detailed enterprise statistics for trade* [sbs_na_dt]

Table SA3.8 **Five largest companies in Wholesale and Retail in 23 EU member states, 2014, names (in alphabetical order), employment, ownership**

Austria	BILLA, PENNY, MERKUR, BIPA	Hofer	Lidl	Media-Saturn, Metro C&C	Spar
	REWE Group (DE)	Aldi (DE)	Lidl (Schwarz Gruppe, DE)	METRO Group (DE)	Spar (NL)
	39,970	7,883	4,470	4,850	39,749
Belgium	Aldi	Carrefour	Colruyt	Delhaize	Lidl
	Aldi (DE)	Groupe Carrefour (FR)	Colruyt	Delhaize	Lidl (Schwarz Gruppe)(DE)
	5,300	12,000	26,300	16,270	4,600
Bulgaria	BILLA, PENNY	Fantastico	Kaufland + Lidl Bulgaria	MAKRO Cash & Carry	Piccadilly + Carrefour
	REWE Group (DE)		Lidl (Schwarz Gruppe)(DE)	METRO Group (DE)	Groupe Carrefour (FR)(franchised)
	5,970	2,660	12,030	2,268	3,100
Czech Rep.	Albert + Spar	BILLA + PENNY	Globus	Lidl + Kaufland Česká Republika	Tesco Stores ČR
	Ahold (NL)	REWE Group (DE)	Globus Holding (DE)	Lidl (Schwarz Gruppe)(DE)	Tesco (UK)
	15,000	11,100	7,000	10,725	12,001
Denmark	Bestseller A/S	Coop Danmark	Dansk Supermarked	DLG	Pandora
	Bestseller A/S				Pandora
	3,400	10,177	25,611	7,631	9,957
Estonia	Coop Eesti	Magnum	Maxima	Rimi Eesti Food, C&C Supernetto	Selver
		Magnum AS	Maxima Grupe (LT)	ICA Gruppen (SE)	Kaubamaja Group
	4,400	550	3,696	2,876	2,920
Finland	Amer Sports	HOK Elanto	Kesko	S-Market	Stockmann
			Kesko Food	S-Group	Stockmann
	7,505	6,058	8,610	7,470	7,033
France	Auchan	Carrefour	Intermarché, Netto	E. Leclerc	Casino
	Groupe Auchan	Groupe Carrefour	ITM Entreprises	E. Leclerc	Groupe Casino
	71,920	109,000	120,000	105,000	70,560
Germany	Aldi Nord + Süd	EDEKA	Lidl	Real, Metro C&C Media-Saturn	REWE, PENNY, BILLA, Baumarkt
	Aldi	EDEKA	Lidl (Schwarz Gruppe)	METRO Group	REWE Group
	59,638	324,900	96,200	98,083	228,124
Hungary	Auchan Magyarország	CBA	CO-OP Hungary	Spar Magyarország	Tesco
	Groupe Auchan (FR)	CBA		Spar (NL)	Tesco (UK)
	6,421	18,000	30,500	14,015	18,611

Ireland	Dunnes Stores	Lidl	SuperValu	Tesco	UDGHealthcare
	Dunnes Group	Lidl (Schwarz Gruppe)(DE)	Musgrave Group	Tesco (UK)	
	13,600	4,000	7,869	14,925	8,300
Italy	Carrefour Italia	CONAD	Coop Italia	Esselunga S.p.A.	Selex Gruppo Commerciale S.p.A.
	Groupe Carrefour (FR)	CONAD			
	20,122	47,382	54,591	21,135	31,000
Latvia	IKI + Mego	Lenoka	Maxima Latvija	Prisma Latvija	Rimi Latvia
	Mego		Maxima Grupe (LT)	S-Group (FI)	ICA Gruppen (SE)
	1,500	1,340	8,537	1,310	5,255
Lithuania	IKI	Maxima LT	Norfos Mažmena, Rivona	Rimi Lietuva	Sanitex
	REWE Group (DE)	Maxima Grupe	NORFA Group	ICA Gruppen (SE)	JSC Sanitex
	7,922	16,987	4,456	3,239	2,484
Netherlands	Albert Heijn +Albert	Media-Saturn, MAKRO C&C	Blokker, Bart Smit	Dekamarkt, Dirk	Jumbo
	Ahold	METRO Group (DE)	Blokker Holding	Detailresult Groep	
	102,000	8,604	22,195	18,050	31,066
Poland	Auchan Polska	Biedronka	Carrefour Poland	Grupa Muszkieterów	Tesco Poland
	Groupe Auchan (FR)	Jeronimo Martins (PT)	Groupe Carrefour (FR)	Les Mousquetaires (FR)	Tesco (UK)
	19,505	55,200	16,200	14,100	28,442
Portugal	Aldi	Continente	Jumbo, Pão de Açúcar	Minipreço	Pingo Doce
	Aldi (DE)	Sonae SGPS	Groupe Auchan (FR)	DIA (ES)	Jeronimo Martins / Ahold (NL)
	3,280	29,960	8,504	3,503	28,050
Romania	Auchan + Real	Billa, Penny Market, XXL Mega	Carrefour, Artima	Mega Image	Kaufland Romania
	Groupe Auchan (FR)	REWE Group (DE)	Groupe Carrefour (FR)	Delhaize Group (BE)	Lidl (Schwarz Gruppe)(DE)
	9,344	7,900	9,323	10,200	12,180
Slovakia	Billa	CBA Slovakia	Lidl + Kaufland Slovenska Rep.	METRO Cash&Carry SR	Tesco Stores SR
	REWE Group (DE)	CBA (HU)	Lidl (Schwarz Gruppe)(DE)	METRO Group (DE)	Tesco (UK)
	3,805	2,321	8,805	1,275	9,000
Slovenia	Engrotus	Hofer	Lidl	Mercator (IP)	Spar Slovenia
		Aldi (DE)	Lidl (Schwarz Gruppe)(DE)	Agrokor (CR)	Spar (NL)
	2,584	1,180	1,320	10,117	4,307
Spain	DIA, S.A.	Eroski	El Corte Ingles, S.A.	Inditex, S.A.	Mercadona
	DIA	Eroski Group	El Corte Ingles	Inditex	Mercadona
	23,219	38,686	52,345	41,980	74,228

Sweden	Axfood	Coop Sverige	Dometic Group	H&M	ICA
			Dometic Group	H&M	ICA Gruppen
	8,481	10,944	6,389	7,489	8,213
UK	Asda	Co-op	Morrisons	Sainsbury's	Tesco
	Walmart (US)	The Co-operative Group	Morrisons	Sainsbury's	Tesco
	165,000	62,000	127,403	107,000	317,874

Notes:
- Foreign MNE owner indicated by country code after company name; home-based MNE ownership indicated by not indicating country code after company name; domestic firm indicated by not including company name in second country row.
- Where possible, employment indicated in headcounts (though often unclear in annual reports and press messages).
Source: WIBAR-3 Industrial Relations survey

ICT

Table SA4.1 **Total industry employment (employees) and number of persons employed in affiliates of foreign-owned MNEs, ICT, 23 EU member states, 2008-2014 (thousands; and in %)**

	Total employment (employees)			Foreign-owned affiliates (persons employed)			*% employed in foreign-owned affiliates*		
Host country	2008	2010	2014	2008	2010	2014	*2008*	*2010*	*2014*
W/N/S									
Austria	39.7	52.8	53.6	8.9	9.1	16.8	*22.4*	*17.2*	*31.3*
Belgium	49.5	49.9	52.3	4.9	6.5*)	8.3	*9.9*	*13.1*	*15.9*
Denmark	46.3	48.0	60.1	14.7	20.0	19.0	*31.7*	*41.7*	*31.6*
Finland	43.0	45.6	52.0	12.9	13.0	5.1	*30.0*	*28.5*	*9.8*
France	314.3	350.0	394.9	64.0	63.6	73.6	*20.4*	*18.1*	*18.6*
Germany	475.3	486.3	660.8	97.3	95.1	119.8	*20.5*	*19.6*	*18.1*
Ireland	64.6	74.0	76.5	33.0	36.0	32.0*)	*51.0*	*48.6*	*41.8*
Italy	265.1	272.1	289.6	41.8	42.7	51.1	*15.8*	*15.7*	*17.6*
Netherlands	145.2	166.0	156.4	35.1	36.9	39.5	*24.2*	*22.2*	*25.3*
Portugal	32.1	36.0	45.6	7.5	8.1	10.4	*23.4*	*22.5*	*22.8*
Spain	211.5	207.8	217.1	57.8	52.2	62.0	*27.3*	*25.1*	*28.6*
Sweden	92.2	93.9	104.2	30.5	32.3	38.5	*33.1*	*34.4*	*36.9*
UK	541.5	543.4*)	668.8	195.3	184.5	216.7**)	*36.1*	*34.0*	*32.4*
Sub-total	**2,320.3**	**2,425.8**	**2,831.9**	**603.7**	**600.0**	**692.8**	***26.0***	*24.7*	***24.5***
% growth		**+4.6%**	**+16.6%**		**-0.6%**	**+15.5%**			
CEEs									
Bulgaria	22.9	28.3	40.6	9.4	12.3	19.5	*41.0*	*43.5*	*48.0*
Czech Republic	51.6	54.2	64.4	22.0	25.8	29.6	*42.6*	*47.6*	*46.0*
Estonia	6.8	7.3	10.3	2.6	2.5	3.4	*38.2*	*34.2*	*33.0*
Latvia	8.0	8.0	16.8	3.0	3.1	7.1	*37.5*	*38.8*	*42.3*
Lithuania	7.5	9.6	15.4	2.0	3.1	6.8	*26.7*	*32.3*	*44.2*
Hungary	41.4	43.8	56.7	10.8	12.0	24.4	*26.1*	*27.4*	*43.0*
Poland	67.8	76.7	116.8	14.7	20.0	38.4	*21.6*	*26.1*	*32.9*
Romania	46.2	46.5	71.1	17.6	22.2	40.4	*38.1*	*47.7*	*56.8*
Slovakia	21.9	19.1	24.3	6.8	8.4	10.3	*31.1*	*44.0*	*42.4*
Slovenia	9.0	9.6	10.2	1.1	1.0	2.1	*12.2*	*10.4*	*20.6*
Sub-total	**283.1**	**303.1**	**426.6**	**90.0**	**110.4**	**182.0**	***31.8***	***36.4***	***42.7***
% growth		**+7.1%**	**+40.7%**		**+22.6%**	**+64.9%**			
All total	**2,603.4**	**2,728.9**	**3,248.5**	**693.7**	**710.4**	**874.8**	***26.7***	***26.0***	***26.9***
% growth		**+4.8%**	**+19.0%**		**+2.4%**	**+23.1%**			

*) authors' estimate, based on AIAS MNE database
**) 2013
Sources: Eurostat, *Annual Enterprise Statistics for services* [sbs_na_1a_se_r2] and *FATS statistics* [fats_g1a_08]

Table SA4.2 **Employment in ICT by sub-sector, 23 EU member states, 2014 (thousands), and growth 2008-2014 in %**

	2014		2008-2014	
	J62 Computer programming, consultancy	J63 Information service activities	Total ICT	Total ICT (growth in %)
W/N/S				
Austria	37.8	15.8	53.6	**35.0**
Belgium	47.9	4.4	52.3	**5.7**
Denmark	53.5	6.6	60.1	**29.8**
Finland	47.7	4.3	52.0	**20.9**
France	352.6	42.3	394.9	**25.6**
Germany	581.2	79.6	660.8	**39.1**
Ireland*)	51.0	25.5	76.5	**18.4**
Italy	201.8	87.8	289.6	**9.2**
Netherlands	142.3	14.1	156.4	**7.7**
Portugal	41.0	4.6	45.6	**42.1**
Spain	199.8	17.3	217.1	**2.7**
Sweden	95.7	8.5	104.2	**13.0**
UK	603.6	65.2**)	668.8	**23.5**
Sub-total	**2,455.9**	**376.0**	**2,831.9**	**22.0**
CEEs				
Bulgaria	33.5	7.1	40.6	**77.3**
Czech Republic	54.6	9.8	64.4	**24.8**
Estonia	8.3	2.0	10.3	**51.5**
Latvia	11.5	5.3	16.8	**110.6**
Lithuania	12.4	3.0	15.4	**105.3**
Hungary	46.5	10.2	56.7	**37.0**
Poland	88.3	28.5	116.8	**72.3**
Romania	59.1	12.0	71.1	**53.9**
Slovakia	19.2	5.1	24.3	**10.9**
Slovenia	9.0	1.2	10.2	**13.2**
Sub-total	**342.4**	**84.2**	**426.6**	**50.7**
All total	**2,798.3**	**460.2**	**3,248.5**	**24.8**

*) no data provided by Eurostat, authors' estimate based on AIAS MNE Database
**) 2013
Source: Eurostat, *Annual detailed enterprise statistics for services* [sbs_na_1a_se_r2]

Table SA4.3 **Five largest companies in ICT in 23 EU member states, 2014, names (in alphabetical order), employment, ownership**

Austria	Atos	Capgemini Austria	SAP AG Austria	Software AG Austria	TTTech Computertechnik
	Atos (FR)	Capgemini (FR)	SAP (DE)	Software AG (DE)	TTTech Computertechnik
	1,800	1,050	350	660	370
Belgium	Alcatel-Lucent BELL	Cegeka	HP Belgium	Ordina Belux	Vzw Smals
	Nokia (FI)	Cegeka	Hewlett-Packard (US)	Ordina (NL)	
	1,600	2,100	1,800	2,917	1,700
Bulgaria	CSC Bulgaria	HP Global Delivery Bulgaria	IBM Bulgaria	SAP Labs Bulgaria	Sofica Group
	CSC (US)	Hewlett-Packard (US)	IBM (US)	SAP (DE)	Sofica Group
	588	2,660	550	600	900
Czech Rep.	Accenture Central Europe	AVAST Software	HP Belgium Czech Republic	IBM Česká Republika	Tieto Czech Republic
	Accenture (IE)	AVAST Software	Hewlett-Packard (US)	IBM (US)	Tieto (FI)
	1,300	640	1,411	3,700	2,100
Denmark	CGI Denmark	CSC Denmark	IBM Denmark	KMD	Tema A/S
	CGI (CA)	CSC (US)	IBM (US)		
	597	821	2836	2,988	688
Estonia	CGI Estonia	Nortal Group	Playtech Estonia	Proekspert AS	Skype Technologies
	CGI (CA)	Nortal Group	Playtech (US)		Microsoft (US)
	160	320	670	118	230
Finland	Basware	CGI Suomi	Fujitsu Finland	Microsoft Mobile	Tieto
	Basware	CGI (CA)	Fujitsu (JP)	Microsoft (US)	Tieto
	1,466	2,832	1,785	3,200	4,896
France	Atos	Capgemini	CGI France	Dassault Systèmes	IBM France
	Atos	Capgemini	CGI (CA)	Groupe Dassault	IBM (US)
	17,200	11,000	9,100	6,600	8,500
Germany	Atos	Capgemini	HP Deutschland	SAP AG	T-Systems
	Atos (FR)	Capgemini (FR)	Hewlett-Packard (US)	SAP	Deutsche Telekom
	9,800	7,800	8,450	17,857	21,590
Hungary	Graphisoft SE	IBM Hungary Int'l Shared Services	IT Services Hungary	SAP Hungary	Sysdata PSE
	Nemetschek	IBM (US)	Deutsche Telekom (DE)	SAP (DE)	Siemens (DE)
	276	2,667	3952	579	620

Ireland	Adobe Ireland	EMC	Google	Microsoft	Oracle
	Adobe Systems (US)	EMC (US)	Alphabet (US)	Microsoft (US)	Oracle (US)
	2,788	2,800	2,820	1,900	1,163
Italy	Exprivia	HP Italiana	IBM Italia	NTT DATA Italia	Zucchetti Group
		Hewlett-Packard (US)	IBM (US)	NTT (JP)	
	1,754	3,300	5,948	2,610	2,630
Latvia	Accenture Latvijas	Citrus Solutions	Exigen Services Latvia	Lattelecom Technology	Tieto Latvia
	Accenture (IE)	State	Exigen Services (US)	State	Tieto (FI)
	550	278	326	248	720
Lithuania	Adform	Barclays Technologies Centre Lithuania	COWI Lietuva	CSC Baltic	Getjar
	Adform (DK)	Barclays Bank (UK)	COWI Group (DK/SE)	CSC (US)	Sungy Mobile (CN)
	380	1,322	140	340	70
Netherlands	Accenture Nederland	Atos Nederland	Cofely	HP Nederland	Sogeti Nederland
	Accenture (IE)	Atos (FR)	GDF SUEZ (FR)	Hewlett-Packard (US)	Capgemini (FR)
	4,704	8,876	5,999	2,156	2,473
Poland	Atos Poland	Capgemini Poland	Comarch	GK Asseco Poland	IBM Poland
	Atos (FR)	Capgemini (FR)	Comarch Group	Asseco Group	IBM (US)
	3,320	6,050	4,400	3,175	3,300
Portugal	Accenture Portugal	Altran Portugal	Glintt	Microsoft	Sonaecom
	Accenture (IE)	Altran (FR)	Glintt Global Intelligent Techn.	Microsoft (US)	Sonae SGPS
	1,300	700	1,312	480	675
Romania	Accenture Romania	HP CeBOC	Microsoft Romania	Oracle Romania	Ubisoft Romania
	Accenture (IE)	Hewlett-Packard (US)	Microsoft (US)	Oracle (US)	Ubisoft (FR)
	1,900	3,000	760	2,470	1,200
Slovakia	Asseco Central Europe	ESET	HP Slovakia	IBM Slovensko	T-systems Slovakia
	Asseco Group (PL)	ESET Group	Hewlett-Packard (US)	IBM (US)	Deutsche Telekom (DE)
	660	988	1,744	4,750	3,649
Slovenia	Adacta	Comtrade Gaming	IBM Slovenija	SRC d.o.o.	Telekom Slovenije
		Comtrade Group (US)	IBM (US)	SRC Group	State
	350	125	220	320	380
Spain	Accenture SL	Capgemini Espana	Ibermatica, S.A.	IBM Global Services Espana	Indra Sistemas, S.A.
	Accenture (IE)	Capgemini (FR)	Ibermatica	IBM (US)	
	9,800	3,780	2,540	2,180	12,786

Sweden	CGI Sweden	Eniro	IBM Sweden	IFS	Tieto Sweden
	CGI (CA)	Eniro AB	IBM (US)	IFS AB	Tieto (FI)
	4,357	2,603	1,992	2,645	2,439
UK	Accenture (UK) Ltd	Capgemini UK plc	CGI IT UK Ltd	IBM UK Ltd	Microsoft UK
	Accenture (IE)	Capgemini (FR)	CGI (US)	IBM (US)	Microsoft (US)
	8,797	7,994	4,924	15,819	3,141

Notes:
- Foreign MNE owner indicated by country code after company name; home-based MNE ownership indicated by not indicating country code after company name; domestic firm indicated by not including company name in second country row.
- Where possible, employment indicated in headcounts (though often unclear in annual reports and press messages).
Source: WIBAR-3 Industrial Relations survey

Transport and telecoms

Table SA5.1 **Total industry employment (employees) and number of persons employed in affiliates of foreign-owned MNEs, Transport and telecoms, 23 EU member states, 2008-2014 (thousands; and in %)**

	Total employment (employees)			Foreign-owned affiliates (persons employed)			*% employed in foreign-owned affiliates*		
Host country	2008	2010	2014	2008	2010	2014	*2008*	*2010*	*2014*
W/N/S									
Austria	223.2	213.4	195.5	16.6	22.3	34.8	*7.4*	*10.4*	*17.8*
Belgium	216.4*)	229.5	218.5	54.5	45.0*)	32.7	*25.2*	*19.6*	*15.0*
Denmark	162.2	160.1	171.9	45.0	54.4	54.9	*27.7*	*34.0*	*31.9*
Finland	140.1	144.2	140.3	21.8	18.3	18.9	*15.6*	*12.7*	*13.5*
France	1,465.1	1,504.5	1,710.4	80.8	77.7	136.7	*5.5*	*5.2*	*8.0*
Germany	1,937.6	1,918.3	2,041.7	151.5	129.6	170.5	*7.8*	*6.8*	*8.3*
Ireland	91.5	82.5	79.3	19.4	18.8	16.0*)	*21.2*	*22.8*	*20.2*
Italy	1,072.9	1,027.4	1,021.5	82.5	77.9	95.1	*7.7*	*7.6*	*9.3*
Netherlands	433.4	409.0	396.7	104.9	102.9	109.6	*24.2*	*25.2*	*27.6*
Portugal	178.2	170.0	158.8	16.1	14.7	20.2	*9.0*	*8.2*	*12.7*
Spain	850.4	791.3	710.8	58.7	62.6	74.9	*6.9*	*7.9*	*10.5*
Sweden	259.6	251.8	250.0	61.2	54.5	57.3	*23.6*	*21.6*	*22.9*
UK	1,442.6	1,378.8	1,347.3	302.1	325.4	349.5	*20.9*	*23.6*	*25.9*
Sub-total	**8,473.2**	**8,280.8**	**8,442.7**	**1,015.1**	**1,003.4**	**1,171.1**	***12.0***	***12.1***	***13.9***
% growth		**-2.3%**	**+2.0%**		**-1.1%**	**+16.7%**			
CEEs									
Bulgaria	169.1	161.6	162.2	22.5	17.6	26.6	*13.3*	*10.9*	*16.4*
Czech Republic	282.2	260.7	238.7	56.0	52.6	44.4	*19.8*	*20.2*	*18.6*
Estonia	40.3	35.8	42.3	6.2	6.3	8.1	*15.3*	*17.6*	*19.1*
Latvia	82.9	71.2	81.6	6.8	8.7	10.4	*8.2*	*12.2*	*12.7*
Lithuania	106.4	94.7	113.1	9.4	8.7	11.3	*8.8*	*9.2*	*10.0*
Hungary	229.7	215.4	228.0	34.0	34.8	46.8	*14.8*	*16.2*	*20.5*
Poland	645.8	631.4	632.8	60.7	87.1	101.4	*9.4*	*13.8*	*16.0*
Romania	392.2	356.9	374.9	54.5	60.7	58.8	*13.9*	*17.0*	*15.7*
Slovakia	107.6	110.2	99.1	20.4	20.2*)	24.0	*19.0*	*18.3*	*24.2*
Slovenia	52.6	49.5	43.2	4.1	4.1	5.3	*7.8*	*8.3*	*12.3*
Sub-total	**2,108.8**	**1,987.4**	**2,015.9**	**274.6**	**300.8**	**337.1**	***13.0***	***15.1***	***16.7***
% growth		**-5.8%**	**+1.5%**		**+9.5%**	**+12.1%**			
All total	**10,582.0**	**10,268.2**	**10,458.6**	**1,289.7**	**1,304.2**	**1,508.2**	***12.1***	***12.7***	***14.4***
% growth		**-3.0%**	**+1.9%**		**+1.1%**	**+15.6%**			

*) authors' estimate, based on AIAS MNE database
Sources: Eurostat, *Annual Enterprise Statistics* [sbs_na_1a_se_r2] and *FATS statistics* [fats_g1a_08]

Table SA5.2 **Employment in Transport and telecoms by sub-sector, 23 EU member states, 2014 (thousands)**

	H49 Land transport	H50 Water transport	H51 Air transport	H52 Warehousing	H53 Post & courier activities	J61 Telecoms	Total
W/N/S							
Austria	114.8	0.4	6.6	34.7	23.9	15.1	**195.5**
Belgium	103.9	1.3	5.4	51.7	31.9	24.3	**218.5**
Denmark	65.8	20.8	9.8	33.7	23.1	18.7	**171.9**
Finland	67.2	9.3**)	4.7	30.4	16.5**)	12.2	**140.3**
France	627.0	13.9*)	66.1*)	584.5	251.6	167.3	**1,710.4**
Germany	734.0	23.9	57.3	611.6	503.3	111.6	**2,041.7**
Ireland*)	29.9	0.5	7.8	14.6	14.4	12.1	**79.3**
Italy	400.4	45.6	21.2	315.2	158.0	81.1	**1,021.5**
Netherlands	171.2	16.2	25.2	83.6	69.3	31.2	**396.7**
Portugal	88.0	1.6	10.9	29.0	14.3	15.0	**158.8**
Spain	337.8	6.5	28.3	203.4	75.1	59.7	**710.8**
Sweden	128.7	11.2	5.3	44.5	35.2	25.1	**250.0**
UK	494.1	12.9**)	70.8**)	334.3	225.4	209.8	**1,347.3**
Sub-total	**3,362.8**	**164.1**	**319.4**	**2,371.2**	**1,442.0**	**783.2**	**8,442.7**
CEEs							
Bulgaria	89.0	1.5	1.9	31.1	18.7	20.0	**162.2**
Czech Republic	149.1	0.5	2.2	35.9	33.7	17.3	**238.7**
Estonia	20.9	0.8	0.3	12.6	3.4	4.3	**42.3**
Latvia	41.9	0.9	1.3	27.2	5.3	5.0	**81.6**
Lithuania	77.3	1.5	0.6	20.1	7.6	6.0	**113.1**
Hungary	120.7	0.7	0.8	52.4	34.5	18.9	**228.0**
Poland	363.0	3.0	4.0	122.2	91.8	48.8	**632.8**
Romania	226.7	2.3	3.6	62.0	36.9	43.4	**374.9**
Slovakia	53.9	0.4	0.4	18.1	15.8	10.5	**99.1**
Slovenia	23.6	0.2**)	0.5**)	7.3	6.6	5.0	**43.2**
Sub-total	**1,166.1**	**11.8**	**15.6**	**388.9**	**254.3**	**179.2**	**2,015.9**
All total	**4,528.9**	**175.9**	**335.0**	**2,760.1**	**1,696.3**	**962.4**	**10,458.6**

*) 2012
**) 2013
Source: Eurostat, *Annual detailed enterprise statistics for services* [sbs_na_1a_se_r2]

Table SA5.3 **Employment in Transport and telecoms by sub-sector, number of employees, 23 EU member states, growth 2008-2014 in %**

	H49 Land transport	H50 Water transport	H51 Air transport	H52 Warehousing	H53 Post & courier activities	J61 Telecoms	Total
W/N/S							
Austria	-0.1	[3.8]	-31.9	-32.1	-18.6	-16.2	-12.0
Belgium	15.7	[36.9]	-12.4	7.3	-17.7	-16.0**)	1.0
Denmark	1.1	51.8	56.1	19.1	-24.8	5.1	6.2
Finland	-4.1	[-3.4**)]	x	12.6	x	-7.8**)	0.5
France	-7.4	-13.4*)	x	132.5a	x	-0.7a	16.7a
Germany	14.1	-34.2	6.4	21.2	18.8	-39.1	5.4
Ireland	-13.3	[-28.6]	-6.8	-13.1	10.8	-21.0	-13.3
Italy	-5.8	67.1	-0.3	-5.9	-4.4	-18.8	-4.8
Netherlands	-12.8	8.6**)	-17.6**)	9.7	-2.6	-22.4	-8.8
Portugal	-14.2	[36.0]	4.0	-10.2	-19.2	12.0	-8.9
Spain	-21.8	-22.7	-25.6	3.3	-22.4	-7.8	-16.9
Sweden	5.3	-19.3	x	-6.5	x	-7.6	-3.6
UK	-10.0	-8.8***)	-23.2***	8.8	-14.6	-1.9	-7.7
Sub-total	**-1.4**	**(-5.0)**	**(-1.6)**	**1.1a**	**(-10.2)**	**--13.5**	**-0.3**
CEEs							
Bulgaria	4.7	[-72.0]	[-29.3]	-10.1	-3.9	-2.4	-4.4
Czech Republic	-16.3	[-18.5]	[-60.8]	-4.0	-9.2	-18.1	-15.6
Estonia	-11.1	[-38.9]	[-24.1]	22.5	x	27.4	5.0
Latvia	-0.6	[63.5]	[-6.3]	4.6	-26.3	-2.8	-0.9
Lithuania	6.9	[--17.8]	[-6.9]	30.7	-21.7	-8.5	6.3
Hungary	5.5	[-23.5]	[-62.1]	-5.8	-11.1	6.8	-0.7
Poland	-11.9	[-5.6***]	-32.0	81.5	x	-17.6	-2.0
Romania	0.1	[-24.5]	[-17.4]	-3.9	-14.4	-14.1	-4.3
Slovakia	7.0	[-38.3]	[-62.0]	-43.4	-5.2	13.5	-6.9
Slovenia	-24.4	[-23.3**]	[-37.8*)]	-7.3	-9.1	-0.2	-17.9
Sub-total	**-4.6**	**(-18.4)**	**(-30.1)**	**7.1**	**(-11.5)**	**1.2**	**-4.1**
All total	**-1.9**	**(-6.9)**	**(-10.2)**	**2.6**	**(-10.4))**	**-10.6**	**-1.1**

*) 2008-2012
**) 2009-2014
***) 2008-2013
x no data provided by Eurostat
a break in time series; total excl. France
[ ] fewer than 5,000 observations in 2014
Source: Eurostat, *Annual detailed enterprise statistics for services* [sbs_na_1a_se_r2]

Table SA5.4 **Percentage of employed in foreign-owned affiliates in Transport and telecoms by sub-sector, 23 EU member states, 2008 and 2014**

	H49 Land transport		H52 Warehousing etc.		H53 Postal & courier activities		J61 Telecoms	
	2008	2014	2008	2014	2008	2014	2008	2014
W/N/S								
Austria	3.8	4.8	19.8	25.6	5.9	5.2	28.2	89.3
Belgium	4.0	5.0*)	19.7	26.0	x	x	14.2	28.6
Denmark	12.4	13.4	34.6	26.3	x	x	90.1	82.0
Finland	5.8	4.3**)	24.4	18.8	x	x	53.3	36.5
France	1.7	2.1	11.2	10.0	x	x	2.6	13.3
Germany	3.2	3.1	14.4	16.1	1.9	2.6	17.3	23.8
Ireland*)	4.1	8.0*)	21.1	27.0*)	x	x	x	x
Italy	2.5	2.3	8.1	8.5	2.6	3.0	28.4	27.0
Netherlands	13.5	14.8	39.2	47.4	7.4	8.1	23.3	43.0
Portugal	7.1	7.5	16.5	30.9	9.0	10.0**)	16.4	15.3
Spain	2.9	5.6	13.1	17.1	3.9	3.6	15.8	24.9
Sweden	15.5	17.7	41.9	42.7	x	x	38.5	29.9
UK	14.0	16.4	34.1	40.7	6.0	14.4	32.2	14.7
Sub-total	**5.8**	**8.1**	**22.9**	**25.9**	**(6.6)**	**(6.7)**	**21.9**	**35.7**
CEEs								
Bulgaria	4.7	11.3	10.1	13.8	3.5	9.6	68.3	43.0
Czech Republic	9.1	11.1	48.4	49.8	11.3	6.8**)	78.2	43.3
Estonia	3.9	4.5	23.5	27.1	x	x	76.5	81.4
Latvia	3.6	5.7	15.1	21.3	2.7	5.5	9.4	21.5
Lithuania	3.5	4.1	15.0	17.6	3.1	3.5	54.6	54.5
Hungary	8.6	10.9	18.5	34.0	1.3	2.5	72.2	72.0
Poland	6.3	9.4	25.6	26.0	x	x	22.0	62.5
Romania	5.4	10.0	12.1	20.4	3.7	9.5	64.0	45.2
Slovakia	11.3	11.1	20.3	45.9	x	x	71.3	80.5
Slovenia	6.1	9.8	13.9	21.7	2.7	3.6	7.6	20.6
Sub-total	**6.5**	**8.8**	**20.2**	**28.0**	**(4.8)**	**(4.5)**	**52.7**	**52.5**
All total	**6.0**	**8.5**	**21.8**	**26.6**	**(6.3)**	**(5.8)**	**27.3**	**43.2**

*) authors' estimate, based on AIAS MNE database
**) 2013
Sources: Eurostat, *Annual detailed enterprise statistics for services* [sbs_na_1a_se_r2] and *FATS statistics* [fats_g1a_08]

Table SA5.5 **Five largest companies in Transport and telecoms in 23 EU member states, 2014, names (in alphabetical order), employment, ownership**

Austria	DHL	LKW Walter	ÖBB	Österreichische Post	Telekom Austria
	Deutsche Post (DE)	LKW Walter	State	State	Telekom Austria
	1,400	1,483	39,481	18,403	8,635
Belgium	Belgacom	Bpost	De Lijn	Infrabel	NMBS-SNCB
	Proximus Groep	State	State	State	State
	14,190	27,480	8,170	12,500	19,000
Bulgaria	Balgarski poshti	BDZ	SOMAT	Stolichen Elektrotr. EAD Sofia	VIVACOM
	State	State	Willi Betz (DE)	E. Ganchev	Kosarev Group (RU)
	11,200	11,800	1,100	2,169	5,905
Czech Rep.	České Dráhy	Česká Pošta	O2 Czech Republic	T-Mobile CZ	Vodafone
	State	State	PPF (NL)	Deutsche Telekom (DE)	Vodafone (UK)
	24,163	32,050	4,352	3,200	1,700
Denmark	DSB	DSV	AP Moller Mærsk	Post Danmark	TeliaSonera
	State	DSV	AP Moller Mærsk	PostNord (SE/DK)	TeliaSonera (SE/FI)
	7,629	21,865	6,100	12,215	6,740
Estonia	Eesti Raudtee	Eesti Telekom	Port of Tallinn	Omniva (Eesti Post)	Tallink Group
	State	TeliaSonera (SE/FI)	State	State	Tallink Group
	830	2,011	265	1,800	6,654
Finland	Elisa	Finnair	Posti Group	TeliaSonera Finland	VR-Ythyma
		Finnair	State	TeliaSonera (SE/FI)	State
	4,138	4,981	16,406	3,262	9,689
France	Air France	Orange	La Poste	SNCF	SFR
	Air France-KLM (FR/NL)	Orange	State	State	Altice
	63,955	99,399	259,899	152,600	9,295
Germany	Deutsche Bahn	Deutsche Post DHL	Deutsche Telekom	Lufthansa	Schenker (R & L)
	State	Deutsche Post	Deutsche Telekom	Lufthansa	Deutsche Bahn (DB)/ State
	53,442	205,731	1,114,749	67,155	94,976
Hungary	Magyar Posta	Magyar Telekom	MAV Magyar Allamvasutak	Telenor Magyarország	Waberer's International
	State	Deutsche Telekom (DE)	State	Telenor (NO)	Waberer's International
	32,910	7,352	16,505	1,065	1,814
Ireland	Air Lingus	An Post	Córas Iompair Éireann (Irish Rail)	Eircom	Ryanair
	International Airlines Group (IAG, UK/ES)	State	State		Ryanair
	3,766	9,237	9,648	3,454	9,500

Italy	Fastweb	Ferrovie dello Stato Italiane SpA (FS)	Gruppo Poste Italiane	Gruppo Telecom Italia (TIM)	Vodafone Italia
	Swisscom (CH)	State	State	TIM	Vodafone (UK)
	3,417	69,115	143,003	66,025	6,884
Latvia	Kreiss Latvia	Lattelecom	Latvijas dzelzceļš (Latvian Railways)	Latvijas Pasts (Latvian Post)	Rīgas satiksme
		State	State	State	State
	2,050	1,310	7,278	4,000	4,300
Lithuania	Girteka Logistics	Lietuvos Geležinkeliai	Lietuvos paštas	TeliaSonera	MG Baltic
		State	State	TeliaSonera (SE/FI)	MG Baltic Group
	7,100	12,728	6,100	4,195	2,631
Netherlands	KLM	KPN	NS (Dutch Railways)	PostNL	Veolia Transdev Nederland
	Air France-KLM (FR/NL)	Foundation Pref. Shares	State	PostNL	Veolia Transdev (FR)
	26,657	26,234	20,200	28,944	4,200
Poland	GK Orange Polska	PKP Cargo	PKP Polskie Linie Kolejowe	Poczta Polska	Przewozy Regionalne
	Orange (FR)	PKP Group	PKP Group	State	State
	18,074	24,690	37,611	79,471	9,470
Portugal	Barraqueiro Transportes	Comboios de Portugal (CP)	CTT Correios	Portugal Telecom	TAP Transportes Aereos Portugueses
	Grupo Barraqueiro	State	State	Altice (FR)	State
	5,350	2,766	11,217	10,883	6,655
Romania	CFR	Orange Romania	Poșta Română	Regia Autonomă de Transport Bucureşti	Telekom Romania
	State	Orange (FR)	State	State	Deutsche Telekom (DE)
	52,500	2,653	27,000	10,850	7,100
Slovakia	Orange Slovensko	Slovak Telekom	Slovenská pošta	ZSSK Cargo	ZSSK
	Orange (FR)	Deutsche Telekom (DE)	State	State	State
	1,148	3,081	14,288	6,103	5,841
Slovenia	Adria Airways	Intereuropa	Pošta Slovenije	Slovenske železnice	Telekom Slovenije
	State	Intereuropa	State	State	State
	370	637	6,025	8,088	2,794
Spain	AENA S.A.	CORREOS, S.A	Iberia	RENFE Operadora	Telefónica España / Movistar
	State	State	International Airlines Group (IAG, UK/ES)	State	Telefónica, S.A
	7,256	51,725	16,233	14,595	35,006

Sweden	Posten AB	SAS	SJ (Swedish Railways)	Stena AB	TeliaSonera
	PostNord (SE/DK)	SAS (SE/DK/NO States)	State	Stena AB	TeliaSonera (SE/FI)
	23,180	3,748	4,953	11,231	24,951
UK	British Airways plc	BT Group plc	DB Schenker Rail (UK) ltd	P&O Ferries	Royal Mail Group Ltd
	International Airlines Group (IAG, UK/ES)	BT Group plc	Deutsche Bahn (DB) (DE)	DP World (UAE)	Royal Mail Group
	35,694	72,700	2,803	3,709	149,172

Notes:
- Foreign MNE owner indicated by country code after company name; home-based MNE ownership indicated by not indicating country code after company name; domestic firm indicated by not including company name in second country row.
-'State' includes regional and local authorities.
- Where possible, employment indicated in headcount (though often unclear in annual reports and press messages).
Source: WIBAR-3 Industrial Relations survey

Five industries

Table SA6.1 **Trade union density, collective bargaining coverage and multi-employer Bargaining in 23 EU member states, five industries, 2013/14**

	Metal and electronics manufacturing			Wholesale			Retail			ICT			Transport & telecoms		
	T	C	M	T	C	M	T	C	M	T	C	M	T	C	M
Austria	41	99	99	9*)	98	99	9*)	99	99	12	85	41	16	86	81
Belgium	72	100	100	25*)	100	98	25*)	100	79	42	58	54	68	100	75
Bulgaria	18	22	8	1*	5	2	1*	9	4		8	4	12	35	3
Czech R.	28	50	5	2*)	41	2	2*)	48	4		11	0	13	49	4
Germany	26	63	51	6	42	34	10	40	37		44	39	53	51	46
Denmark	74	85	55	34	48	40	40	52	12		45	38	55	70	42
Estonia	20	27	8	3*)	28	14	3*)	38	28		6	0	22	60	0
Finland	70	100	100	38*)	68	68	38*)	82	82	53	100	100	60	92	88
France	17	95	95	6*)	90	90	6*)	92	92	4	70	70	10	100	87
Hungary	7	18	3	4*)	6	0	4*)	40	0	4	26	18	22	45	5
Ireland	12	34	0	16*)	22	0	16*	36	0	8	6	0	10	32	0
Italy	34	98	95	25*)	80	80	25*)	86	86	12	82	76	52	90	77
Latvia		30	5	2*)	15	0	2*)	21	0		5	0	4	23	3
Lithuan.	14	15	0	3*)	3	0	3*)	3	0		2	0	3	26	0
Netherl.	24	95	89	11)*	31	29	11*)	95	93	8	21	20	26	76	41
Poland	8	13	0	3	3	0	5	4	0		15	2	18	28	11
Portugal		38	12	2*)	34	6	2*)	62	62		18	0	20	27	17
Romania	38	65	0	1*)	45	0	1*)	55	0		9	0	5	40	0
Slovakia	24	20	15	6*)	38	30	6*)	23	16		11	8	6	35	25
Slovenia	22	100	100	20*)	85	82	20*)	88	88		5	5	14	34	6
Spain	21	100	92	11*)	59	29	11*)	76	66	15	56	50	24	45	16
Sweden	78	100	90	28*)	85	85	28*)	88	80	48	60	52	65	95	93
UK	18	22	0	13*)	14	0	13*)	16	0	11	13	0	38	36	0

Key: T = Trade Union Density; C = Collective Bargaining Coverage; M = share of employees covered by industry agreement (MEB)
* Retail and Wholesale combined
Sources: ICTWSS database 5.1 (Visser 2016a); Eurofound, *Working life country profiles* (2015) and *Representativeness Studies* (2010-2016); national sources (derived from CAWIE-1 and CAWIE-2 research projects); WIBAR-3 Industrial Relations survey; Pignoni 2016

Table SA6.2 **Shares of employment in the five largest companies in total employment by country and industry, 23 EU member states, 2014**

	Metal and electronics manufacturing		Wholesale	Retail		ICT	Transport & telecoms		Total 5 industries (unweighted)
	Total	*Motor vehicles*	Total	Total	*Supermarkets and dept stores*	Total	Total	*Telecoms*	
Austria	16	*56(2)*	2	30	*80(4)*	8	35	*54(2)*	18.2
Belgium	11	*36(4)*	3	26	*69*	20	37	*100(2)*	19.4
Bulgaria	9	*37(2)*	3	11	*29*	17	23	*29(1)*	12.6
Czech Republic	8	*22(2)*	3	25	*52*	15	28	*54(3)*	15.8
Denmark	32	*NR*	21	30	*65(3)*	11	32	*34(1)*	25.2
Estonia	22	*NR*	9	31	*67*	15	30	*80(2)*	19.8
Finland	20	*NR*	42	19	*34*	27	33	*59(2)*	28.2
France	18	*44(2)*	2	29	*70*	14	34	*72(2)*	19.4
Germany	20	*71(4)*	4	26	*73*	10	26	*67(1)*	17.2
Hungary	14	*30(3)*	2	33	*73*	14	27	*39(1)*	17.4
Ireland	43	*NR*	18	24	*53*	15	45	*29(1)*	29.0
Italy	9	*39(1)*	3	17	*43*	5	28	*80(2)*	12.4
Latvia	10	*NR*	10	20	*43*	15	24	*25(1)*	15.8
Lithuania	7	*15(1)*	8	30	*60*	17	29	*100(2)*	18.2
Netherlands	19	*70(2)*	4	25	*49(3)*	11	27	*86(1)*	17.2
Poland	3	*13(4)*	6	16	*31*	17	27	*37(1)*	13.8
Portugal	5	*27(4)*	4	24	*65*	10	23	*77(1)*	13.2
Romania	13	*40*	4	11	*21*	13	27	*22(2)*	13.6
Slovakia	13	*25(3)*	5	19	*35*	49	31	*46(2)*	23.4
Slovenia	15	*17(1)*	8	39	*73*	19	40	*46(1)*	23.2
Spain	8	*25(3)*	3	21	*43*	15	17	*55(1)*	12.8
Sweden	28	*80(3)*	11	16	*30(3)*	14	27	*43(1)*	19.2
UK	9	*7(1)*	4	26	*55*	6	20	*35(1)*	13.0
Total (unweighted)	**15.3**	***36.3*)***	**7.4**	**23.8**	***53.1***	**15.6**	**29.1**	***55.1***	**18.2**
Total (weighted)	**14.6**	***50.1**)***	**4.7**	**23.8**	***52.9***)***	**11.3**	**27.2**	***55.2****)***	**18.0**

NR = not relevant (no motor vehicle manufacturers in top-5)
*) calculated over 18 countries
**) calculated over 47 companies (number of largest companies, when fewer than 5, between () in each cell)
***) calculated over 108 companies (number of largest companies, when fewer than 5, between () in each cell)
****) calculated over 34 companies (number of largest companies, when fewer than 5, between () in each cell)
Sources: Eurostat, *Annual Enterprise Statistics*; AIAS MNE Database; WIBAR-3 Industrial Relations survey

Table SA6.3 **Distribution of employment in the five largest companies by ownership category and by country and industry, 23 EU member states, five industries, 2014**

	Metal and electronics manufacturing				Wholesale				Retail				ICT				Transport & telecoms			
	F	H	S	D	F	H	S	D	F	H	S	D	F	H	S	D	F	H	S	D
AT	40	60	0	0	85	0	0	15	100	0	0	0	96	0	0	4	2	28	58	2
BE	91	9	0	0	75	25	0	0	34	66	0	0	62	21	0	17	0	18	82	0
BG	88	12	0	0	92	0	0	8	88	0	0	12	95	0	0	5	19	6	75	0
CZ	89	11	0	0	68	6	0	26	100	0	0	0	84	8	0	8	15	0	85	0
DE	0	100	0	0	22	78	0	0	0	100	0	0	40	60	0	0	0	90	10	0
DK	13	41	0	46	0	80	0	20	4	21	0	75	54	0	0	46	25	62	13	0
EE	58	42	0	0	64	27	0	9	46	21	0	33	75	17	0	8	27	53	20	0
FI	16	84	0	0	17	33	0	50	16	62	0	22	56	44	0	0	7	14	71	8
FR	13	87	0	0	62	34	0	4	0	100	0	0	32	68	0	0	2	26	72	0
HU	77	23	0	0	96	0	0	4	44	21	0	35	97	3	0	0	15	3	82	0
IE	100	0	0	0	6	0	0	94	51	49	0	0	100	0	0	0	11	26	53	10
IT	3	55	0	42	59	41	0	0	12	26	0	62	76	0	0	24	5	23	72	0
LT	28	0	0	72	4	49	0	47	31	69	0	0	100	0	0	0	16	11	72	1
LV	54	0	0	46	0	0	0	100	79	10	0	11	75	0	0	25	0	0	89	11
NL	31	69	0	0	33	0	0	67	4	78	0	18	100	0	0	0	16	53	31	0
PL	100	0	0	0	28	72	0	0	100	0	0	0	63	37	0	0	11	37	52	0
PT	100	0	0	0	69	31	0	0	21	79	0	0	56	44	0	0	48	14	38	0
RO	100	0	0	0	93	7	0	0	100	0	0	0	100	0	0	0	10	0	90	0
SK	100	0	0	0	97	0	0	3	100	0	0	0	89	11	0	0	12	0	88	0
SI	44	30	0	26	66	18	0	16	86	0	0	14	25	0	32	43	0	5	95	0
ES	86	14	0	0	18	82	0	0	0	100	0	0	40	12	0	48	17	6	77	0
SE	56	44	0	0	0	0	0	100	0	52	0	48	55	45	0	0	20	72	8	0
UK	42	58	0	0	11	38	0	51	21	79	0	0	88	12	0	0	13	87	0	0
Unw Ave.	*58*	*32*	*0*	*10*	*46*	*27*	*0*	**27**	*45*	*41*	*0*	*14*	*71*	*18*	*1*	*10*	*13*	*28*	*58*	*1*

Key: F = Foreign-owned MNE; H = Home-based MNE; S = State-owned firm; D = Domestic firm
Source: WIBAR-3 Industrial Relations survey

Table SA6.4 **Shares of employment in foreign-owned MNE affiliates and in all MNEs, 23 (10) EU member states and five (four) industries, 2014**

	Metal and electronics manufacturing		Wholesale	Retail		ICT		Transport & telecoms	
Host country	*FOA*	MNE	*FOA*	*FOA*	MNE	*FOA*	MNE	*FOA*	MNE
W/N/S									
Austria	*36*		*34*	*37*		*31*		*18*	
Belgium	*44*	53	*18*	*16*	24	*16*	32	*15*	21
Denmark	*31*		*32*	*14*		*32*		*32*	
Finland	*28*	39	*32*	*16*	34	*10*	46	*14*	24
France	*26*		*27*	*13*		*19*		*8*	
Germany	*20*	57	*21*	*8*	36	*18*	38	*8*	28
Ireland	*65*		*29*	*30*		*42*		*20*	
Italy	*16*		*16*	*17*		*18*		*9*	
Netherlands	*31*	45	*31*	*19*	31	*25*	40	*28*	43
Portugal	*31*		*15*	*19*		*23*		*13*	
Spain	*35*	58	*16*	*17*	27	*29*	41	*11*	16
Sweden	*37*	52	*37*	*21*	34	*37*	47	*23*	31
UK	*37*	51	*28*	*21*	41	*32*	47	*26*	43
Sub-total	***25***		***24***	***16***		***25***		*14*	
CEEs	*FOA*	MNE	*FOA*	*FOA*	MNE	*FOA*	MNE	*FOA*	MNE
Bulgaria	*33*		*18*	*12*		*48*		*16*	
Czech Republic	*56*	63	*26*	*49*	53	*46*	51	*19*	28
Estonia	*45*		*15*	*32*		*33*		*19*	
Latvia	*37*		*32*	*28*		*42*		*13*	
Lithuania	*31*		*17*	*23*		*44*		*10*	
Hungary	*66*	69	*28*	*34*	39	*43*	48	*21*	27
Poland	*44*	50	*18*	*29*	35	*33*	45	*16*	18
Romania	*67*		*25*	*23*		*57*		*16*	
Slovakia	*66*		*18*	*30*		*42*		*24*	
Slovenia	*30*		*24*	*50*		*21*		*12*	
Sub-total	***54***		***22***	***29***		***43***		***17***	
All total	***31***		***23***	***18***		***27***		***14***	

Key:
FOA Share employed by foreign-owned MNE affiliates
MNE Share employed by all MNEs, including home-based MNEs
Sources: for FOA and MNE: Eurostat, *Annual Enterprise Statistics* [sbs_na_ind_r2] [sbs_na_dt] [sbs_na_1a_se_r2] and *FATS statistics* [fats_g1a_08]; for MNE additional: WIBAR-3 Industrial Relations survey; AIAS MNE database; *Fortune Global 500; Forbes Global 2000*

Table SA6.5 **Growth in number of employees in five industries (%), 23 EU member states, 2008-2014**

Host country	Metal and electronics manufacturing	Wholesale	Retail	ICT	Transport & telecoms	*Total*
W/N/S						
Austria	-3.1	1.3	5.3	35.8	-12.1	***0.2***
Belgium	-23.7	-0.4	3.7	5.7	1.0	***3.7***
Denmark	-12.3	10.9	-23.3	29.8	6.0	***-3.2***
Finland	-19.4	-7.9	6.4	20.9	0.1	***-5.6***
France	-5.9	16.0	8.3	19.3	16.7	***8.9***
Germany	2.8	30.9	20.0	39.2	5.4	***12.8***
Ireland	-43.6*)	-10.1*)	-9.0*)	16.9	-13.3	***-9.2***
Italy	-16.8	-2.7	2.2	9.2	-4.8	***-5.9***
Netherlands	-5.4	-3.6	2.5	7.7	-8.4	***-2.2***
Portugal	-19.7	-18.9	-8.2	42.1	-10.9	***-8.6***
Spain	-31.6	-16.0	-13.6	2.7	-16.5	***-17.5***
Sweden	-16.9	3.4	6.6	13.0	-3.7	***-2.7***
UK	-10.8	0.1	1.8	23.5	-6.7	***-0.5***
Sub-total	**-8.6**	**4.6**	**4.3**	**22.1**	**-0.4**	***1.0***
CEEs						
Bulgaria	-2.2	-11.0	4.9	77.3	-4.1	***-2.2***
Czech Republic	-10.3	4.8	-9.8	24.8	-15.6	***-6.9***
Estonia	-11.7	-21.4	-8.9	51.5	5.0	***-4.3***
Latvia	-14.0	-23.5	-13.9	110.6	-0.9	***-8.8***
Lithuania	-15.3	-10.2	-11.1	105.3	6.3	***-2.8***
Hungary	-10.9	-10.6	-18.5	37.0	-0.7	***-8.4***
Poland	-3.1	-11.9	-4.3	57.5	-2.0	***-3.4***
Romania	-3.4	-9.0	-15.9	53.9	-4.3	***-7.0***
Slovakia	-5.7	-9.1	24.2	10.9	-7.9	***0.9***
Slovenia	-16.2	-17.0	-2.8	13.2	-17.9	***-13.2***
Sub-total	**-5.4**	**-10.0**	**-7.5**	**50.7**	**-4.4**	***-5.8***
All total	**-7.9**	**1.4**	**2.2**	**24.8**	**-1.2**	***-0.2***

*) 2009-2014
Source: Eurostat, *Annual Enterprise Statistics* [sbs_na_ind_r2] [sbs_na_dt] [sbs_na_1a_se_r2]

Table SA6.6 **Percentage shares of five industries in total employment (and in thousands), 23 EU member states, 2014**

	Metal and electronics manufacturing	Wholesale	Retail	ICT	Transport & telecoms	*Total 5 ind.*	Total empl. (000)
W/N/S							
Austria	7.1	4.6	7.8	1.3	4.9	*25.7*	4,034
Belgium	3.9	4.2	5.4	1.2	4.9	*19.6*	4,497
Denmark	6.1	7.3	6.6	2.4	7.0	*29.4*	2,469
Finland	6.8	3.5	6.5	2.2	5.9	*24.9*	2,386
France	4.6	3.9	6.3	1.5	6.5	*22.8*	26,129
Germany	10.2	4.4	7.9	1.7	5.2	*29.4*	38,908
Ireland	2.3	4.4	9.7	4.1	4.3	*24.8*	1,856
Italy	6.7	3.2	4.6	1.3	4.7	*20.5*	21,810
Netherlands	3.3	5.7	8.8	1.9	5.0	*25.9*	8,029
Portugal	3.5	4.4	7.3	1.1	3.7	*20.0*	4,255
Spain	3.5	5.0	6.4	1.3	4.1	*20.3*	17,211
Sweden	6.7	4.7	5.7	2.3	5.4	*24.8*	4,597
UK	3.5	3.8	10.2	2.3	4.6	*24.4*	29,560
Sub-total *)	**5.9**	**4.2**	**7.3**	**1.7**	**5.1**	***24.2***	**165,741**
CEEs							
Bulgaria	5.0	4.7	7.1	1.4	5.5	*23.7*	2,927
Czech Republic	12.3	4.3	4.6	1.3	4.9	*27.4*	4,884
Estonia	5.4	4.5	7.5	1.7	7.1	*26.2*	600
Latvia	2.8	4.9	10.3	2.0	9.5	*29.5*	859
Lithuania	2.6	5.9	8.5	1.2	8.8	*27.0*	1,288
Hungary	7.7	3.8	5.8	1.4	5.6	*24.3*	4,070
Poland	5.2	3.7	5.5	0.7	4.1	*19.2*	15,591
Romania	5.1	3.7	5.2	0.9	4.5	*19.4*	8,254
Slovakia	9.6	4.1	5.3	1.0	4.2	*24.2*	2,349
Slovenia	9.7	4.0	5.5	1.1	4.8	*25.1*	893
Sub-total *)	**6.5**	**4.0**	**5.7**	**1.1**	**4.8**	***22.1***	**41,715**
All total *)	**6.0**	**4.2**	**7.0**	**1.6**	**5.0**	***23.8***	**207,456**

*) weighted average

Sources: Eurostat, *Annual Enterprise Statistics* [sbs_na_ind_r2] [sbs_na_dt] [sbs_na_1a_se_r2] and *Employment statistics*

List of abbreviations

CBC	collective bargaining coverage
CEE	Central and Eastern Europe
CLA	collective (labour) agreement
DG ECFIN	Directorate General for Economic and Financial Affairs (European Commission)
EC	European Commission
ECB	European Central Bank
EFA	European Framework Agreement
EMU	Economic and Monetary Union
EOD	employers' organisation (density)
ETUC	European Trade Union Confederation
ETUI	European Trade Union Institute
EWC	European Works Council
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
HRM	Human resource management
ICT	Information and communication technology
ILO	International Labour Organization
IMF	International Monetary Fund
IR	industrial relations
MEB	multi-employer bargaining
MNE	multinational enterprise
OECD	Organisation for Economic Co-operation and Development
SEB	single-employer bargaining
SMEs	small and medium-sized enterprises
TCA	Transnational Company Agreement
TUD	trade union (density)
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development

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Appendix

Statistical appendix

List of figures

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