Chapter 2: The evolution of the crisis – developments in wage bargaining systems

On the basis of the main trends identified in chapter 1, this chapter considers the role of collective bargaining in wage-setting, in a context of greater intervention by national governments and an evolving European economic governance regime.

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2.1. Introduction

As a key factor of international competitiveness and internal demand, wages are an important economic variable. The economic crisis has rekindled the debate on the relative merits of different wage-setting mechanisms in promoting external competitiveness. A gradual decoupling of nominal labour costs and productivity in the run-up to the crisis is considered to have contributed to imbalanced growth in certain Member States, eventually feeding into diverging rates of growth and unemployment since the initial shock. Sizeable wage adjustments have been observed in the Member States that were most severely affected. However, the crisis has also drawn renewed attention to the role of wages in sustaining demand, particularly in a context of very low inflation and stagnant growth. Here again, the question of the impact of different wage-setting mechanisms has been raised.

Wages are the compensation employees receive for their work and correspond to the 'price' that employers pay for workers' 'services'. The labour nexus has long been recognised as a very special relationship which requires a specific analytical framework. This is partly because it entails a degree of uncertainty as to the content of the tasks to be performed within a subordination contract and presupposes an active commitment by workers (Simon, 1951; Akerlof, 1982). More broadly, a specific analytical framework is seen as necessary because the labour market is a 'social institution' (Solow, 1990) and labour cannot be considered a 'market good', since it is not possible to separate it from the human beings who deliver it (Polanyi, 1944).

Labour market institutions are typically a complex combination of market mechanisms and regulation by public authorities. They are supplemented and sometimes replaced by terms set as a result of industrial relations processes. The latter have an obvious and inherent collective dimension, since they involve the representation of workers, produce common economic and normative rules and often see the participation of employer associations alongside or in the place of individual employers.

Collective bargaining is a key feature of industrial relations systems, since it represents the fundamental instrument that social partners use to jointly regulate the employment relationship, especially since general and industrial unions became the main actors of workers' representation in the early 1900s. In the 'industrial society' (Crouch, 1999), collective bargaining tends to cover broad groups of workers — often industry-wide — and to protect them by setting comprehensive minimum standards and limiting unilateral managerial prerogatives in determining employees' tasks and work organisation. For individual employers, collective bargaining represents a useful tool for saving transaction costs, reducing industrial conflict and legitimising — even reinforcing — the power of hierarchy, notably in areas where managerial prerogatives remain. Such benefits may be particularly relevant where they employ a relatively homogeneous workforce to perform standard tasks. Multi-employer bargaining can provide further specific advantages, as it enables short- to medium-term predictability of production costs and reduces the scope for competition on labour costs, especially in sectors less exposed to international competition. The latter may be a valuable element where multi-employer bargaining covers all the main domestic competitors in a certain industry (Sisson, 1987; Marginson, 2014). In globalised markets, however, this is less likely to be the case. Despite or possibly because of these growing constraints, there have been attempts especially by trade unions at developing cross-border wage coordination at European level (Box 2.1).

As a collective process that is relevant for individual actors, wage-bargaining can take place at a number of crucial 'junctions' in the employment relationship, with both macro- and micro-economic implications:

- for individual employers, it determines a basic component of production costs;
- among employers (in sheltered or local markets), it can protect firms from competition on labour costs;
- between employees and employers, it represents a primary element in the conflict surrounding the distribution of the added value produced by economic activities;
- for individual employees, it a key factor in the 'protection' industrial relations afford in the face of labour market pressures and fluctuations; and
- among employees, it constitutes a fundamental means of expressing solidarity through comprehensive 'wage floors' applying to different groups of workers (with different productivity levels) at a given bargaining level.

From an economic point of view, wages (along with non-wage labour costs) are essentially the 'price' employers pay for labour. In a static perspective, they have a 'market-clearing' function, so that basic pay 'outside' the market may affect employment levels. Collectively agreed wages are a common floor for individual pay; scope can be (and in practice is) retained for upward flexibility. However, the higher and the more comprehensive common floor, the more significant will be the effect on labour demand and consequent adverse effects on employment levels. In this case, employers may resort to distinct forms of employment to deviate from collectively agreed conditions, which contributes to labour market segmentation.

In a dynamic perspective, wage developments relative to price and productivity trends influence, respectively, employees' purchasing power and firms' capacity to cope with competition. At macro level, they affect aggregate demand from households, and (through unit labour costs) cost-competitiveness. In addition, there is a two-way interaction between nominal wages and price levels. Past inflation influences workers', and their representatives', demands for wage increases in order to preserve purchasing power. At the same time, if firms are able to transfer production costs to consumers, wage hikes can turn into price rises. This two-way interaction can feed into a price-wage spiral and contribute to cost-pushed inflation or even deflationary wage spirals. However, there is an asymmetry in the sense that wages tend to respond more strongly to increases in demand than to decreases.

It is also important to note that wages can have an incentive effect at micro level both for employees and employers. On the one hand, wages above the market-clearing level can support employees' commitment. On the other hand, relatively high wages can push employers to pursue specialisation and competitive strategies in high added-value sectors and to invest in innovation and productivity-enhancing forms of production and organisation, in order to stay in business and generate profits despite relatively higher labour costs. This incentive link makes the connection between wages and competitiveness less clear-cut, especially in a dynamic perspective, since wages above market-clearing levels may promote productivity improvements in the medium-to-long term. This connection was an important element in the Rehn-Meidner model of wage solidarity and growth proposed in Sweden immediately after World War II (Andersen, Dølvik and Ibsen, 2014).

Given these different economic functions of wages, one has to take account, in determining the link between wages, productivity and competitiveness, of the different horizons over which micro- and macroeconomic interactions work out their effects. The main complication is that wages are only one of a set of multiple variables that influence macro-level outcomes.

This chapter first presents wage-setting institutions (section 2.2). It then provides a brief overview of the link between those institutions and economic performance (section 2.3). Section 2.4 examines changes in collective wage-bargaining institutions, and the evolving role of the state. Section 2.5 illustrates some basic empirical elements of recent developments in collective wages and productivity. The final section presents our concluding remarks.

2.2. Wage-setting systems and institutions: collective bargaining between the market and state intervention

Wage-setting institutions in advanced market economies are a combination of various regulatory tools, of which collective bargaining is only one. The main elements of the regulatory mix are market forces, state intervention and collective bargaining. The labour market (although a social institution, see Solow 1990) exerts the primary influence on wages, as shown by the difference between actual and basic wages (whether set by legislation or collective bargaining). Political regulation can be important, especially (for wage levels) in establishing legal minimum wages or (for wage developments) in setting automatic indexation mechanisms. The scope for collective bargaining is delimited and influenced by political regulation and market forces.

As a wage-setting tool, collective bargaining is in principle an alternative to the market, but workers' bargaining power is in practice strictly rooted in labour market conditions. High unemployment and economic downturns tend to depress the bargaining power of trade unions and exert a downward pressure on collective wage rates, but not in all circumstances. 'Downward rigidities' apply in particular to nominal (as opposed to real) wages, to collectively agreed wages and under conditions of low (wage) inflation (European Commission, 2013b; OECD 2014b). Recent developments suggest that adjustments are also subject to a time lag (European Central Bank, 2014).

Political intervention can either constrain or promote collective bargaining. Where public regulation plays a direct and substantial role in setting wages, via legal minimum wages and indexation mechanisms, the scope for wage-bargaining can be significantly reduced, since negotiations can be effective only if they succeed in setting wages above the legal minima and the indexation rates – in other words, the higher the legal minimum wages and the indexation, the narrower the scope for collective bargaining. A similar effect can be produced by rules on ceilings, as in the case of Belgium's 'competitiveness laws', whereby wage developments in the country are benchmarked against those of its main trading partners (NL, DE, FR), or more generally, in the case of income policies, even by rules set under tripartite agreements, such as in Italy in 1993. At the same time, political regulation may act promotionally, by partly insulating wage-bargaining from market pressure (e.g. by establishing mandatory bargaining, obligatory mediation procedures, tripartite negotiations on legal minimum wages) or if it extends the effects of collective agreements beyond the signatories, through rules which make such deals generally binding.

The three types of wage-setting institution (the market, legislation and industrial relations) can be characterised according to their flexibility and internal differentiation. Market forces ensure, in principle, high sensitivity to local circumstances and closely reflect the demand-supply equilibrium and differences in productivity. Legal minimum wages and other legal mechanisms, in contrast, are inflexible and fully binding for the time they are in force (and often indefinitely). Moreover, they are by nature comprehensive and do not take account of local circumstances (although they may reflect special situations, as when different minimum wages are established for certain categories of worker). As regards flexibility and internal differentiation, collective bargaining falls somewhere between market and state intervention, since it can reflect local 'average' conditions to a variable extent, depending on the bargaining level and the degree to which wage rates are linked to job grades and classifications.

Collective wage-bargaining systems can be analysed by reference to different dimensions which can be used to identify their main features and indicate, albeit sometimes in a general way, how they interact with legal and market regulation. To determine the importance of collective bargaining as an independent wage-setting institution, one should assess whether legal regulation reduces the scope for it by intervening in the wage-setting process (e.g. by imposing minimum wages) or by limiting, or even excluding, it (as is often the case in the public administration sector).

In assessing the degree to which collective bargaining operates independently of legislation, the main relevant dimension is (external) autonomy, i.e. independence from legal intervention that restricts or replaces wage negotiations or can shape them. For instance, the law may forbid any contractual wage indexation mechanism or, conversely, introduce legal wage indexation systems; it could introduce 'pay rules' as ceilings (as in the case of the Belgian 'competitiveness law'). Of course, the same principle applies to other matters subject to bargaining, such as working time, or other processes, such as conflict.

As regards the distance between collective bargaining and market mechanisms, the assessment usually centres on analysis of the collective bargaining structure. The two main indicators are centralisation and coordination. Centralisation relates to the relative importance of the various bargaining levels in a given national system, while coordination refers to relationships between bargaining levels (vertical coordination) or across different bargaining units at the same level (horizontal coordination).

A third indicator is the coverage rate, i.e. the proportion of employees whose wages are affected by collective wage rates. (Recent developments in these indicators were analysed in Chapter 1).

To what extent can these indicators gauge the impact of collective bargaining on wages, as compared with that of market mechanisms? Market pressure tends to be more of a factor in collective bargaining at lower levels of centralisation and coordination. Bargaining coverage is a very important element in assessing the capacity of collective bargaining to modify market allocations, since it indicates how inclusive the provisions in collective agreements are and how effectively they replace the market in determining key aspects of the employment relationship, starting with wages. A reduction in the coverage rate has been identified as an indicator of deregulation in the labour market (Traxler, Kittel and Lengauer, 1997), simply because it leaves more space for market forces.

It is important to stress that collective bargaining structure and coverage may also depend on legal rules and state action. For instance, if legislation provides for a certain bargaining level to prevail over another, or to have sole responsibility for certain topics or wage elements, it can promote decentralisation or, conversely, centralisation. Finally, coverage rates may be highly dependent on the introduction of legal extension rules, whereby, if certain criteria are met, collective agreements may be generally binding. For these reasons, policy shifts may be important drivers of change in the collective bargaining system.

Box 2.1. Cross-border coordination of wages

Based on a draft by Lorenzo Bordogna and Roberto Pedersini.

To address downward pressures on wages linked to international competition, trade unions have attempted to coordinate wage policies, at both inter-sectoral and sectoral level, across countries in Europe (Schulten, 1999; Marginson and Sisson, 2006: ch.4; Glassner and Pochet, 2011 for a general review).

The unions have created various cross-border structures and institutions to exchange information on a regular basis, to promote cooperation between unions of different countries and to monitor collective bargaining processes and outcomes. Such initiatives, some of which go back to the 1970s, but many of which accelerated in the run-up to EMU, were developed in contiguous geographical areas with close economic integration and comparable industrial relations systems. The trade union network in the region of North Rhine-Westphalia, Belgium and the Netherlands was particularly active, but similar networks have been set up in central and eastern Europe and in the Nordic countries.

At cross-industry level, the Doorn Initiative of September 1998 was a reaction of Belgian unions to the 1996 law linking wage developments to those in neighbouring countries. The initiative was supported by the trade union confederations of Germany, Luxembourg and the Netherlands (and French unions from the early 2000s on). Meetings between the participating unions were held annually until 2002, were then less frequent for a few years and also occasionally suspended, but resumed on a bi-annual basis after 2006 (Glassner and Pochet, 2011: 13).

In several cases, sectoral coordination has been promoted through a top-down approach by European trade union federations. Following a 'statement of principle on collective bargaining' in 1993, the European Metalworkers' Federation adopted a European Coordination Rule in 1998, setting guidelines and minimum standards for wage negotiations. The rule was based on the principle that annual (nominal) wage increases for workers should compensate for inflation and include 'balanced participation' in productivity gains. Similar guidelines for wage increases were adopted by several other European trade union federations, such as in the textiles, clothing and leather, food, agriculture and tourism, public services, and graphics sectors (Glassner and Pochet, 2011: 15).

More recently, wage-bargaining coordination efforts across EU countries were initially revived by the economic crisis and then became a key element in the response of the European Trade Unions Confederation (ETUC) to the change in policy objectives and the new institutional framework provided by the European Semester. The economic downturn triggered a campaign to combat the downward pressures on wages. This strategy was part of the traditional trade union rejection of concession bargaining as 'natural' in crisis periods. More significantly, it represented a shift from a bottom-up approach, as promoted by sectoral federations or even national unions, to a top-down process managed by ETUC.

ETUC's bargaining coordination strategy covered both the private and the public sectors and focused on the rejection of wage freezes and wage cuts, and opposition to any automatic rule linking productivity developments with wage trends. A fundamental bargaining objective was to ensure that wages grow in both nominal and real terms and that overall wage-cost developments reflect the sum of trend productivity and medium-term inflation. ETUC supported this wage-bargaining policy by strengthening information exchanges and developing a toolkit to coordinate collective bargaining in the context of the European Semester.

The attempts at wage coordination had mixed results. In certain Member States, such as Germany and the Nordic countries, where the economic context was favourable, nationally and transnationally coordinated wage policies brought about a significant convergence in pay rates. Here, 'the coordinating capacities of the national bargaining systems provided the institutional basis for the Europeanisation of wage regulation' (Traxler and Brandl, 2009: 196-97).

In contrast, the European Metalworkers' Federation recognised in 2001 that their European Coordination Rule of 1998 had had only a limited impact on bargaining outcomes. In many countries, these outcomes were often more consistent with the ECB target of non-inflationary wage increases than with the Coordination Rule, and in some cases, including in Germany and Italy, they even had a deflationary impact (EMF, 2001; EIROnline, August 2001; European Industrial Relations Review, August 2001: 18-20). One explanation for this was employers' preference for decentralisation, strengthened by the enlargement of the EU (and later EMU) to countries with a predominantly single-employer bargaining system (Meardi, 2002; Marginson and Traxler, 2005).

The difficulties of organising coordination across distinct pay, collective bargaining and representation systems proved to be significant (Glassner and Pochet, 2011: 19-21; Marginson and Sisson, 2006: 107-108). Workers and unions in low-wage countries may have more of an interest, at least in the short term, in seeking alliances with employers in their own country in order to increase national competitiveness and create additional employment opportunities for their members, than in coordinating their wage policy with unions in high-wage/high-welfare countries (Scharpf, 1996; Streeck 1996: 89-94; Traxler and Brandl, 2009: 182-83). Even greater difficulties may arise from limited interest on the part of employers and national employers' associations in participating in such strategies.

Among the European social partner organisations on the employers' side, there is a broad consensus that wage developments should be closely linked to productivity and economic conditions, including labour productivity, and that wage-bargaining is a national competence. BUSINESSEUROPE has repeatedly called for greater 'wage flexibility' (including wage moderation and the abolition of automatic wage indexation) to foster growth and improve competitiveness, calling on national social partners to support efforts in this respect. The European Centre of Employers and Enterprises providing Public Services (CEEP) expressed concerns about the divergence of wage developments in the eurozone. While stating that the impact of wage developments on domestic demand should be balanced against their role in ensuring competitiveness (2009), CEEP has supported the idea that they should follow productivity (2012). The European Association of Craft, Small and Medium-sized Enterprises (UEAPME) called for an EU-level debate on macroeconomic differences across Member States, including wage-setting and its role in Member States' competitiveness, and referred to a need for further economic policy coordination (Eurofound, 2014).

2.3. Wage-setting systems and economic performance

Much of the debate about collective bargaining, wage-setting and macro-level economic outcomes has been centred on the bargaining structure, following corporatist analyses in the mid-1980s and the debate triggered by an article on *Bargaining Structure, Corporatism and Macroeconomic Performance* by Calmfors and Driffill (1988). In the academic literature, one of the main matters of contention has been whether centralisation (or coordination), as opposed to decentralisation, ensures better economic performance in terms of price stability, employment levels and growth (Visser, 2013).

Market wisdom would support the view that more decentralised collective bargaining performs better, since it gives more weight to local circumstances and increases both adaptability and differentiation. It is argued, therefore, that it leads to outcomes closer to those driven by market forces. However, it has been noted that centralisation and coordination, combined with a responsible attitude on the part of confederal trade unions, allow wage developments to be controlled and possible local tensions on wages to be managed, and provide credible and relevant signals for economic actors, thereby amplifying the incentive potential of collective wages for workers and entrepreneurs. Calmfors' and Driffill's hypothesis is that better macroeconomic performance is linked to either decentralised or centralised collective bargaining structures, while intermediate degrees of centralisation/coordination impair both positive effects.

The main results of the debate that followed Calmfors' and Driffill's conclusions can be summarised in three points. From the analytical point of view, the main variable to depict the collective bargaining structure, has come to be seen as coordination, rather than centralisation. This is mainly because centralisation is merely one possible way to coordinate bargaining in order to take account of the impacts of wage developments on macroeconomic outcomes. The main common observation regarding the effectiveness of centralised bargaining in helping to achieve macroeconomic goals has concerned the ability of peak social partner organisations to internalise possible spillover effects of wage policies and to frame demands according to the general interest, as opposed to particularistic objectives only. In practice, 'a heterogeneous organisation has to concentrate on goals (e.g. economic growth) which meet the interests of as many members as possible. [...] The upshot is that associational structures and goals which increase an organisation's capacity to find internal compromises at the same time strengthen an organisation's capacity to adopt a "responsible" policy line with relation to external groups' (Traxler *et al.*, 1997, p. 791).

From the empirical point of view, part of the literature underlined the capacity of decentralised coordinated bargaining systems ('organised decentralisation') to support good economic performance, at least as well as, and possibly even more effectively than, 'unorganised' decentralisation (see, for instance, Traxler *et al.*, 1997; Traxler and Kittel, 2000; Traxler and Mermet, 2003; Traxler and Brandl, 2010). It was not possible, however, to establish a strong link between particular features of the wage-bargaining system and macroeconomic outcomes, as quite different bargaining structures can be associated with positive or negative economic performance, depending on the period and the groups of countries concerned.

A similar position, which recognises the merits of collective wage-bargaining institutions in achieving macroeconomic goals, has recently been voiced by the OECD:

> *Coordinated or highly centralised wage-bargaining institutions promote low structural unemployment and mitigate the direct impact of shocks on employment. By increasing the responsiveness of real wages and/or working hours to changes in macroeconomic conditions, coordinated bargaining institutions may reduce the need to adjust employment in response to negative output shocks. Moreover, such institutions may also be more likely to take account of any negative employment externalities that may be associated with collective wage-bargaining (OECD, 2014a, p. 26).*

Discussion of the link between wage-setting institutions and economic performance has been revived by analysis of the effects of the recent economic crisis and of the policy responses implemented to foster competitiveness and restore economic growth, especially within the EU. While recognising the complex links between wage-bargaining institutions and wage developments, and the lack of strong evidence in support of a particular wage-setting model, certain elements of the bargaining system have been identified as exerting relevant influence on wage outcomes and their responsiveness to unemployment and terms of trade. Wage setting systems, including automatic indexation clauses and minimum wages, have featured in the country-specific recommendations as part of the European Semester (See Table 2.7).

The Commission has recognised that 'many aspects of wage-bargaining are a matter of practice followed by social partners, rather than law'. Also, because the various elements of the bargaining system are interlinked, the overall impact of individual reforms is uncertain (for instance, a revision of extension mechanisms can have an impact on wage coordination). Finally, the success of reforms also depends on cooperative social dialogue, so 'the promotion of social pacts and tripartite agreements on wages could also be considered' (European Commission, 2011b, pp. 99-100).

During the crisis, wage moderation has been identified as a key factor in promoting competitiveness and addressing external imbalances for countries with large trade deficits. Similarly, legal intervention through minimum wages and indexation mechanisms has been under scrutiny due to a desire to avoid negative impacts on labour demand. These arguments should be balanced against aggregate demand considerations, as wages directly determine workers'/household income. Wage moderation may have a depressing effect on domestic demand if associated with households' lower expectations as regards future labour market prospects. The beneficial effects of wage containment policies depend crucially on the openness of the economy and on developments in foreign demand (European Commission, 2013a). Should the latter remain weak, the benefits of domestic wage restraint may prove negligible.

In addition to wage moderation, collective bargaining decentralisation has been considered important in ensuring that wage dynamics are in line with productivity and that labour is reallocated towards the most dynamic jobs and industries.[1] However, wage differentiation in itself may be insufficient to foster employment in the absence of accompanying policies, especially in the field of education and training (supporting the up-skilling of the unemployed and promoting mobility from low to higher skilled jobs). Moreover, it should be noted that the propensity to consume is higher at the lower end of the income distribution (European Commission, 2014b). This may mean that wage differentiation has implications for internal demand. Against a background of decentralised bargaining and worsening household expectations, a coordinated response (e.g. by means of multi-employer/tripartite agreements) can help to set expectations on a non-deflationary path while allowing for the continuation of the relative wage adjustment needed to support reallocation from declining to expanding sectors.

[1] The European Central Bank *Monthly Bulletin* for October 2014 states that 'further reforms to collective bargaining — which enable firm-level wage agreements to better reflect local labour market conditions and productivity developments, and which allow for greater wage differentiation — would improve signalling mechanisms regarding demand for different types of worker'.

In its 2012 and 2014 economic reviews for Spain, the OECD recommended a system of opt-in (rather than optout) of sectoral collective agreements, to increase the flexibility of wage-bargaining. Such a reform would also amount to a *de facto* decentralisation of wage-bargaining.

2.4. Changes in wage-setting institutions

A basic feature of institutions, almost an inherent and constitutive element, is their stability through time. Institutions represent a framework and a guide for action; one of their main advantages is the capacity to shape expectations regarding the future actions of others. Institutional change usually follows a path-dependent trajectory and transformation takes place incrementally, 'at the margin', as social actors look for improvements in their own pay-offs (North, 1990). It may also take place when new interpretations of existing norms are put forward and social actors exploit the scope for functional 'plasticity' (Baccaro and Howell, 2011), whereby institutions are pushed to achieve results that better reflect the changing actors' interests, even if formally they remain unaltered. Such a path-dependent course of change can be abandoned and 'external shocks' may cause ruptures whereby the relevant actors change suddenly and major discontinuities arise in institutional settings. On occasion, this could also be due to the accumulation of previous incremental changes, which eventually turn into a substantial transformation of the institutional and regulatory arrangements.

These two basic features of institutional settings (stability or 'stickiness') and their transformation (path-dependent with ruptures at exceptional junctures) have important implications for the analysis of wage developments. First, they suggest that short-term wage developments *within countries* tend to be linked to factors other than institutional change, because the latter proceeds slowly and needs time to feed into 'outcomes'. This is especially true when we focus on wage outcomes produced by collective bargaining, which typically relates to periods in the future and therefore manifests its effects with a time lag. As a consequence, different responses to the same external conditions, i.e. the economic and financial crisis of the late 2000s, should be explained by the presence of major variations *between countries*, linked either to distinct institutional settings (or structural factors) or to major differences in the nature, extent and duration of the external shocks. It may therefore be important to ask *which industrial relations institutions* are linked to *what response patterns*, so as to be able to assess their relative performance. This is the sense of analysing the relationship between coordination and macroeconomic performance (see above).

A second key question is whether the present crisis is one of those momentous junctures where institutional ruptures occur, due either to an exceptional external shock or to the accumulation of incremental changes which lead to a 'turning point'. Chapter 1 provided some general indications as to the changes in collective bargaining institutions over the past decade. As assumed by institutional theories, continuity prevails, but there are signs of transformation. In the past decade, a number of long-term trends have continued, with some signs of acceleration. Collective wage-bargaining has continued its shift to more decentralised levels. While in the 10 years to 2010 the prevalent bargaining level in the EU remained the sectoral or industry level, by 2013 the balance had shifted towards company and intermediate bargaining (alternating between sector and company level). However, this acceleration was essentially linked to changes in the prevalent bargaining level in countries most severely hit by the crisis, especially those covered by external support measures both in the eurozone and elsewhere. Between 2007 and 2013, decentralisation in the main bargaining level took place in Greece, Ireland, Portugal, Romania and Slovenia. In the same period, Finland re-centralised collective bargaining, while in all the other Member States the prevalent bargaining level remained unchanged.

There was no similar trend in coordination levels, which remained on average rather stable. In the countries involved in the more marked shift to decentralisation, it is possible to observe diverging trends. In Greece, coordination increased substantially due to state intervention; in Ireland, Romania and Slovenia, decentralisation was coupled with lower coordination; in Portugal, coordination remained stable at a relatively low level. The most prominent result of the crisis was the introduction and reinforcement of opening clauses, which in a sense extends and qualifies the reach of decentralisation trends and points to the acceleration of 'structural' change. The most recent changes, which mainly affected countries receiving financial assistance, may represent further indications of an impending 'turning point' (see Chapter 3), but it seems too early to assess whether these crisis-led developments will be transitory or will lead the countries involved onto another institutional path.

As regards state intervention in wage-setting, there is no overall common trend across Member States. However, since 2008, the direction of individual trajectories has changed somewhat. While before the crisis there were some signs of less state intervention, in recent years governments have become more involved in wage-setting. Again, this is true for Member States receiving external financial support, such as Greece, Portugal and Spain, where stronger government influence has reduced the scope for collective bargaining and favoured decentralised bargaining. In private-sector wage-setting, this entailed the introduction of (additional) requirements for granting the extension of collective agreements, stricter rules on collective agreements continuing to apply after expiry and a change in the status of collective bargaining, with company-level collective agreements prevailing over sectoral collective agreements in some cases (Marginson and Welz, 2014).

Intervention through minimum wages remained relatively stable, with some adjustments to take account of their impact on employment levels, but also with initiatives aimed at preserving the purchasing power of minimum wages. Interestingly, the role of the social partners in determining minimum wages has been reduced in some cases (see below), thereby contributing to the state playing a greater role in wage-setting institutions (Marginson and Welz, 2014).

Box 2.2. Statutory minimum wages

Establishing a statutory minimum wage is one of the main forms of policy intervention in wage-setting processes. It represents a floor for all wages in the economy, although some exceptions or modulations are possible for certain occupations or groups of workers, with which all employers must comply. It is enforced through legislation, but can be determined in various ways, including through consultations with social partners or even tripartite central agreements. In the EU, the majority of Member States have a statutory minimum wage. Germany was the latest to join this group, with the introduction of a statutory minimum wage on 1 January 2015. The countries that do not have a statutory minimum wage are Austria, Denmark, Italy, Cyprus, Finland and Sweden. In most of these countries, the absence of a minimum wage is counterbalanced to some extent by the wide coverage of collective bargaining and high union density (Denmark, Finland and Sweden) and/or institutional mechanisms (mandatory membership of the employers' association in Austria and constitutional rules and jurisprudential practice in Italy).

Minimum wages protect employees at the lower end of the income scale. According to economic analysis, they may have an impact on unemployment (by reducing low productivity workers' chances of finding a job) and on labour costs in general, since they may push the wage scale upward in order to preserve wage ratios between different occupations (i.e. the gap between wage levels in different jobs). It is clear that the level of the minimum wage is crucial for both these potential negative side-effects. One of the main indicators for minimum wages is their level as a proportion of the national average or median wage. In the 2014 European Semester exercise, five Member States (Bulgaria, Germany, Portugal, Romania and Slovenia) received country-specific recommendations (CSRs) on minimum wages.

Table 2.1 shows the wide range of monthly minimum wages across the EU. They are generally below 50% of average monthly earnings and therefore seem to serve as a lower floor for the most disadvantaged groups of workers in the labour market.

Minimum wages cannot be equated to minimum labour costs, on the supply side, or minimum disposable income, on the demand side. The former include payroll taxes and mandatory social contributions payable by employers. The latter should take account of tax credit for low-paid workers, in-work income supplements and other benefits.

Table 2.1. Statutory monthly minimum wages in EUR (second half of 2014) and as a proportion of the mean value of average monthly earnings (2012/3)

Country	Monthly minimum wage (EUR)	% of average monthly earnings
Belgium	1 501.82	46.1
Bulgaria	173.84	38.2 (p)
Czech Republic	309.62	31.7
Estonia	355.00	33.0
Ireland	1 461.85	43.7
Greece	683.76	
Spain	752.85	36.1
France	1 445.38	46.9
Croatia	398.31	37.5
Latvia	320.00	42.0
Lithuania	289.62	48.3
Luxembourg	1 921.03	50.4
Hungary	328.16	43.3
Malta	717.95	48.5
Netherlands	1 495.20	43.3
Poland	404.16	44.8 (p)
Portugal	565.83	42.9
Romania	205.34	36.3
Slovenia	789.15	53.2
Slovakia	352.00	36.0
United Kingdom	1 301.31	40.0

Source: Eurostat.
Note: Proportion of average monthly earnings: 2013 data, except BE, EE, FR, NL (2012) and EL (no data for 2012/13), p = provisional.

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The most significant initiative on minimum wages was taken in Greece in 2012, when the minimum wage was cut by 20% and frozen until 2016. Also, the procedure for setting minimum wages was changed: it is now a prerogative of the government, albeit after consultation with the social partners, while previously they were established by cross-sector national collective agreement. A temporary cut in minimum wages was introduced in Ireland in 2011, in the framework of the Memorandum of Understanding (MoU) covering financial support measures. In addition, minimum wages set in low-pay sectors by joint labour committees must now take competitiveness and labour market indicators into account. The MoUs in Cyprus and Portugal also covered the issue of minimum wages, with a view to keeping increases under control. Government was given a stronger role in setting minimum wages in Hungary, where the social partners now have only a consultative role, and in Poland and Spain, where the governments discontinued the practice of consulting the social partners. In Slovenia, indexation was introduced in 2010 to keep minimum wages in line with the cost of living, while in Slovakia new legislation allowed the government to raise the minimum wage above the prescribed formula. The propensity to adopt statutory minimum wages to protect low-paid workers was confirmed in 2014 by the decision to introduce legal minimum wages in Germany as from January 2015.

Overall, these changes in state intervention contributed to the above-mentioned shifts towards decentralisation and affected coordination levels. While the overall trend may be regarded as a weakening of multi-employer bargaining in Europe (Marginson, 2014), the concentration of changes in the Member States affected by exceptional measures and the prominent role played by governments may leave scope for readjustment by social partners once the measures are lifted.

Wage indexation

In four Member States (Belgium, Cyprus, Luxembourg and Malta), indexation mechanisms automatically link wages to (a metric of) the cost of living. In Spain, the inclusion of pay guidelines and inflation forecasts in cross-sectoral agreements fulfils a similar role, particularly in combination with wage revision clauses (subsequently adjusting wages to observed inflation). In Italy, a 2009 cross-sector agreement introduced a system whereby collective bargaining at sectoral level refers to expected inflation to preserve the purchasing power of wages The agreement includes a wage revision clause similar to the one in place in Spain. In Slovenia, minimum wages (but not those above the minimum) have been linked to the cost of living since 2010.

Technical adaptations to cost-of-living indicators have been made in Belgium (2012, on the government's initiative). In Luxembourg, the government suspended wage indexation from 2012 to 2014. The Belgian government that came into office in October 2014 announced a similar suspension. In Spain, wage guidelines since 2009 have no longer included official inflation forecasts and far fewer agreements include wage revision clauses. There has been no reform of the indexation system in Malta, where both sides of industry support the existing system.

In Cyprus, a tripartite agreement in 2012 maintained indexation but introduced exemptions for companies facing hardship (Marginson and Welz, 2014). The economic adjustment programme for Cyprus states that 'the application of the cost-of-living adjustment (COLA) in the public sector has been suspended for the full programme period (to end 2016). In the meantime, a reform of the COLA will reduce the frequency of adjustment (once instead of twice per year), will introduce a mechanism for automatic suspension during adverse economic conditions and move from full to partial indexation of 50%. A tripartite agreement will be pursued with social partners for the application of the reformed system in the private sector' (European Commission, 2013c).

2.5. Wage developments

This section considers the main developments in collective wages, compensation per employee and productivity before and since the start of the crisis.

Box 2.3. Collectively agreed wages: data

Data on the outcome of collective wage-bargaining are limited. National sources use different methodologies, refer to distinct aggregates and are therefore not directly comparable. In an EU-funded study that focused on the eurozone,[1] the CAWIE Project recently produced an overview of existing data and their quality and comparability (*Collectively agreed wages in Europe: Improving existing data and indicators to support social dialogue and economic governance in the EU*). The quality analysis, which covers indicators available for nine EU Member States (Austria, Belgium, Finland, France, Germany, Italy, the Netherlands, Portugal and Spain) representing 93 % of eurozone GDP, identifies challenges for each indicator and stresses the general issue of harmonisation (Van Gyes, 2012). Major consequences of the heterogeneity of coverage and methodologies of the national indicators relate to the difficulty of aggregating data and comparing across countries. This difficulty is also shown by the lack of EU-wide indicators on wage-bargaining. The ECB provides a quarterly aggregate indicator of developments in 'negotiated wages' in the euro area among its experimental statistics (ECB, 2002, p. 37-38); this is based on 10 countries and uses most of the indicators covered by the CAWIE Project, but as it uses non-harmonised national data and the coverage varies across countries, 'caution should be exercised in drawing conclusions on the development of wage drift in the euro area on the basis of this indicator' (Schubert, 2012).

Despite these general problems as regards the availability and comparability of data, the European Foundation for the Improvement of Living and Working Conditions (Eurofound) has been working on this topic for many years through the European Industrial Relations Observatory (EIRO) and has produced an Annual Update on Pay since the early 2000s. This valuable contribution has recently been complemented by an extensive publication on *Pay in Europe the 21st Century*, which covers collective wage developments and systems and the important issue of minimum wage policies (Eurofound, 2014). Eurofound's work on collective wages is also accessible through a dedicated 'collective wage-bargaining' section on the current EurWORK Observatory. This is currently the most comprehensive and reliable information source and dataset available for analysing collective wage developments in the EU since the turn of the century. Unfortunately, as indicated, data is not strictly comparable across countries and information is not available for all Member States. However, time series on collective wage developments for individual countries are consistent, so trends can be identified over the observation period (the decade between 2002 and 2012).

These data cover 21 Member States and usually include an indicator encompassing the whole economy, whereas in some cases they cover only certain industries. Collective wage developments can be traced in both nominal and real terms. This chapter considers real collective wage increases, thereby discounting inflation.

Taking the 2002-12 period, it is possible to compare the five years before 2007 (the peak growth year before the economic downturn) with the five years after it, which have been characterised in many Member States by economic crisis and low growth at best in some cases combined with fiscal crisis. Data for a number of central and eastern European countries are either not available (Bulgaria, Estonia, Latvia, Lithuania and Poland) or cannot be used because of breaks in the time series (Hungary and Slovenia). In addition, information on collective wage developments for the whole economy is lacking for Cyprus, Denmark and Luxembourg. For the remaining 17 countries, it is possible to compare the two periods or at least to show the wage-bargaining outcome in one of them (Ireland for the first period and Italy for the second).

(1) The project was coordinated by the Research Institute for Work and Society (HIVA-KU Leuven) and the Institute of Economic and Social Research of the Hans-Böckler-Foundation (WSI) and carried out by research bodies belonging to the Trade Union related Research Institutes (TURI) network.

Table 2.2 suggests that the years after 2007 witnessed a reduction in real collective wage outcomes. Exceptions are Austria, Germany, Portugal and Slovakia, which recorded higher real collective wage increases after 2007 than in the period leading up to the crisis, and the Netherlands, which experienced moderate real wage growth of 0.5 % in both periods. In some cases, there is a reversal in the direction of developments, from a rise to a reduction. The most significant reversal took place in the UK, which saw a real increase of 6 % in 2002-07 turn to a slump of 5.9 % in 2007-12. In Malta, real collective wages increased by 6.5 % in 2002-07, but decreased by 0.4 % in 2007-12. In Belgium, a rise of 0.9 % in 2002-07 turned into a decrease of 0.5 % in 2007-12. Finally, in Italy, real wages decreased by 0.2 % after 2007, but no data are available for the previous period. In all the other countries, real wages continued to grow in the second period, but with a slowdown (often quite significant) in growth rates.

Table 2.2. Real collective wage developments (2002-12, % change)

	2007/2002	2012/2007	2012/2002
AT	0.7	1.8	2.6
BE	0.9	-0.5	0.4
CZ	11.1	4.9	16.5
DE	1.0	3.2	4.3
EL	11.6	2.0	13.8
ES	3.2	0.5	3.8
FI	6.6	0.5	7.1
FR	5.7	2.6	8.4
IE	8.5	.	.
IT	.	-0.2	.
MT	6.5	-0.4	6.1
NL	0.5	0.5	1.0
PT	0.7	1.9	2.6
RO	58.3	20.3	90.5
SE	3.6	2.6	6.3
SK	8.8*	9.2	18.8
UK	6.0	-5.9	-0.2

* Percentage change 2007/2003.

Source: Eurofound, Collective wage-bargaining, http://www.eurofound.europa.eu/observatories/eurwork/collective-wage-bargaining/context; author's calculations.

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To gain further insight into real collective wage developments, it is possible to follow actual trends in the decade under review for clusters of countries that share similar conditions in terms of industrial relations institutions and economic systems. In this exercise, a certain degree of simplification is inevitable, but the main objective is to inspect trends in each country and not to establish a 'typology'. It is possible to distinguish between eastern and central European countries (with relatively weak industrial relations systems but faster-growing economies), Nordic countries (with strong industrial relations traditions), continental European countries (with established industrial relations institutions and close economic integration with Germany), programme countries (particularly affected by the consequences of the economic crisis) and the rest, in a residual grouping. Countries in the other standard classifications (liberal economies and Mediterranean countries) have been partly involved in financial support schemes and are therefore covered in the above breakdown.

Wage trends in the three central and eastern European countries for which data are available (the Czech Republic, Romania and Slovakia) indicate that they have been catching up significantly over the past decade, although at different levels and paces, with the economic crisis slowing down this process and levelling out wage increases, since 2009 for Romania and 2010 for the Czech Republic and Slovakia. The latest figures indicate that the 'wage stagnation' phase could soon be over (Chart 2.5).

Continental countries show a period of stability before the crisis, with real wages at most 1 % higher in 2007 than in 2002 (in Germany). With the crisis, a more dynamic phase started, which, after a general upturn in 2009 (basically linked to the fall in inflation that accompanied the crisis), involved a slowdown and a rebound after 2011 in Germany and partly in Austria and (at a very low level) in Belgium, while in the Netherlands the reduction continued (Chart 2.6).

In the Nordic countries, the crisis triggered a break in a previous sequence of wage increases, which resulted in a temporary halt for Sweden and the start of a downturn for Finland (Chart 2.7).

The financial support measures affected the countries concerned in different ways and to various extents, resulting in varying trends. Ireland and Greece both recorded sharp real collective wage increases before the crisis. This trend was halted in Greece after 2009, but no data are available for Ireland after 2008. Portugal and Spain recorded low wage increases until the crisis, followed by a rise in 2009-10 and then a slight downturn (Chart 2.8).

The remaining countries present different patterns — which may be partly explained by the fact that they are a 'residual' grouping. While France and Malta entered a period of stability after 2007 following a phase of more or less steady rises in real collective wages, developments in Italy over the decade were substantially flat, with the gains of 2009 and 2010 immediately eroded in 2011 and 2012. The United Kingdom, on the other hand, registers a steady decrease in real collective wages since 2007-09 and these are now below 2002 levels (Chart 2.9).

Although there are similarities between countries across the various groups, there are also significant differences and it is difficult to identify clear links to the main features of industrial relations systems. For instance, central and eastern European countries share a common pattern in spite of collective bargaining systems with different characteristics. Prior to some recent changes (which could not have had a substantial effect on these data, as they took place at the end of the observation period — see Box 1.2), collective wage-bargaining seems to have played a greater role in Romania than in the Czech Republic, with Slovakia in an intermediate position. For these countries, the real driving factors may be economic and productivity growth, including a process of catching up with 'European wages': in 2002, compensation per employee was around 11 % of the EU-28 average in Romania, 20 % in Slovakia and 30 % in the Czech Republic, while by 2012 this had risen to 20 %, 41 % and 45 % respectively (Table 2.3). In the Nordic countries, the positive performance of Swedish collective wage rates may be linked to the (more positive) economic cycle, and the same may apply to Germany and Austria, for instance. A similar connection with the economic cycle could explain the (more negative) developments in the Netherlands.

Table 2.3. Nominal compensation per employee: total economy (EUR; EU-28=100)

Country	2002	2007	2012	2013
BE	142.52	141.52	147.50	149.12
BG	9.27	11.78	17.27	18.14
CZ	29.86	39.79	44.90	42.24
DK	135.32	141.53	147.79	147.96
DE	114.05	103.95	105.55	106.65
EE	22.52	39.25	41.74	44.42
IE	120.36	138.06	127.73	124.48
GR	71.71	76.87	68.62	63.50
ES	88.65	93.50	97.46	97.22
FR	129.23	131.63	136.00	137.08
HR	40.87	47.69	48.27	48.38
IT	107.25	109.54	111.67	112.23
CY	67.76	70.24	70.87	66.05
LV	15.96	32.50	33.42	34.69
LT	18.33	28.94	32.36	33.60
LU	155.92	159.63	165.28	168.94
HU	31.35	38.59	33.77	34.13
MT	56.14	55.79	58.39	58.22
NL	143.58	147.00	150.05	152.19
AT	139.20	137.31	141.56	143.24
PL	29.21	29.53	32.44	32.93
PT	56.68	58.57	56.60	58.05
RO	11.03	23.36	20.06	21.25
SI	57.45	65.67	68.83	68.25
SK	19.88	33.00	41.04	41.00
FI	115.93	120.20	128.04	129.59
SE	127.06	131.62	142.20	143.47
UK	133.00	134.15	115.65	111.73
Maximum	*155.9*	*159.6*	*165.3*	*168.9*
Minimum	*9.3*	*11.8*	*17.3*	*18.1*
Range	*146.7*	*147.8*	*148.0*	*150.8*

Source: AMECO (HWCDWR), ESA1995[1].

(1) National accounts-based data used in this chapter correspond to the European System of Accounts (ESA) 1995.

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From a rough classification of wage trends before and since the onset of the crisis (2008-10 is not included due to the short-term impact of the economic slowdown and the 'low inflation shock'), no clear patterns can be linked to industrial relations features. The only countries with a positive trend since the start of the crisis are Germany (from -0.4 % to 1.6 %), Sweden (from 1.7 % to 3.2 %) and Belgium (from 0.1 % to 1.1 %). Austria shows moderate stable growth in real collective wages of slightly more than 1 % in both periods. The other countries all record a slowdown in real collective wage increases, with some (the Czech Republic, Greece, Romania and Slovakia) maintaining a positive trend, while others (Spain, Finland, Italy, Netherlands, Portugal and the UK) have seen a downward trend.

Table 2.4. Real collective wage trends going into and coming out of the 2008-10 crisis (% change)

	2007/2005	2013/2011
AT	1.3	1.2
BE	0.1	1.1
CZ	3.0	0.7
DE	-0.4	1.6
ES	1.4	-2.0
EL	5.4	1.1*
FI	0.9	-1.2*
FR	2.8	0.0*
IE	4.4	-
IT	1.0	-1.6
NL	0.9	-2.4
PT	0.1	-0.7
RO	19.2	1.1*
SE	1.7	3.2
SK	6.0	1.8
UK	1.3	-3.3

Source: Eurofound, Collective wage-bargaining, *http://www.eurofound.europa.eu/observatories/eurwork/collective-wage-bargaining/context; author's calculations.*
Note: * 2012/2011.

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Collective wages and labour productivity

This section compares wage developments with trends in labour productivity. It should be noted that a certain degree of correlation between collective wage growth and productivity developments (either over time in a country, or across countries) does not imply a causal link between these variables. Rather, the aim of the section is to provide descriptive evidence on the relative developments of both variables, comparing the period before the crisis with more recent years.

Table 2.5 shows the difference between collective wages and the real productivity index in terms of hours worked (PHW) (2002=100, except for IT, 2006=100, and SK, 2003=100). Before the crisis, collective wage developments were systematically below productivity increases measured in real terms, with Ireland and Romania the only exceptions. The crisis started a clearly new phase, with most countries (RO, EL, MT, FI, CZ, DE, NL,FR, IT, SE, SK and BE) recording higher real collective wage growth than gains in productivity per hour worked; in some (e.g. AT and the UK), the gap between real collective wage growth and productivity narrowed, sometimes to a limited extent (PT). Only Spain shows a different pattern, with the gap between productivity and collective wages widening at a faster rate. Despite these variations, the narrowing of the gap between wages and productivity appears as a fairly general trend, without particular links to industrial relations systems. If we look at the whole decade between 2002 and 2012, real collective wage growth remains below productivity gains except in Greece, France, Malta and Romania.

Table 2.5. Collective wages and productivity (2002-12): difference in percentage change

	2007/2002	2012/2007	2012/2002
AT	-9.7	-1.8	-11.8
BE	-5.5	0.6	-4.9
CZ	-16.9	3.4	-13.3
DE	-7.5	1.9	-5.6
EL	-4.3	8.3	5.2
ES	-0.9	-10.0	-11.2
FI	-8.1	3.5	-4.0
FR	-0.4	1.6	1.3
IE	1.0	:	:
IT	:	1.2	:
MT	-1.4	5.4	4.5
NL	-10.0	1.7	-8.1
PT	-4.9	-3.7	-8.9
RO	19.7	16.9	47.2
SE	-10.3	0.8	-9.7
SK	-11.4	0.7	-11.7
UK	-7.3	-2.3	-9.5

Source: EUROSTAT (Labour productivity — annual data [nama_aux_lp] Real labour productivity per hour worked), ESA1995. Eurofound, Collective wage-bargaining, http://www.eurofound.europa.eu/observatories/eurwork/collective-wage-bargaining/context; author's calculations.

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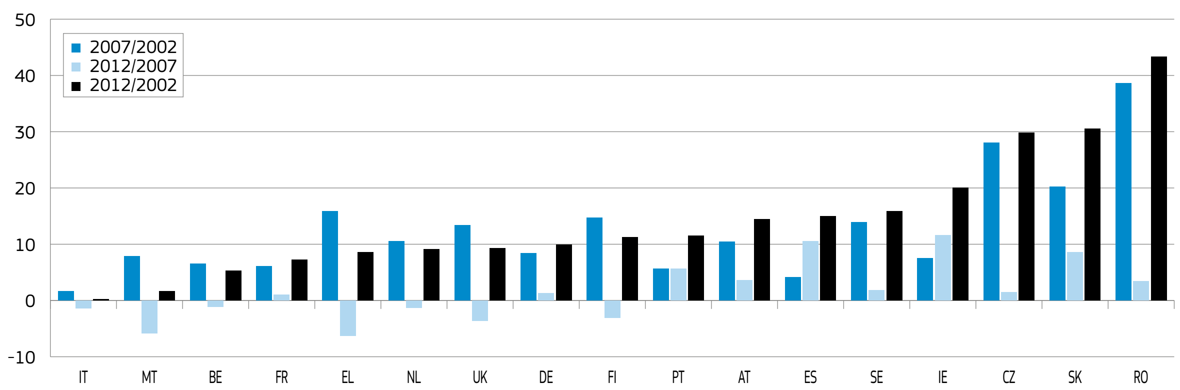
As, with certain limited exceptions (see above), the crisis induced a general slowdown in real wage growth, the gap between wages and productivity since the start of the crisis is mostly linked to a contraction in output. Real productivity per hour worked diminished in a number of countries (BE, EL, FI, IT, LU, MT, NL and the UK) between 2007 and 2012 and increased at a slower pace in almost all the other countries. The only Member States with higher productivity gains after 2007 were Spain and Ireland, with Portugal recording similar growth for both periods (Chart 2.1).

Chart 2.1. Real productivity per hour worked (2002-12, % change)



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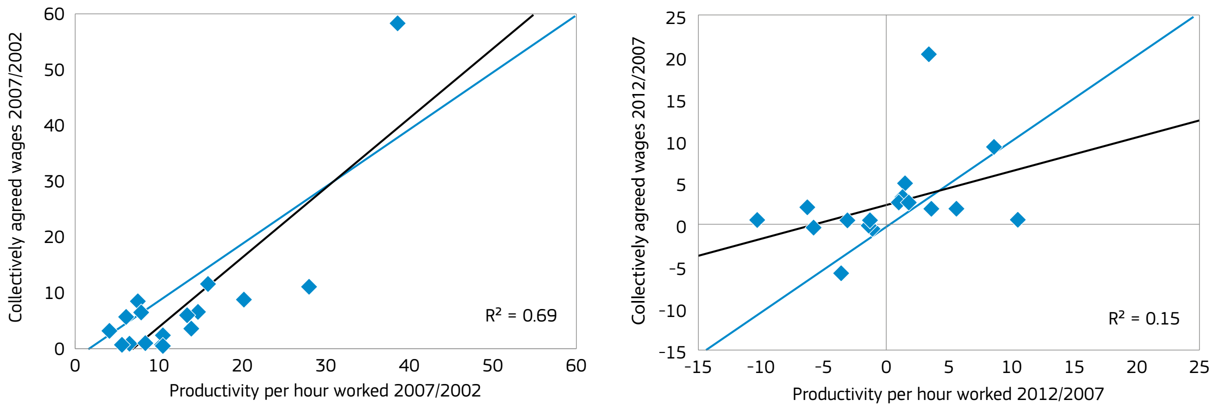
Source: EUROSTAT (Labour productivity - annual data [nama_aux_lp], Real labour productivity per hour worked), ESA1995. Author's calculations.

Chart 2.2 shows the break in the pre-crisis pattern and the shift in many countries from collective real wage developments below productivity in the first period to real wage increases exceeding productivity growth in the second. This change in pattern significantly weakens the correlation between collective wage increases and productivity developments that can be observed before 2007. The high cross-country correlation in the first period is partly driven by the outlying position of Romania, but the clear association between productivity and real wages remains even if Romania is excluded from the analysis, albeit at a lower level (the Pearson correlation coefficient falls from 0.829 to 0.648 at 1 % significance level).

Overall, there is a correlation between real wage growth and productivity developments. Collective wages generally capture a share of productivity gains. In the more recent period, collective wages often outpaced productivity, partly as a result of an unexpectedly low inflation that has not been taken into account in bargaining. This has protected employees' income levels in relative terms.

Chart 2.2. Collective wages and productivity trends (2007/2002 and 2012/2007) (% change)



Source: EUROSTAT (ESA1995), Eurofound (2013). Authors' calculations.

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Nominal and real compensation per employee

Basic wage rates established by collective bargaining do not usually correspond to the compensation actually paid to employees, because the latter includes many elements which may still be determined by collective agreements (such as overtime bonuses), individually agreed by the worker or unilaterally granted by the employer. The difference between collective wage and actual compensation is usually referred to as 'wage drift' (Phelps Brown, 1962). It is possible to analyse developments in nominal and real compensation per employee in order to extend the overview to those Member States for which no data on collective wage developments were available. Such analysis may also yield a sensitivity test for the two main conclusions regarding the impact of the crisis on wage outcomes. These indicators are calculated using aggregate data from national accounts and represent total compensation paid to employees divided by the total number of employees, or full-time equivalents where available. As an economy-wide average measure, it should be handled with great caution, but the following elements can inform the analysis:

- employee compensation is by definition higher than basic collective wage rates, since it includes allowances, overtime, bonuses, performance-related and variable pay, and any other elements added to minimum collectively agreed pay, including individual wage and salary components;

- while both collective wage and employee compensation developments may be influenced by the economic cycle, compensation should be more closely linked to upward and downward swings. Collective bargaining sets wages 'ex ante' for a given period of time, whereas compensation includes a number of extra components (bonuses, performance-related and variable pay) that are inherently more variable over time, determined 'ex post' and often positively correlated with economic trends (or closely linked to market mechanisms in terms of the framework introduced in section 2.2.).

Table 2.6 tracks nominal and real compensation per employee in the periods immediately before and after the onset of the economic crisis, and in 2002-12. As we saw with regard to collective wages, the two sub-periods differed substantially in terms of outcomes. Nominal wage growth slowed down in the second five-year period in as many as 23 Member States. In the euro area, the only exceptions are Belgium and Austria, where it remained at the same levels, and Germany, where it rose by more than 10%, as compared with around 3% in the previous period. The other exceptions are Bulgaria and Poland, where nominal compensation increased. Greece was the only Member State that experienced an actual fall in nominal compensation, by 2.8%.

Between 2002 and 2007, real compensation per employee increased by around two thirds in Latvia and by some 40% in Lithuania and Estonia. Real increases ranging from around 15% to 25% were recorded in the other central and eastern European countries, with the exception of Bulgaria and Poland. Ireland, Finland, the UK and Sweden saw real compensation rises of 10% to 15%. Other countries showed lower increases, ranging from just under 9% in Bulgaria and Croatia to practically stable compensation in Belgium (+0.9%). Negative trends were observed in Luxembourg (-7.1%), Spain (-1.5%), Germany (1.2%), Cyprus (-1.0%) and Poland (0.5%).

The crisis brought about a slowdown in real compensation developments, with a reduction in the pace of growth in 19 Member States in 2007-12 and a negative trend emerging in a number of countries: Greece (10.9%), Romania (-9.5%), Latvia and Hungary (both around -7%) and also the UK, Malta and Croatia. A reduction in real compensation per employee continued in Luxembourg and Cyprus, at lower rates of 3.1% and 0.4% respectively. In only a few Member States did a slowdown or reversal not take place and real growth actually gain momentum: Bulgaria (from 8.5% to 27%), Belgium (from 0.9% to 3.5%), Austria and France (both with small increases of 0.5 pp). In three countries, a negative trend turned positive: Germany (up to 4.5%), Spain (10.7%) and Poland (15.4%).

Given the construction of the indicator, trends in compensation are influenced (negatively) by labour hoarding, (positively) by shedding and by composition effects, so that a large reduction in employment, especially in low skilled and low productivity jobs, may push real compensation up even during an economic downturn. This may have happened in Spain (-14.7% in the number of employees), Portugal (-9.4%) and Bulgaria (-7.3%). In this respect, it is notable that sharp falls in real compensation took place alongside significant drops in the number of employees in Greece (-15.7%), Ireland (-13.7%), Lithuania (-14.6%) and Latvia (-18.00%) (*Source*: AMECO, *Employees, persons: total economy, National accounts NWTN, ESA 1995*).

Table 2.6. Changes in nominal and real compensation per employee 2012-2002 (% change)

	Nominal compensation per employee			Real compensation per employee		
	2007/2002	2012/2007	2012/2002	2007/2002	2012/2007	2012/2002
AT	12.0	12.3	25.8	2.7	3.2	6.0
BE	12.8	13.5	28.0	0.9	3.5	4.5
BG	44.9	59.6	131.3	8.5	27.0	37.8
CY	19.2	10.4	31.6	-1.0	-0.4	-1.4
CZ	36.4	11.3	51.9	25.6	7.8	35.3
DE	3.5	10.6	14.5	-1.2	4.5	3.2
DK	19.1	13.6	35.4	6.6	0.8	7.5
EE	97.9	15.8	129.2	41.4	2.8	45.3
EL	21.7	-2.8	18.4	4.6	-10.9	-6.8
ES	19.8	13.5	36.0	-1.5	10.7	9.0
FI	17.8	16.0	36.6	13.1	4.7	18.4
FR	15.7	12.5	30.2	4.5	5.0	9.6
HR	31.2	13.0	48.3	8.6	-0.5	8.0
HU	44.6	9.7	58.6	16.6	-7.2	8.2
IE	30.3	0.8	31.3	14.0	8.1	23.3
IT	16.0	11.0	28.8	3.6	2.6	6.4
LT	78.9	21.8	118.0	42.6	4.0	48.4
LU	16.3	12.8	31.1	-7.1	-3.1	-10.0
LV	178.7	11.6	210.9	70.0	-7.4	57.4
MT	18.5	14.0	35.1	4.6	-0.7	3.9
NL	16.3	11.2	29.3	6.4	5.3	12.0
PL	12.6	32.4	49.0	-0.5	15.4	14.9
PT	17.4	5.3	23.5	2.6	2.1	4.8
RO	156.6	25.1	221.0	27.9	-9.5	15.7
SE	18.8	10.7	31.6	10.1	1.9	12.2
SI	37.7	14.2	57.2	16.8	5.8	23.5
SK	49.2	20.8	80.2	25.6	14.9	44.3
UK	24.7	11.3	38.7	11.1	-1.1	9.9
EU-28	13.6	8.9	23.7	3.3	3.9	7.3
EA-18	13.5	8.9	23.7	1.8	5.3	7.2

Source: AMECO, Nominal compensation per employee: total economy (HWCDW, national currency), Real compensation per employee, deflator GDP: total economy (RWCDV, national currency 2005=100,) ESA 1995.

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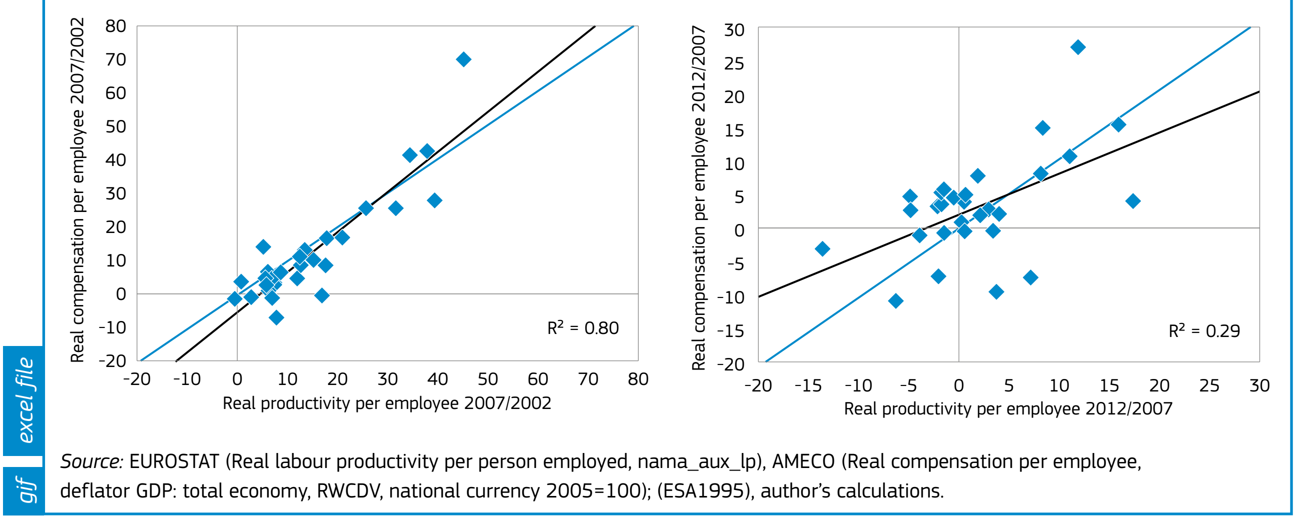
These trends in compensation, especially if seen in connection with developments in employment, indicate the severe impact of the crisis on wages. Other studies (European Commission, 2012a, 2013b) confirm wage moderation following the crisis and a recent OECD analysis pointed out that large adjustments have already taken place in terms of wage moderation, with significant effects on unit labour costs and external competitiveness (OECD, 2014b). According to the OECD findings, based on micro-data from 2010 for 19 OECD countries, 'one in two workers experienced a real cut in wage compensation', 'over half of those who experienced such cuts saw their nominal wage compensation fall' and 'much of the fall was almost certainly due to reduced hours of overtime and lower bonuses' (OECD, 2014b: p. 44). Cuts in earnings significantly helped to redress macroeconomic imbalances, but they also 'contributed to hardship and social distress in a number of countries' (OECD, 2014b: p. 45). Also, since 'further adjustments based on wage cuts may be difficult to achieve' due to nominal downward wage rigidities, macroeconomic policies could effectively focus on other objectives, such as increasing product market competition and promoting labour market programmes that facilitate transitions between sectors, e.g. through training and support for work experience. In addition, other important forms of intervention may address the distribution of wage adjustments and support the income of low-paid workers, for whom wage cuts have been particularly significant, possibly leading to severe hardship. This objective may be pursued through well-designed minimum wage schemes and the calibration of in-work benefits for the low-paid in low-income households (OECD, 2014b: pp. 44-45).

Chart 2.3 illustrates that real compensation shows the same general association with productivity trends in the two sub-periods as observed in the case of collective real wages. In 2002-07, there is a strong correlation between growth in real compensation per employee and gains in real labour productivity per person employed; furthermore, in most of the countries (22 out of 28), real compensation grows less than labour productivity (dots below the red line). In the second period, the correlation between increases in real compensation and productivity is substantially reduced and in the majority of cases (15 out of 28) real compensation grows more than labour productivity.

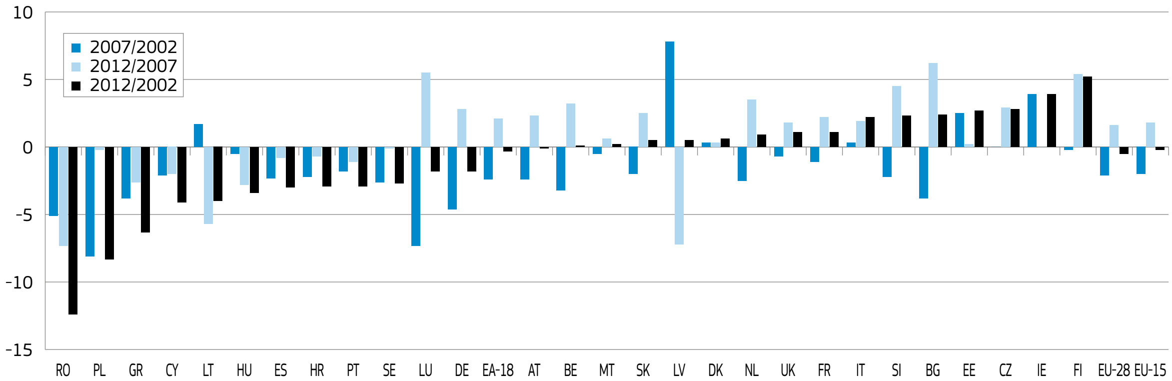
Developments in real compensation relative to productivity provide an indication of changes in real unit labour cost (RULC) on the supply side and labour income share (or wage share) on the demand side. The analysis shows that RULC and wage share tended to decrease before the crisis in most Member States (Chart 2.4). The general trend was reversed after 2007, indicating a recovery in wage share linked to a disproportionately small reduction in compensation, as compared with the fall in output (European Commission, 2012a: pp. 309-310).

Chart 2.3. Real compensation and productivity trends (2007/2002 and 2012/2007) (% change)



Source: EUROSTAT (Real labour productivity per person employed, nama_aux_lp), AMECO (Real compensation per employee, deflator GDP: total economy, RWCDV, national currency 2005=100); (ESA1995), author's calculations.

Chart 2.4. Adjusted wage share: total economy: as percentage of GDP at current market prices (2002-10, percentage points change)



Source: AMECO (Adjusted wage share: total economy: as percentage of GDP at current market prices (Compensation per employee as percentage of GDP at market prices per person employed - ALCD0), ESA1995. Author's calculations.

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Box 2.4. What role do wage-bargaining arrangements play in different pay outcomes?

The link between the features of wage-bargaining arrangements and pay outcomes has been debated intensively for several decades. In a seminal paper in the late 1980s, the Swedish economist Lars Calmfors and his British colleague John Driffill formulated the hypothesis that highly decentralised and highly centralised bargaining systems both yield a better alignment between wages and productivity and lower unemployment rates than systems with purely sector-level bargaining. However, the empirical validity of this hypothesis has been questioned from the outset and alternative hypotheses have been formulated that see the level of 'coordination' as the crucial factor in achieving suitable pay outcomes.

Examining pay outcomes under different bargaining regimes between 1999 and 2012, Eurofound[1] reports that more coordinated bargaining regimes (predominantly through sector-level bargaining) seem to have resulted in the closest link between pay and productivity and hence the smallest loss of wage-related competitiveness. However, this finding is based on a descriptive analysis only and requires further validation.

Eurofound's follow-up project[2] will strengthen the methodology and use a larger panel dataset (i.e. a combined country cross-section time-series approach). This will make it possible not only to examine more features of the wage-bargaining arrangements (such as extension mechanisms, opening clauses, wage pacts and tripartite councils) and control for contextual factors (such as institutional characteristics of the labour market or the business cycle), but also to take into account different trends across Member States.

The preliminary results of this project suggest that the type of coordination mechanism is key for pay outcomes generated by wage-bargaining systems. All types of coordination (pattern bargaining, intra- or inter-associational coordination, state-sponsored or state-imposed) seem to result in more moderate pay outcomes as compared with uncoordinated bargaining. First findings as regards predominant bargaining level, on the other hand, are less clear and mixed in relation to the outcome variables: similar pay outcomes can be observed in countries with different predominant bargaining levels, and *vice versa*. None of the initial findings indicate that local/company bargaining is more effective in keeping labour-cost growth in line with productivity. Countries with predominantly sectoral/industry-level bargaining seem over time to have had more moderate pay developments (as compared with productivity developments) than others. The final results of the project will be published in mid-2015.

(1) For more detail, see *Pay in Europe in the 21st century* (2014): http://www.eurofound.europa.eu/publications/htmlfiles/ef1388.htm.

(2) Eurofound 2015, forthcoming — carried out by the Institute for Employment Studies.

2.6. Conclusion

This chapter, together with the analysis in chapter 1 on recent developments in collective bargaining institutions, provides some insight into the direction and main drivers of change, with particular attention to the impact of the economic and sovereign debt crisis and of the policy responses geared to restoring competitiveness and boost economic growth.

The economic crisis accelerated a long-term underlying trend towards a decentralisation of wage-bargaining institutions, which was in this phase supported by national and EU-level policy initiatives, especially through broader scope for lower-level agreements derogating from sectoral standards. Although national patterns vary, decentralisation is prevalently still framed in coordinated collective bargaining systems; this should make it easier to internalise macroeconomic objectives and reduce the possible spillover effects of wage developments.

Government interventionism in wage-bargaining institutions has increased in recent years, which is a further indication of the growing importance of adjustments in the labour market and in wage patterns in the context of an internationalised economy and especially of EMU. Initiatives have focused mainly on bargaining structure and coverage, by favouring decentralised bargaining over sectoral bargaining and restricting the possibility of making multi-employer agreements generally binding through extension mechanisms. Existing indexation mechanisms remained largely in place, with some temporary or limited adjustments. Similarly, legal minimum wages were partly reconsidered to take into consideration the impact on employment, but their role in terms of in-work income protection was confirmed and in some instances extended. Recent research shows that government intervention has been the main force shaping change in wage-setting mechanisms in the past few years, whereas the autonomous role of social partners has been somehow reduced (Marginson and Welz, 2014, p. 27).

Besides national governments, EU institutions have focused on collective wage-setting institutions and supported reform, especially in the context of the European Semester in which the CSRs are central. However, national governments seem to play the key role in driving the transformation of wage-bargaining institutions.

As regards wage outcomes, it is possible (despite limited available data) to identify a clear impact of the economic crisis on collective real wages. In most cases, real wage trends slowed down significantly and sometimes turned negative. In only a few cases did wage growth accelerate or maintain a significant rate of growth. The strongest collective wage increases were seen in eastern and central European countries, possibly due to a process of catching up with 'European wages'. Although the floor is rising, however, the gaps between Member States remain constant.

Other findings show the close correlation between collective wage growth and productivity trends in the pre-crisis period (although wage increases often did not fully reflect productivity gains). The link was not so strong during the crisis, when real collective wage growth exceeded productivity increases more often, including due to the combined effect of inflation and output shocks. This pattern may show that collective bargaining protects employees' incomes by containing to some extent the impact of the crisis on wage levels. Significantly, the same results were obtained for all Member States in terms of nominal and real compensation. Research results have now shown that the crisis put significant pressure on wages, with wage restraint making an important contribution to redressing macroeconomic imbalances and restoring competitiveness, but further adjustments in this direction may be more difficult to achieve. Given the current fragile economic growth prospects, low inflation and weak domestic demand, policymakers may prioritise support for wages and incomes as a key component of domestic demand and a driver of economic growth (European Commission, 2014b).

Table 2.7. Country-specific recommendations on wage setting (2011-14)

	2011	2012	2013	2014
AT	–	–	–	–
BE	Reform wage-bargaining and wage indexation	Reform wage-setting system including indexation	Reform wage-setting system including indexation	Reform wage-setting system including indexation
BG	Link wage growth to productivity	–	–	Adjust statutory minimum wages taking into account the impact on employment and competitiveness
CY	Reform wage-setting and wage indexation	Reform wage indexation system	Implement commitments under financial assistance programmes	–
CZ	–	–	–	–
DE	–	Wages in line with productivity	Wage growth to support domestic demand	Improve conditions that further support domestic demand, *inter alia* by reducing high taxes and social security contributions, especially for low-wage earners. Monitor the effect of minimum wages on employment
DK	–	–	–	–
EE	–	–	–	–
EL	Implement commitments under financial assistance programmes	Implement commitments under financial assistance programmes	Implement commitments under financial assistance programmes	–
ES	Comprehensive reform of collective bargaining process and wage indexation system	–	–	Reduce labour market segmentation. Continue regular monitoring of the labour market reforms. Promote real wage developments consistent with the objective of creating jobs
FI	–	Continue to align wage and productivity developments	Support alignment of real wages and productivity	–
FR	Ensure minimum wage developments support job creation	Minimum wage should support job creation and competitiveness	Lower cost of labour; ensure minimum wage supports job creation and competitiveness	–
HR	n.a.	n.a.	n.a.	Review wage-setting system to better align productivity developments and wage conditions
HU	–	–	–	–
IE	Implement commitments under financial assistance programmes	Implement commitments under financial assistance programmes	Implement commitments under financial assistance programmes	–

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	2011	2012	2013	2014
IT	Ensure wage growth better reflects productivity developments	Monitor and if necessary improve implementation of the new wage-setting framework	Ensure effective implementation of wage-setting reforms	Evaluate impact of labour market and wage-setting reforms and assess need for additional action. Review social protection for the unemployed, while limiting the use of wagesupplementing schemes to facilitate labour re-allocation
LT	–	–	–	–
LU	Reform wage-setting and wage indexation	Reform wage-bargaining and wage indexation	Reform wage-setting and wage indexation	Reform the wage indexation system so as to improve the responsiveness of wages to productivity developments. Pursue the diversification of the structure of the economy, including by fostering private investment in research
LV	Implement commitments under MoU of 20 January 2009	–	–	–
MT	Reform wage-setting and wage indexation	Reform wage-bargaining and wage indexation	Monitor wage indexation mechanism and stand ready to reform (in background considerations)	–
NL	–	–	–	Allow for more differentiated wage increases by making full use of the existing institutional framework
PL	–	–	–	
PT	Implement commitments under MoU of 17 May 2011	Implement commitments under MoU of 17 May 2011	Implement commitments under MoU of 17 May 2011	Maintain minimum wage developments consistent with the objectives of promoting employment and competitiveness. Ensure a wage-setting system that promotes the alignment of wages and productivity. Explore the possibility of firm-level temporary opt-out arrangements from sectoral contracts agreed between employers and workers' representatives. Review the survival of collective agreements

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	2011	**2012**	**2013**	**2014**
RO	Implement commitments under MoUs (June 2009 and June 2011)	Implement commitments under MoUs (June 2009 and June 2011)	Complete the EU/IMF financial assistance programme	Establish clear guidelines for transparent minimum wage-setting, taking into account economic and labour market conditions
SE	–	–	–	–
SI	–	Ensure wage growth supports competitiveness and job creation	Ensure wage growth supports competitiveness and job creation	Develop a comprehensive Social Agreement by the end of 2014 ensuring that wage developments, including the minimum wage, support competitiveness, domestic demand and job creation. Redefine the composition of the minimum wage and review its indexation system
SK	–	–	–	–
UK	–	–	–	–

Source: Marginson and Welz 2014 and European Commission (2014a).

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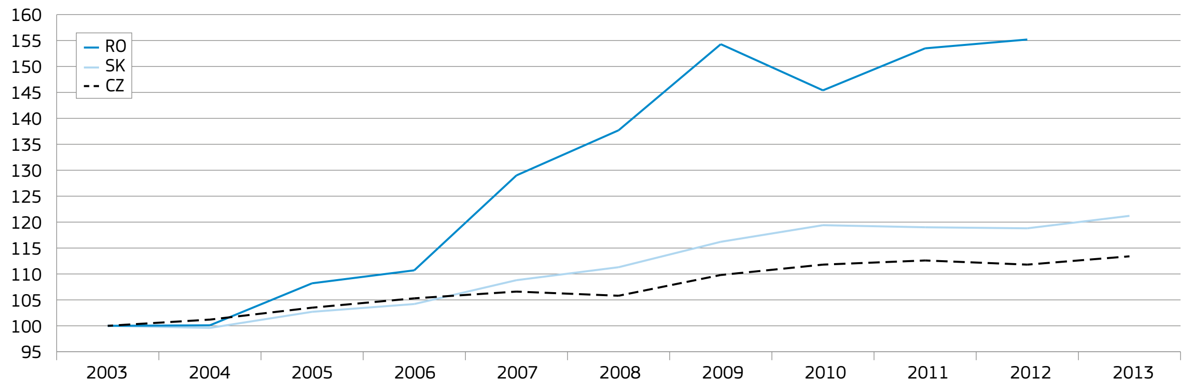
Chart 2.5. Real collective wage developments in the Czech Republic, Romania and Slovakia (2003-13)



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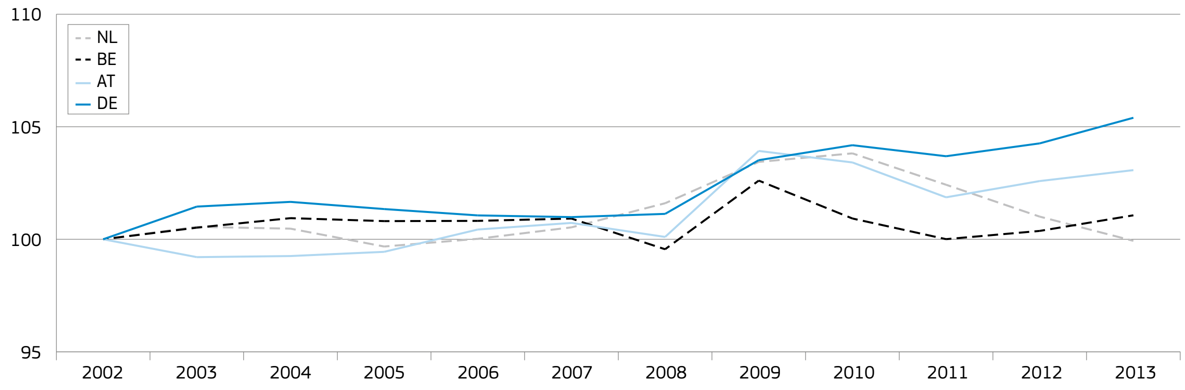
Source: Eurofound, Collective wage bargaining, http://www.eurofound.europa.eu/observatories/eurwork/collective-wage-bargaining/context

Chart 2.6. Real collective wage developments in Austria, Belgium, Germany and the Netherlands (2002-13)



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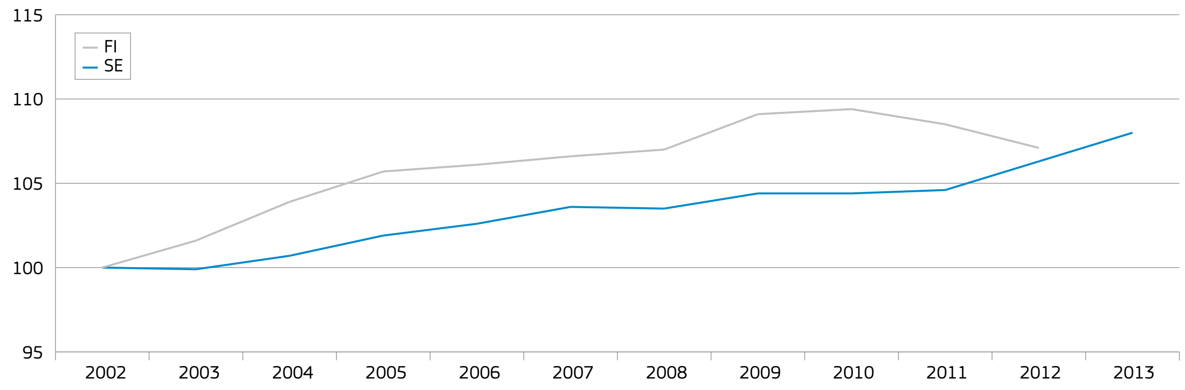
Source: Eurofound, Collective wage bargaining, http://www.eurofound.europa.eu/observatories/eurwork/collective-wage-bargaining/context

Chart 2.7. Real collective wage developments in Finland and Sweden (2002-13)



Source: Eurofound, Collective wage bargaining, http://www.eurofound.europa.eu/observatories/eurwork/collective-wage-bargaining/context

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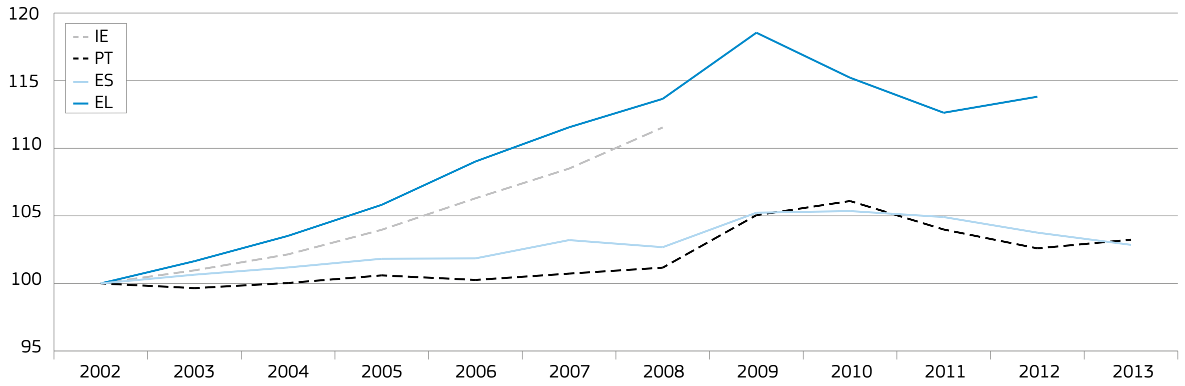
Chart 2.8. Real collective wage developments in Ireland, Greece, Portugal and Spain (2002-13)



Source: Eurofound, Collective wage bargaining, http://www.eurofound.europa.eu/observatories/eurwork/collective-wage-bargaining/context

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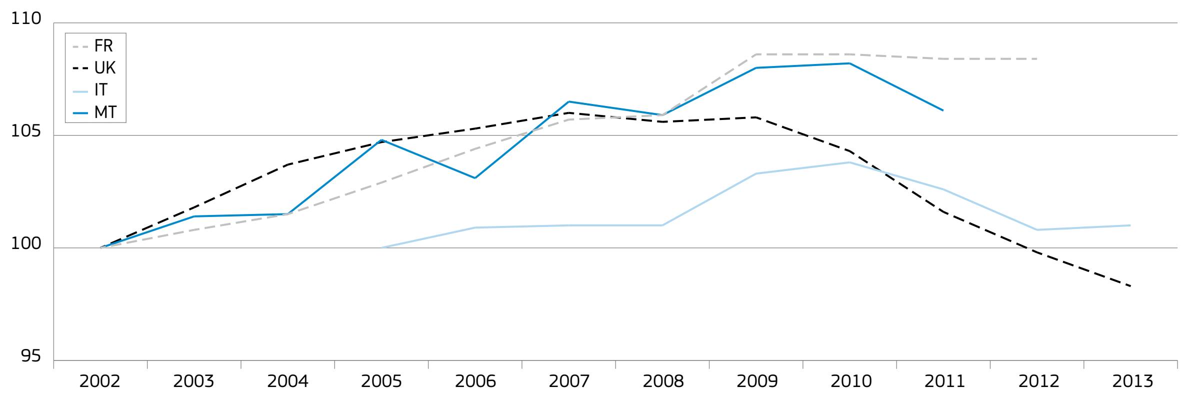
Chart 2.9. Real collective wage developments in France, Italy, Malta and UK (2002-13)



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Source: Eurofound, Collective wage bargaining, http://www.eurofound.europa.eu/observatories/eurwork/collective-wage-bargaining/context

Table 2.8. National wage guidelines or recommendations in the run-up to EMU

Country	Agreement	Wage guidelines or recommendations
BE	Cross-sectoral bipartite agreements (1998 and 2001, linked to the Law on national competitiveness)	Set maximum wage increase corresponding to average wage increases in France, Germany and the Netherlands
DK	National tripartite declaration (1987)	Increases in Danish labour costs should not exceed those in competing countries
FI	Agreement of the national tripartite incomes policy commission (1995)	Pay rises should be in line with the total sum of the Bank of Finland's (and subsequently the ECB's) inflation target and national productivity growth
DE	Statement of the national tripartite 'Alliance for jobs, vocational training and competitiveness' (Joint declaration, December 1998; 2000; difficult renewal 2002-03)	Results of collective bargaining should be based on productivity growth and primarily used for job creation measures
EL	National tripartite 'Confidence Pact' agreement (1997)	Wages should rise in line with inflation and reflect part of national productivity growth
IE	National tripartite agreements (1987, 1990, 1994, 1997, 2000)	Maximum pay increases are set in line with the European Stability Pact
IT	National tripartite agreements (1993 and 1998)	Nationally agreed wage increases should reflect national and average European inflation; additional wage agreements at company level should reflect productivity
PT	National tripartite agreement 'Employment Pact' (1996)	Pay rises should reflect inflation and productivity growth
NL	National bipartite agreements within the Labour Foundation (1982, 1993, 1999)	Recommendation of moderate wage increases in order to improve overall competitiveness
ES	Bipartite national pay moderation accord (2001). Pay negotiation in 2002 concluded within framework agreement	Wages should reflect forecast inflation and productivity growth
SE	Bipartite agreement for the industry (1997)	Recommendation for a 'European norm' according to which Swedish wages should not rise faster than the EU average

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Source: Adaptation from Schulten and Bispinck 2001, p. 24, integrated with Marginson and Sisson 2004, Table 5.1.

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