Pay equity effects of minimum wages in different national industrial relations models

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Introduction

The over-riding objective of a minimum wage is to redistribute earnings to the lower paid (Brosnan 2001, Freeman 1996). Unions, employers and governments in different countries at different points of time may emphasise other related goals – such as increased labour market participation (by providing better incentives), controlled wage growth, improved social dialogue, reduced informal employment, higher income tax revenues and lower welfare and in-work tax benefits (Kohl and Platzer 2007, Recio 2006, Saget 2008) – but it is the social goal of improving the position of low-wage workers that underpins policy design.

The economic logic of this policy position remains controversial. The notion that a labour market intervention can have long-term distributive consequences is contested by those who point to potential disemployment effects that reduce the share of earnings to the low paid; in other words, insiders benefit from greater pay equity but this is offset by a growing share of outsiders. However, as is now well known, investigation of the impact of minimum wage rises finds broadly neutral employment effects. Studies that utilise a monopsony-type labour market model find evidence of small positive employment effects – including the detailed empirical studies of US data (Card and Krueger 1995) and UK data (Manning 2003). Also, a recent assessment of the first decade of a statutory national minimum in the UK reports no overall significant effect on employment and in fact a positive effect on employment growth in local labour markets with a high share of minimum wage workers (Dolton et al. 2010).

Reflecting this recent shift in conceptual and empirical research on the topic, various studies have sought to clarify the pay equity effects of minimum wage systems, generally

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through cross-national comparative investigation (eg. EC 2008, Lucifora et al. 2005, Pontusson et al. 2002, Salverda and Mayhew 2009). This paper contributes to this strand of research. Its starting point is the argument that the minimum wage, as one component of a country’s system of wage-setting institutions, has a long-term, determining effect on the wage structure. The pay equity effects are especially pronounced for jobs found among the bottom end of the labour market – sometimes referred to as minimum wage contour jobs (Rodgers et al. 2004), following Dunlop’s (1957) notion of wage contour, since the statutory minimum wage is a key external wage that influences wage changes. The paper argues that while a country’s system of wage-setting institutions provides the enabling conditions for pay equity outcomes (especially its strength of collective bargaining coverage and value of the minimum wage), there is insufficient attention in the literature to the specific strategies and responses of governments and trade unions in shaping pay equity. An empirical focus on the interaction between collective wage agreements in key sectors of employment and minimum wage policy developments sheds new light on the types of pay bargaining strategies that can promote pay equity in a context of a rising minimum wage.

Our initial analysis of country patterns of pay equity effects (Section 1) shows that high value minimum wages do tend to be associated with stronger pay equity. However, as we elaborate in Section 2, there is an important interaction with strength of collective bargaining. The specificity of certain country patterns calls for further interrogation of the industrial relations context. As such, the bulk of the paper (Section 3) investigates the interaction of collective wage bargaining and minimum wage policy developments in selected European countries. We draw on the results of a comparative research project that analysed the actions and strategies of government and social partners. The project involved the collection of original interview data and collective agreements in key sectors of employment that are significantly influenced by, or contribute to, developments in minimum wage policy. The analysis of data is structured around four identified pay bargaining strategies, observed at sector and/or company levels, which contribute in different ways to the pay equity effects of minimum wage policy.

1. Does a higher minimum wage improve pay equity?
Investigation of the redistributive effects of a minimum wage focuses on its relationship with measures of wage equality. The level and degree of enforcement of a minimum wage
are often cited as the key policy variables that directly impact upon pay equity. Data on employer compliance with minimum wage legislation is not widely available and therefore investigations focus on the consequences of varying levels of minimum wages. The standard measure used is the Kaitz index (Kaitz 1970), which expresses the value of the minimum wage as a percentage of median earnings. Three measures of pay equity are most often investigated in studies to date - wage inequality in the bottom half of the wage distribution, the incidence of low pay and particular measures of gender pay equity. Gender equity is a key focus since women are more likely than men to benefit from the protection afforded by a minimum wage because they are over-represented in low wage employment. Better protection for female low wage workers can potentially improve women’s total average earnings and therefore contribute to a narrowing of the gender pay gap (Rubery et al. 2005, Rubery and Grimshaw 2011).

A review of recent international studies that test the impact of minimum wages on pay equity suggests that the empirical evidence is in fact mixed. For example, in their test of the consequences for low pay in ten OECD countries, Salverda and Mayhew (2009: 147) find limited evidence of effects from differential minimum wage levels. In their words, ‘The ten [country] cases show no obvious relationship between the level of the minimum wage and the aggregate incidence of low pay’. Moreover, in a comparison of the impact of a similar trend decline of minimum wages in the US and the Netherlands they show that the incidence of low pay remained constant at a high level in the US yet rose by more than five percentage points in the Netherlands (op. cit.: figure 9). Similar evidence is reported in the 2008 EC report, *Industrial Relations in Europe*. The regression analysis identifies no significant effect of the value of a statutory minimum wage on either the inter-decile measure of wage inequality or the gender pay gap in EU member states (EC 2008: annex tables 2 and 3).

By contrast, other studies point to more systematic effects. In his econometric analysis of the impact of labour market institutions on earnings inequality in a larger sample of 23 OECD countries, Snickers (2010: figure 5.7) finds the Kaitz index measure of a country’s minimum wage since the late 1990s has had an increasingly positive effect on wage equality at the bottom of the wage structure (measured as the bottom decile as a ratio of the median). Also, Lucifora et al.’s statistical analysis finds multiple evidence of a significant negative effect of the Kaitz index on the incidence of low pay for OECD
countries – both in the form of bi-variate correlations and factor analysis (2005: tables 5 and 6).

Differences in results are to some extent a consequence of differences in definitions, datasets, statistical techniques, time periods and country samples. However, they also suggest that the effort to disentangle the direct effect of a statutory minimum wage on pay equity, while controlling for other factors, may not be the most effective means of understanding its impact.

Repeating the straightforward correlation tests here we find weak-to-moderately strong evidence of a relationship between the value of a country’s minimum wage and measures of pay equity. The data derive from multiple sources: estimates of the Kaitz index for 2009 derive from the OECD minimum wage database; the incidence of low pay (full-timers only) are taken from the European Structure of Earnings Survey; and the relative risk of women’s low pay compared to men derive from EU-SILC data. The two graphs in figure 1 report the relationship between the Kaitz index (the value of each country’s minimum wage relative to median earnings of full-time workers) and two selected measures of pay equity - the incidence of low pay (defined as the percentage of full-time employees earning less than two thirds of median earnings) and women’s risk of low pay compared to men.

The data for the 18 countries in the left-hand graph suggest a weak negative relationship between the Kaitz index and the incidence of low wage employment; the estimated correlation index is -0.196. There is therefore some evidence to support the statement that countries with a higher minimum wage relative to median earnings are more likely to have a lower incidence of low wage work than countries with a low value minimum wage. Nevertheless, there is considerable variation within the contours of this general pattern. For example, the minimum wage is considerably higher in Ireland than in Spain (Kaitz measures of 51.1 and 44.1, respectively) but Ireland has a higher not lower incidence of low wage work than Spain - 21.5% and 15.2%, respectively. France is clearly the country that best typifies the negative relationship. However, it is also often cited as illustrative of the risks of exceeding the upper threshold to the minimum wage beyond which it undermines redistributive effects. Pitched too high, the minimum wage may displace low wage workers from employment and therefore reduce their share of earnings. Also, as we
explore below, a high minimum wage may encroach on the freedom of social partners to set wages and address low pay through collective bargaining. These issues are central to the French experience where in recent years the high level of the statutory minimum has been blamed by some commentators for the persistent high rate of unemployment and crowding out of collective bargaining (Gautié 2009); these risks are weighed against the gains of the reduced incidence of low wage work as shown in figure 1.

**Figure 1. Relationship between the Kaitz index and two measures of pay equity**

Concerning the relationship with gender wage equity, figure 1 displays a more significant, moderately strong negative relationship (a correlation measure of -0.677), such that the higher the minimum wage the lower the gender gap in incidence of low wage employment. Latvia, Slovenia and Hungary are illustrative of countries where a relatively high value minimum appears to be a preventive measure against women incurring a very high relative risk of low pay; in these countries women’s risk of low pay is contained at or below twice that of men’s. Conversely, the countries where women face the highest gender bias in the distribution of low wage work are among those with the lowest value minimum. This includes the Czech Republic, where women face a four-fold risk of low wage work and the level of the minimum wage is the lowest in Europe, and Estonia, Slovakia and Spain where women’s risk of low wage work is high compared to men and the minimum is among the lowest.
Overall, our estimations support those studies that find evidence of a redistributive effect of minimum wages. Nevertheless, the considerable inter-country variation in results, alongside evidence from other studies that suggest the minimum wage in fact has no significant impact, calls for further interrogation. The following section argues that the specific role and effectiveness of minimum wage policy in improving pay equity is best investigated through the lens of the wider national model of industrial relations, especially concerning the strategies of the main social actors and the form of wage-setting through collective bargaining.³

2. Interaction effects -- minimum wages and industrial relations models

The effects of a minimum wage on pay equity cannot be disentangled from a country’s model of industrial relations. In the first instance, we need to recognise that most European countries characterised by an inclusive system of industrial relations do not have a national statutory minimum wage, in part because joint regulation of wages for the most part provides reasonable protection for low wage workers - a functional equivalent to statutory minimum wage protection (Schulten 2006: 12; see appendix 2).⁴ Among countries with a statutory minimum, the evidence suggests that higher value minimum wages, which tend to support greater pay equity, are more likely to be found in industrial relations models that have a dual or inclusive character; that is, stronger collective bargaining appears to complement a higher value minimum wage. Also, analysis of the dual institutional features of minimum wage system and collective bargaining coverage shows that a country’s institutional character serves as a relatively robust indicator of pay equity outcomes. However, the cross-national pattern is not systematic and recent trends point to evidence of government intervention to raise the minimum wage value in several countries where exclusive industrial relations models have caused a spiralling of low wage employment. Agency therefore matters, and we argue for greater attention to be paid to the particular approaches and strategies of government and social partners in shaping minimum wage policy and the associated pay equity effects.

*Do more inclusive industrial relations models support higher value minimum wages?*

Existing studies provide two good reasons for the proposition that a higher value minimum wage is complemented by strong collective bargaining coverage. First, dual and inclusive models of collective bargaining (following Gallie’s 2007 application of the
terms) are associated with a more compressed wage distribution, which in principle raises
the relative level of low wages. This compression in bargained rates is likely to have an
upwards effect on the setting of the minimum wage level as well, thereby facilitating
strong pay equity effects (Bosch et al. 2010, Gregory et al. 2000). The second reason is
closely related. In countries with strong collective bargaining coverage, it is likely that
social partners are in a better position to argue for a higher national minimum – either
because this suits their pay equity strategy or, as the EC (2008) study argues, because it
avoids low wage competition which might damage centralised wage agreements (see, also,
Schulten 2006).

We can test the veracity of these two arguments against available data. Figure 2 provides
partial support for the notion that, among countries with a statutory national minimum,
countries with a dual or inclusive model – represented here as having higher levels of
collective bargaining coverage – tend, on average, to have a higher Kaitz index than
countries with exclusive models. The Kaitz index for dual and inclusive-type countries is
on average 49.5 and for exclusive-type countries 45.4. Also, the estimated correlation
between the two variables shown in figure 2 is moderately strong and positive (0.416).
The institutions of minimum wages and collective bargaining thus appear to be
complementary, insofar as a high value minimum wage does not preclude inclusive
bargaining and vice versa. 5

Figure 2. Relationship between the Kaitz index and collective bargaining coverage

![Graph showing the relationship between the Kaitz index and collective bargaining coverage.](image)

Note: Countries are colour coded to fit type of collective bargaining: blue diamond = exclusive; green cross
is dual; and white triangle is inclusive. Collective bargaining data refer to 2006, except 2007 for Ireland and
Source: OECD minimum wage database for ratio of minimum wage to median earnings of full-time employees. Collective bargaining data from ICTWSS (Visser 2010) except Ireland collective bargaining data from eiro.online.

There is an important possible objection to the argument so far which concerns the relationship between inclusive bargaining models and the share of the working population in employment. If inclusive bargaining models are associated with lower rates of employment then the pay equity effects enjoyed by those in work are to some extent offset by lack of job opportunities for the inactive and unemployed. However, the empirical evidence does not support this objection; a statistical test of association between minimum wage values and employment rates for OECD countries reveals very weak measures of correlation and, in most cases, it is in fact positive rather than negative (see Appendix 1).

**Reconsidering pay equity effects**

Given the possibility of complementary institutional interlinkages what are the combined pay equity effects of country systems of minimum wages and collective bargaining? Figure 3 presents an overview of results for four groups of countries categorised as having either strong or weak collective bargaining coverage, on the one hand, and either a high value or low value/absent minimum wage on the other. It includes countries with no statutory national minimum wage, such as Germany and Sweden, in order to provide a broader comparative test of the pay equity effects of varying wage-setting models. The incidence of low wage employment is shown in parentheses and follows the definition and data source used in figure 1 above.

As anticipated, on average, countries with strong collective bargaining coverage and a high value minimum wage experience the lowest incidence of low wage employment – an average incidence of 13.9%. The second best performing group are those countries with strong collective bargaining and either a low value minimum wage or no statutory national minimum. By contrast, both groups of countries with weak collective bargaining – whether or not the minimum wage is of a high value, a low value or absent altogether – score a high incidence of low wage employment. Indeed, among the latter two groups, no individual country scores an incidence of less than 16%, which is greater than the group average for the other two groups of countries.
Figure 3. Combined effects of collective bargaining and minimum wages on the incidence of low-wage employment

<table>
<thead>
<tr>
<th>Collective bargaining model</th>
<th>Minimum wage system</th>
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<tbody>
<tr>
<td></td>
<td>High value</td>
<td>Low value or Absent</td>
</tr>
<tr>
<td>Strong coverage</td>
<td>BE (7.0%)</td>
<td>AT (14.5%)</td>
</tr>
<tr>
<td></td>
<td>GR (16.8%)</td>
<td>DE (19.6%)</td>
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<tr>
<td></td>
<td>FR (8.8%)</td>
<td>DK (8.0%)</td>
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<tr>
<td></td>
<td>PT (20.3%)</td>
<td>ES (15.2%)</td>
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<tr>
<td></td>
<td>SI (16.4%)</td>
<td>LU (15.2%)</td>
</tr>
<tr>
<td></td>
<td>AVERAGE (13.9%)</td>
<td>AVERAGE (14.8%)</td>
</tr>
<tr>
<td>Weak coverage</td>
<td>HU (23.5%)</td>
<td>CZ (16.3%)</td>
</tr>
<tr>
<td></td>
<td>IE (21.5%)</td>
<td>EE (21.5%)</td>
</tr>
<tr>
<td></td>
<td>LV (30.9%)</td>
<td>LT (27.7%)</td>
</tr>
<tr>
<td></td>
<td>AVERAGE (25.3%)</td>
<td>PO (21.9%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AVERAGE (21.1%)</td>
</tr>
</tbody>
</table>

Notes: Categories of collective bargaining coverage defined as: Strong coverage if 50% plus; Weak if less than 50%. Categories of minimum wage Kaitz values defined as: High value if greater than 47.2 (country average) and Low value if equal or less than 47.2. Source: See figures 1 and 2.

Country specificity -- minimum wage policy responses to problems of pay equity

There are nevertheless several country examples that do not fit the above portrait of general institutional patterns and pay equity effects. We identify three country groups: i) those with a relatively low value of the minimum wage despite strong collective bargaining coverage; ii) those with relatively weak trade unions and a minimum wage value that is higher than anticipated; and iii) those where the combined strength of collective bargaining and minimum wage system does not prevent a high incidence of low-wage employment. We consider each group in turn with specific country illustrations.

In figure 2, the position of Spain suggests its low value minimum wage is out of kilter with the strength of collective bargaining. It ranks sixth out of 17 countries in its strength of collective bargaining coverage but fourteenth in the value of the minimum wage. A key reason is a particular legacy of using the minimum wage as a monthly income standard for various welfare and pension payments (Recio 2006), which inevitably proved an obstacle for many years to increasing the level. Despite their apparent strength in the labour market, Spanish unions have thus traditionally disregarded the minimum as a wage-fixing instrument and concentrated instead on raising minimum pay rates in the hundreds of regional collective agreements (Banyuls et al. 2010, Cebrian et al. 2008). Matters changed in 2004 when the welfare links were abolished and the government set a goal to increase the minimum wage relative to average earnings (Banyuls et al. 2010). This policy
generated an uplift in the Kaitz index during 2004-7 by around four percentage points; nevertheless, at just 44.1 in 2009 the Kaitz measure is still below the European average of 47.2.

A contrasting situation applies in the case of the UK and Hungary which arguably have a higher than anticipated minimum wage value given their low levels of collective bargaining coverage – the Kaitz measure is similar, for example, to that of Greece and the Netherlands, which have far higher collective bargaining coverage (see figure 2). The reason is that in both Hungary and the UK, for a defined period of time, the interests of social actors (mainly government and trade unions) coalesced around using the minimum wage as an instrument to improve the position of the lowest paid workers. Hungary and the UK ranked among the bottom six out of 24 European countries in the incidence of low pay (2006 ESES data) and in both countries it is widely recognised that collective bargaining had failed, and continues to fail, to address the problem (Mason et al. 2008: 50-58). In the UK, during a four-year period, 2003-6, the independent Low Pay Commission recommended rises in the minimum wage that were purposefully and explicitly designed in order to improve its level relative to average earnings (Grimshaw 2009). No target was set, but through this approach the Kaitz index rose from 43.1 to 46.6 (OECD data), a considerable achievement in the absence of an influential and coordinated trade union organisation in the UK. Also in Hungary, following a steady decline in the minimum wage during the 1990s - from 0.43 to 0.37 between 1992-2000 (Kaitz index, OECD data)$^6$ - a centre-right government unilaterally hiked up the minimum from HUF25,500 to HUF40,000 in 2001, followed by a further significant rise in 2002 (Neumann 2010). OECD data suggest the Kaitz index improved from 0.37 (2000) to 0.51 (2001) and then to 0.57 (2002).

The policy developments witnessed in the UK and Hungary are in fact to some extent reflective of a wider pattern. If we interrogate the relationship between change in minimum wage value and strength of collective bargaining coverage then we find a relatively strong negative relationship - a correlation measure of -0.466 between the change in minimum wage value during 2000-2009 and the strength of collective bargaining coverage averaged over 1995-2006 (see Appendix 3). In other words, countries with weak levels of collective bargaining coverage were more likely than countries with high levels to have experienced increases in the Kaitz index. Of the top ten countries with
the largest rise in the minimum wage, seven were countries with an exclusive model of industrial relations – that is, weak and generally uncoordinated collective bargaining coverage.

Germany is illustrative of a third country group where the incidence of low wage employment is higher than expected given the institutional character of the combined minimum wage and collective bargaining system presented in figure 3. Other countries in this group include Portugal and Italy. Germany’s incidence of low wage work is estimated at 19.6% (ESES data), which is significantly above the average 14.8% figure for the group of countries categorised in figure 3, and double that of Denmark and Sweden (8.0% and 10.5%, respectively). Part of the problem is Germany’s falling collective bargaining coverage. While Sweden has enjoyed a stable level of collective bargaining coverage in the last two decades and Denmark a rising coverage, Germany has witnessed a fall from around 75% in the late 1980s to less than two thirds coverage today (ICTWSS data). Its system of joint wage regulation, coupled with a refusal by employers to apply extension mechanisms, therefore no longer provides an effective functional equivalent to statutory minimum wage protection. Moreover, as with other countries that use collective bargaining as the basis for providing protection for the low paid, Germany has faced serious challenges as to the effectiveness of its institutions because of the liberalisation of the European services industry and increased labour migration (see Skedinger 2009, Woolfson and Sommers 2006, Woolfson et al. 2010). The European Court of Justice rulings on the Laval, Viking and Rüffert cases mean that a minimum rate established through collective bargaining that is not extended nationally is not considered as a minimum rate of pay. As Alber (2010: 28) argues, the legal basis for these rulings is questionable and can be interpreted as a non-neutral assessment of those member states that have established wage protection through collective agreement rather than legislation. In a context of increasing numbers of posted workers, these rulings have posed a serious dilemma for labour relations and wage bargaining and prompted the development of new legally binding agreements in several sectors of the German economy (see below).

These country examples provide valuable case studies of the agency of government intervention in shaping minimum wage policy with varying degrees of support and pressure from trade unions in response to the problem of low wage employment. The institutional character of the industrial relations model is therefore not the only
determinant of the minimum wage value, nor do the combined institutional effects of collective bargaining and minimum wage system necessarily generate the expected pay equity effects. Actions and responses of social actors towards minimum wage policy vary over time and across countries. In addition, across a variety of country models of industrial relations trade unions can develop distinctive strategies as part of collective pay bargaining that enhance the pay equity impact of a rising minimum wage. We investigate these issues in the following section.

3. Understanding strategic actions to improve pay equity

The above analysis supports the widely-held view that wage-setting institutions - including features such as the degree of bargaining centralisation, the strength of union bargaining power and the level of minimum wages - exert a considerable influence on measures of pay equity (for early studies, see Blau and Kahn 1996, Fortin and Lemieux 1997, Gosling and Machin 1995, Rowthorn 1992, Whitehouse 1992). This result is important since it means for a given level of skill composition (influenced by education, technology and trade) the different characteristics of wage-setting institutions can have determining effects on wage structure. However, as we hinted above, an institutionalist perspective requires an understanding of country specificity and the particular actions and strategies of social actors, especially government and trade unions in the case of minimum wage policy and collective bargaining. Moreover, institutions are not static. They are responsive to the changing strategies and actions of government and social partners. In this section we investigate the interaction between minimum wage policy and collective bargaining with the aim of identifying and articulating the strategies and actions that are likely to impact upon pay equity outcomes. We draw on arguments and findings from related studies, but the principal source of evidence is taken from the results of a European research project on minimum wages and collective bargaining (see endnote 2).

Our conceptual and empirical focus is on strategies and actions directed towards the wages of those jobs that may be said to be part of a ‘minimum wage contour’. Dunlop’s (1957) wage contour theory suggests that an external key rate can be as influential as internal factors in determining the wage structure of a firm. Following Levin-Waldman (2002), a statutory minimum wage can be the key rate in particular industries. Several US studies show that the statutory minimum wage acts as a key wage for jobs in certain sectors such that changes in the structure of wages are more closely tied to increases in the minimum
wage than to other factors such as changes in skill demand. Spriggs (1994) shows this for food service occupations. In a more comprehensive assessment, Spriggs and Klein (1994) find that the starting wage of high school educated workers in 43 out of 89 jobs (identified through a matrix of industry and occupation categories) clustered around the movements of minimum wages. A more recent US study (Rodgers et al. 2004) finds that the size of the unexplained wage gap (after controlling for human capital characteristics) between minimum wage contour jobs and average wage contour jobs increases and decreases in line with changes in the statutory minimum wage.

Assuming that minimum wage contours prevail in countries other than the US raises several questions for pay equity outcomes. In a context of a rising minimum wage, what are the consequences when unions aim to sustain past ripple effects, that is, to bargain for a similar rise in wages of jobs paid just above the minimum? Where a statutory minimum wage is perceived as too low (for example, it doesn’t provide a living wage), or is absent, are there mechanisms to establish alternative minimum wage contours? What role do union mobilisation and industrial action play in sustaining pay improvements? And are there sector-specific product market conditions that require employer and union coalitions to underpin positive pay equity effects from minimum wage rises? We address each of these questions through identification of four specific strategies that have consequences for pay equity. Differences in national industrial relations models and the context of minimum wage policy in each case shape the form of strategy and resulting pay equity effects. Table 1 provides a summary.

i) Minimum wage as the going rate

The first strategy is the direct application of the statutory minimum wage as the wage rate for a particular job. The relevance of this strategy and its application in diverse sectors and countries depends on the ‘bite’ of the minimum wage, that is, its value relative to what is perceived as the going rate of pay for the job. The reasons for the linkage vary with industrial relations context. The bite can be high because the minimum wage is pitched at a high level, but can also be high in countries with a low value minimum because there is a high share of low-wage work. A comparison of France, Hungary and the UK is illustrative. The high value minimum in France means that it has a strong bite on collectively bargained wage structures. Considering the proportion of employees whose basic wage is equivalent to the national minimum wage, Gautié (2009) reports a
fluctuating pattern of between 14% and 16% during 2000-2007; the share would be considerably lower if other payments such as seniority premiums and bonuses were included. The minimum wage bite is especially strong among part-time workers and in small firms, up to 45% of part-time workers employed in firms with fewer than 10 employees (op. cit.: 152). In the UK, the share of all employees (including young workers aged 18-21) was estimated at approximately 5% in 2006 and once again the bite is more substantial in small firms, more than 10%, and the majority of minimum wage earners are female part-timers, some 47% (LPC 2007: 30-33).

However, the relevance of this pay practice for collective bargaining in France, Hungary and the UK is quite different. In France, where collective bargaining covers nine in ten workers, there is a concern that the rising SMIC contributes to a crowding out of collective bargaining since it precludes agreements between social partners in branch agreements where pay rates at the bottom of wage scales are overtaken by the SMIC. This illustration has a general lesson for trade unions in all countries: where a minimum wage is too high it may be perceived as superseding the level of pay that unions are able to negotiate with employers through collective bargaining and thereby potentially undermining their ability to mobilise low paid workers. At the same time, however, case-study evidence for France suggests the minimum wage may in certain situations protect against unions having to agree to worse compensation packages where their bargaining power is weak and may in these circumstances be welcomed by trade unions (Gautié 2009: 168-171). In Hungary, the linking of pay rates with the minimum wage in certain sectoral agreements is the result of purposeful negotiations. The sectoral collective agreements for security and construction set the base rates at a level approximately equal to the statutory minimum wage. The base rate agreed in the construction sector agreement, which has been legally binding since 2006, initially set a base rate of HUF500, just 0.8% above the then minimum wage (Neumann 2010). Company bargaining can provide a further uplift to base rates, although this varies substantially. Data show that among the 47 company agreements in the Hungarian construction sector (2009 data), for example, minimum rates for unskilled workers added between 4% and 67% to the sector base rate (op. cit.: 40-2); nevertheless, with only an estimated 25% coverage of collective bargaining in the Hungarian construction sector it is the legally binding sector base rate that is most widely applicable.
In the UK, by contrast, the practice of paying the national minimum wage as the going rate is associated with the absence of collective bargaining and a deterioration in the overall compensation package. The share of minimum wage earners is highest in the sectors of hairdressing, hospitality, cleaning and retail (ranging from 15% to 27% - LPC 2007: figure 2.12), where coverage of collective bargaining is very low, just 6% for example in hospitality (Achur 2010). The significance of this practice in the UK is supported by case study and survey evidence. Evidence from case studies reported in Lloyd et al. (2008) reveals six of eight hotels investigated paid room attendants at or only slightly above the national minimum wage, four of the eight retail case-study firms set entry pay only a few pence above the minimum and all six food processing firms investigated paid agency workers at the minimum wage. Also, national surveys show that three quarters of pubs and restaurants pay new recruits the minimum wage, the median pay of nursery assistants was equivalent to the minimum wage in 2001 and 2003 (IDS 2004). Moreover, the increasing share of minimum wage workers in the retail case studies reported in Mason and Osborne (2008) is associated with revised contracts that reduce pay enhancements for weekend working and public holidays as well as opportunities for bonuses.

The consequences for pay equity depend on two factors – minimum wage policy and the extensiveness of ripple effects. Where minimum wage rises are below average wage growth, low-wage workers are penalised by having their pay pegged to the minimum wage. In the three countries described above, each has enjoyed rises in the real value of the statutory minimum wage in recent years and therefore the practice has been effective in lifting the relative position of the lowest paid workers.
<table>
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<th>Pay strategy</th>
<th>Country context of minimum wage policy, collective bargaining and trade union goals</th>
<th>Pay equity outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Link pay directly to statutory minimum wage</td>
<td>- Increases in the minimum wage relative to average earnings</td>
<td>Relative position of lowest paid increases relative to average earnings</td>
</tr>
<tr>
<td></td>
<td>- Opportunities for collective bargaining</td>
<td>Strong ripple effects diffuse the redistributive impact of a rising minimum wage; reduces incidence of low wage employment</td>
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<tr>
<td></td>
<td>- Limited joint pay setting</td>
<td>Limited ripple effects and strong compression of wages among lowest paid; no effect on the incidence of low wage employment</td>
</tr>
<tr>
<td>2. Bottom-weighted pay deals</td>
<td>- Reactive union strategy since collectively bargained bottom rate falls below the rising minimum wage</td>
<td>Extreme compression (large spike) at the level of the minimum wage</td>
</tr>
<tr>
<td></td>
<td>- Explicit union pay equity strategy supports bottom-weighting and monitors the positive gap with minimum wage</td>
<td>Strong ripple effects are sustained and possibly extended, as reflected in the gap between low pay rates and the minimum wage</td>
</tr>
<tr>
<td>3. Establish binding standards</td>
<td>- Consensus-led response at sector level to external threats to the conditions of collectively negotiated terms and agreements (eg. posted workers, outsourcing of workers)</td>
<td>Strong union bargaining position can establish a relatively high minimum standard</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Subject to compliance, can provide a substitute (within a particular sector) for a statutory national minimum wage</td>
</tr>
<tr>
<td>4. Transfer wage costs to client businesses</td>
<td>- Powerful client firms often dominate the product market for low-wage business services, generating the potential for employer-union consensus over rules governing contract pricing</td>
<td>Minimum contract price floor has the potential to lift collectively agreed wages in line with minimum wage rises, but difficult to enforce upon client businesses</td>
</tr>
</tbody>
</table>
Unlike minimum wage rises, the size of ripple effects is not mandated. One of the major uncertainties therefore in understanding the consequences of a rising minimum wage for pay equity relates to variation in ripple effects (Pollin et al. 2008). We can expect country differences due to varying systems of collective bargaining (Freeman 1996: 645). Where the minimum wage acts as a key rate determining the base rates in collective agreements, such as in France and Hungary, pay differentials are likely to be at least partially restored following minimum wage rises. Trade unions (and employers) may be keen to restore differentials related to experience, job responsibility, skill or qualification, for example. In France, Koubi and L’Hommeau (2007) report a relatively strong ripple effect in a representative sample of firms during 2000-5 up to a wage level equivalent to twice the SMIC, with a 100% ripple effect for wages between 1 and 1.1 of the SMIC (cited in Gautié 2009: 158). In Hungary, Neumann’s (2010) analysis of pay rates in the sectoral agreement for the construction sector shows that the rate of pay for semi-skilled workers retained a pay differential of between 9% and 12% with unskilled pay pegged to the national minimum wage, thus ensuring close to a 100% ripple effect for semi-skilled workers (table 2).

Table 2. Trends in collectively bargained wage rates relative to the statutory minimum wage: Hungary, construction sector, 2006-2010

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unskilled</strong></td>
<td>% of standard MW</td>
<td>100.8</td>
<td>102.3</td>
<td>104.3</td>
<td>100.7</td>
</tr>
<tr>
<td></td>
<td>% of unskilled base rate</td>
<td>100.0</td>
<td>102.3</td>
<td>104.3</td>
<td>100.7</td>
</tr>
<tr>
<td><strong>Semi-skilled</strong></td>
<td>% of standard MW</td>
<td>112.0</td>
<td>114.5</td>
<td>115.9</td>
<td>111.9</td>
</tr>
<tr>
<td></td>
<td>% of unskilled base rate</td>
<td>111.1</td>
<td>111.9</td>
<td>111.1</td>
<td>111.1</td>
</tr>
<tr>
<td><strong>Skilled (&lt;2 years experience)</strong></td>
<td>% of skilled MW</td>
<td>114.2</td>
<td>111.0</td>
<td>102.7</td>
<td>97.7</td>
</tr>
<tr>
<td></td>
<td>% of unskilled base rate</td>
<td>119.0</td>
<td>119.4</td>
<td>118.1</td>
<td>118.1</td>
</tr>
<tr>
<td><strong>Skilled (2+ years experience)</strong></td>
<td>% of skilled MW</td>
<td>116.3</td>
<td>119.4</td>
<td>120.8</td>
<td>114.9</td>
</tr>
<tr>
<td></td>
<td>% of unskilled base rate</td>
<td>127.0</td>
<td>134.3</td>
<td>138.9</td>
<td>138.9</td>
</tr>
<tr>
<td><strong>Master skilled worker</strong></td>
<td>% of skilled MW</td>
<td>145.3</td>
<td>152.5</td>
<td>157.0</td>
<td>149.4</td>
</tr>
<tr>
<td></td>
<td>% of unskilled base rate</td>
<td>158.7</td>
<td>171.6</td>
<td>180.6</td>
<td>180.6</td>
</tr>
</tbody>
</table>

Source: adapted from Neumann (2010: table 17).

But in countries and sectors with weaker trade unions and lower levels of collective bargaining coverage a practice of pegging wages to the statutory minimum is more likely to be associated with a compression of wage differentials during a period of minimum wage rises. In her detailed analysis of the US retail industry where the minimum wage has a strong bite and collective bargaining is absent, Wicks-Lim (2008: table 11.1) finds that
the ripple effect extended up to a wage 25% higher than the minimum wage (incorporating both an immediate and a lagged effect in the calculations), which is small relative to the findings for France reported above. Also, in the UK, weak ripple effects are one of the main reasons why during the 2003-7 period when the minimum wage increased relative to average earnings the incidence of low wage work remained at a high and stable level (Grimshaw et al. 2010). With only few pockets of pay bargaining to restore pay differentials there were insufficient ripple effects to lift workers above the low wage threshold, which at two thirds of median earnings remains substantially above the 2009 level of the national minimum wage, 52% (ASHE data).

ii) Bottom-weighted pay deals
A bottom-weighted pay settlement involves a larger pay increase for the lowest paid compared to higher paid groups. Such a pay strategy may align with the broader objectives of those trade unions that seek to establish a relatively compressed wage structure among their membership and/or to improve the position of the lowest paid (Heery 2000: 59). It is also supported by analysis of earnings data for OECD countries that suggests, on average, union density is associated with a larger positive effect on pay equity in the lower half of the wage hierarchy than the upper half (Pontusson et al. 2002: 300-1). Nevertheless, the likelihood of alignment varies by country and by trade union. Austrian trade unions are well known for their limited concern for wage distribution, instead prioritising full employment as the most effective distributive strategy (Therborn 1992). Metcalf et al. (2001) find unions in the UK do establish a more compressed wage structure for unionised workers relative to non-unionised workers, after controlling for a range of variables including industry and occupation. It is not only a union’s social concerns for equality at play here, a bottom-weighted pay strategy may also meet a union’s strategic orientation towards the economy (Visser and Checchi 2009); by raising standards to squeeze out low wage employment, unions (possibly alongside employers) may also be seeking to displace low paying and low productivity firms from the market.

The diverse motivations for a bottom-weighted pay strategy are evident in the recent experiences of collective bargaining in Croatia, Hungary and the UK. In Croatia, investigation of selected sectors reveals a growing problem of base rates in clothing and retail sector agreements falling increasingly behind the rising national minimum wage. Between 2005 and 2009 the bottom rate of pay agreed in the extended retail sector
collective agreement, for example, fell from 23% to 43% below the national minimum wage (Nestić and Bakarić 2010: table 10). The situation has become something of an accepted convention since it is expected that employees receive additional pay (seniority and other enhancements - similar to the practice in France), which counts towards the minimum wage. Nevertheless, the level of basic pay is now so low that social partners have had to regularly agree special lump-sum allowances to ensure that low-wage workers’ total wage meets minimum wage rules. Company-level pay bargaining provides higher base rates for some but there are very few agreements in the retail sector - just 11 agreed in 2009. Among the lowest paid, therefore, the pattern of falling base rates of pay and bottom-weighted pay deals has directly resulted in a more compressed wage distribution (op. cit.: 39).

In the Hungarian retail sector a bottom-weighted pay strategy in company collective bargaining (there is no retail sector agreement) was supported by trade unions in response to both a higher minimum wage and changes in tax rules that adversely affected workers earning less than a particular monthly threshold (Neumann 2010). For example, in a series of wage agreements for a large supermarket chain, the unions successfully negotiated bottom-weighted agreements in five successive years that awarded low wage employees a percentage raise and higher paid employees a relatively smaller lump sum payment. In the 2010 agreement, this was modified, such that the lowest paid were awarded a lump-sum and higher paid employees no pay rise. Here trade union strategy is not simply to catch up with minimum wage developments as in the Croatian example. Instead, it appears to be aligned with a general strategy to improve pay equity: the Commercial Employees’ Trade Union (KASZ) favours imposing a maximum limit to pay increases for senior managers and redistributing the income to the lowest paid (op. cit.: 36).

In the UK, an explicit bottom-weighted pay bargaining strategy was pursued in the case-study retail company agreement (by the union, Usdaw), as well as the sector agreement covering hospital cleaners, by Unison, but with quite different implications for pay equity. In the former case, the union argued strongly for improvements in the position of the lowest paid in a context of a rising minimum wage. However, while a series of bottom-weighted pay deals improved the position of the lowest paid relative to higher paid colleagues, the positive premium over the national minimum wage fell (table 3); a likely cause is weak union bargaining power relative to the retail company and a poorly
formulated pay equity strategy. In 2001 and again in 2005, the bottom pay grades were abolished, which generated effective pay rises of 8% and 5% for the lowest paid staff. While this strategy bolstered the ripple effect of rises in the statutory national minimum wage, the gap reduced by over a third over the 11-year period from 23% to 15%. By contrast, a more positive outcome for pay equity was achieved in the public sector agreement for hospital cleaners. A clearer union strategy of pay equity, coupled with a stronger potential for worker mobilisation saw the combined negotiation of elimination of bottom grades (in 2009) and higher pay settlements for the lowest paid (2007 and 2010). The result was a considerable improvement in the gap over the national minimum wage over the 11-year period from 7% to 18% (Grimshaw et al. 2010: table 12).

Table 3. Impact of bottom-weighted pay deals in two collective agreements on the gap with the minimum wage, UK 1999-2010

<table>
<thead>
<tr>
<th></th>
<th>National NMW</th>
<th>Retail Company agreement</th>
<th>Hospital cleaners Sector agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adult rate</td>
<td>% annual change</td>
<td>Bottom rate</td>
</tr>
<tr>
<td>1999</td>
<td>£3.60</td>
<td>n.a.</td>
<td>£4.44</td>
</tr>
<tr>
<td>2000</td>
<td>£3.70</td>
<td>2.8%</td>
<td>£4.58</td>
</tr>
<tr>
<td>2001</td>
<td>£4.10</td>
<td>10.8%</td>
<td>£4.95</td>
</tr>
<tr>
<td>2002</td>
<td>£4.20</td>
<td>2.4%</td>
<td>£5.16</td>
</tr>
<tr>
<td>2003</td>
<td>£4.50</td>
<td>7.1%</td>
<td>£5.32</td>
</tr>
<tr>
<td>2004</td>
<td>£4.85</td>
<td>7.8%</td>
<td>£5.56</td>
</tr>
<tr>
<td>2005</td>
<td>£5.05</td>
<td>4.1%</td>
<td>£5.84</td>
</tr>
<tr>
<td>2006</td>
<td>£5.35</td>
<td>5.9%</td>
<td>£6.02</td>
</tr>
<tr>
<td>2007</td>
<td>£5.52</td>
<td>3.2%</td>
<td>£6.26</td>
</tr>
<tr>
<td>2008</td>
<td>£5.73</td>
<td>3.8%</td>
<td>£6.50</td>
</tr>
<tr>
<td>2009</td>
<td>£5.80</td>
<td>1.2%</td>
<td>£6.66</td>
</tr>
<tr>
<td>2010</td>
<td>£5.93</td>
<td>2.2%</td>
<td>£6.81</td>
</tr>
</tbody>
</table>

Note: Pay data refer to the public sector hospitals agreement (‘Agenda for Change’ for 2004-2010 and the Whitley Council agreement for ancillary services workers up to 2003). Source: Grimshaw et al. (2010: tables 11 and 16).

iii) Establishing binding standards

A strategy to establish binding standards is a response to the vulnerability of collective agreements to two forms of outsider competition: first, the temporary posting of workers from other countries that threatens to undermine collective agreements that are not legally binding (under the country of origin principle, Cremers et al. 2007); and second, the outsourcing of activities with staff transfer that exploits differences in terms and conditions between organisations and between sectors with different collective agreements. Germany and the UK provide country examples of legally binding collective
agreements that were specifically established in response to such threats and that sought to protect and improve the position of low wage workers.

In Germany, the recent development of its minimum wage system has followed a path of setting legally binding minima for particular sectors. The impulse for the strategy came from bilateral agreements between the German federal government and Central and Eastern European countries that set quotas for the temporary deployment of posted workers. Its use was especially marked in the construction sector, up to a peak of 188,000 posted workers in 1996 (Bosch and Zühlke-Robinet 2003). According to EU law, terms and conditions of employment could be set in accordance with the country of origin principle, subject to generally binding agreements or other statutory wage protection in the host country (Cremers et al. 2007). In the German construction sector, while the collective agreement was binding at this time, the wage clause was not, and consequently a pattern of social dumping and undermining of the sector-wide collectively agreed pay rates occurred. The employers’ association and the trade union (IG BAU) responded by agreeing a system of legally binding minimum wages for the sector, set out in the Posted Workers Act 1996, after successfully overcoming opposition from the Confederation of German Employers Federation (Bosch and Kalina 2009). Following a political compromise that removed the need for sectoral social partners to win the approval of the employers’ confederation, other sectors have followed suit. During 2007-2010, six sectors established a legally binding minimum wage on the basis of the Law on Posting of Workers and a further eight submitted applications.

Evidence of the relative value of the binding sector-wide minimum wages suggests unions have been effective in establishing a relatively high standard - further evidence that dual and inclusive bargaining models are conducive to high value minimum standards as argued in section 2. Minimum rates in five sectors are different for western and eastern Germany, but set at the same nominal rate of pay in the painting and varnishing sector and in waste management. Figure 4 shows that in western Germany, minima vary from 49% (laundry sector) to 69% (construction) of average earnings for the region. In eastern Germany, the range varies from 51% (laundries) to 83% (painting and varnishing). Using average earnings for Germany, the overall range varies from 44% (laundries in eastern Germany) to 72% (construction in western Germany). If we take the lowest rate for the laundry sector as a proxy for the wage floor then the German minimum is considerably
higher than the European average of 37% (relative to average earnings, 2009 OECD database) and approximately on a par with the French minimum wage at 48% of average earnings. One obvious problem with this pay equity strategy, however, is coverage, since many low wage workers in Germany are employed in workplaces and sectors where union presence is weak or absent.

Figure 4. Relative value of sector-based minimum wages in eastern and western Germany, 2010

Note: Estimated in relation to separate average earnings data for eastern and western Germany; Hourly minimum rates are those agreed and implemented in 2010. We have used the most recently available average earnings data which are for 2008.
Source: adapted from Bosch and Weinkopf (2010: table 1).

Implementation of a binding minimum standard also underpinned trade union strategy in the UK case of the public hospitals collective agreement. It is an unusual example for the UK and represents the first extension of a pay agreement since the abolition in 1983 of the Fair Wage Resolution (which required companies contracting with public authorities to meet the terms and conditions set in national collective agreements). The new binding standard, known as the ‘Two-Tier Code’, was implemented in 2005 in response to a prolonged trade union campaign to prevent the development of two tiers of employment conditions among workers at the private firms providing outsourced public services. Unions had collected evidence of a ‘two-tier workforce’, reported the number of workers earning less than £5 (€5.73) per hour (compared to a 2004-5 minimum wage of £4.85) and balloted for strikes (Grimshaw 2004). A senior wage negotiator for Unison explained:

*We went to the government and said not only is it unfair but also severely destabilising that you have the employed staff of the National Health Service on [collectively agreed pay rates] and outsourced workers who are doing essential work but are on minimum...*
wage and in fact a few cases are being paid below the National Minimum Wage (cited in Grimshaw et al. 2010: 31).

On the employer side, there were mixed views. The employer body for business services firms adopted a pragmatic approach and recognised the need to break out of price-led competition for contracts. However, the peak employer body, the CBI, opposed the extension of the sector wage agreement. At the time, the CBI lost the argument. The wording of the new Code brought the UK position close to the ILO Labour Clauses (Public Contracts) Convention No. 94. It required private contractor employers to provide new recruits with broadly similar employment conditions to those for workers transferred from the public sector whose terms and conditions are protected under the TUPE transfer regulations. As a result, where private contractors had previously paid the minimum wage to cleaning staff, they were instead obliged to pay a wage premium of 18% above the national minimum - a significant improvement (see table 3 above). Despite its positive impact, the Code was abolished by the incoming Conservative-led government in 2010 as part of a new wave of policy reforms that promise to undermine the capacity of low wage workers to defend their relative position in the labour market.ix

iv) Transferring wage costs to client businesses
A significant proportion of the low wage economy is characterised by employing organisations that are dependent for the sale of their product or services on a small number of powerful client businesses. The business cleaning and private security sectors typify a form of product market organisation for business services where the market exchange of services is managed by a form of business-to-business contracting that often places the services provider at a disadvantage to the client in terms of market bargaining power. In this context, a key obstacle to improving pay is the absence of a shared framework of rules which facilitates the passing on of higher labour costs from the service provider to the client (Grimshaw and Carroll 2006: 32-35). Client organisations do not always attach value to non-core activities such as cleaning and security and while they may operate in high value-added markets of the economy (such as banking or higher education) they may nevertheless be willing to select a specialist contractor on the basis of most competitive price per unit of service. Unlike other pay bargaining strategies, this issue very often unites employers and unions, albeit in opposition to representatives from the client side.
In the Hungarian security business, the employer body and the professional chamber have agreed a minimum level of service fees that ought to be charged to client organisations (Neumann 2010). A minimum hourly fee of HUF900 enables payment of the skilled minimum wage (HUF515) and associated tax and social security contributions. Nevertheless, there is limited compliance and the employer and trade bodies lack the power to exercise sanctions. The going market rate for security services in 2010 was estimated at around HUF600-700. According to the head of the employer body for the security sector (MBVMSZ) this is insufficient for a profit-making company to provide legal employment.

Similarly, in the UK, where there are few pockets of effective social dialogue among social partners, the case-study employer established a strong partnership approach with the GMB union in an effort to encourage clients to accept higher prices for contracted services as wages have increased. One of the senior company managers explained their approach:

> We have been working with our union to see how we can increase our pay rates for the employees in that division [security services], how we can get those [clients] buying security to see the value of it and get them to pay a reasonable amount of money for it (cited in Grimshaw et al. 2010: 34).

But to date, the UK security company has had limited success. Some clients pay low fees, others high fees and the company argues this means they have to discriminate in the wages paid to security guards. On some contracts, security guards earn close to the minimum whereas on other contracts pay is significantly higher as a result of the client pressuring for programmes of skill development and uprating of pay. The result is an extreme fragmentation of pay rates for the same job within the same company.

4. Discussion and conclusion

This paper addresses the pay equity effects of minimum wages through interrogation of pay bargaining processes and strategies within different country models of industrial relations. It contributes to several recent comparative studies that generate mixed evidence concerning the impact of minimum wages (largely associated with the relative value relative to median earnings) on pay equity measures such as the gender pay gap and the incidence of low wage work. Our review of European wage data lends support to those studies that find a negative association between the value of a minimum wage, on the one
hand, and, on the other, the incidence of low wage work and the risk of low wage work faced by women compared to men. Nevertheless, the specificity of country patterns calls for further interrogation of the processes of wage determination and pay equity outcomes within the context of country and sector models of wage bargaining. The paper therefore contributes to the current literature by analysing how the aggregate level inter-linkages are articulated through processes and outcomes of pay bargaining drawing on the results of a European research project.

We identify four specific pay bargaining strategies that contribute to the pay equity effects of minimum wage policy developments: setting the bottom rate of pay in collective agreements at the minimum wage level; negotiating bottom-weighted pay settlements; establishing binding standards for collectively agreed wage rates; and contract price agreements that set minimum standards so as to transfer wage costs to client businesses. In each case, specific pay equity effects are identified in relation to the country context of minimum wage policy and the specific trade union goals relevant to the sector or company level collective wage agreement. The summary details in figure 5 conclude our discussion by drawing out the implications of our findings for three specific pay equity effects.

**Figure 5. Summary portrait of pay equity outcomes in five countries**

<table>
<thead>
<tr>
<th>Country</th>
<th>Minimum wage spike</th>
<th>Ripple effects:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>a) Pay gap (between bottom rate and MW)</td>
</tr>
<tr>
<td>Croatia</td>
<td>Negotiated use of bottom-weighted pay deals to align base rates with rising MW</td>
<td>--</td>
</tr>
<tr>
<td>France</td>
<td>Negotiated use of MW as going rate in some collective wage agreements. (Debate over crowding out of collective bargaining)</td>
<td>High compliance with joint wage agreements generates strong higher level ripple effects (restored pay differentials)</td>
</tr>
<tr>
<td>Germany</td>
<td>Binding sector-wide minimum wages set at a relatively high level</td>
<td>Smaller ripple effects than expected due to problems of compliance and changing classification of jobs</td>
</tr>
<tr>
<td>Hungary</td>
<td>Some use of MW as going rate in sector agreements</td>
<td>Size of pay-gap ripple effect depends on company collective agreements, but coverage is weak.</td>
</tr>
<tr>
<td></td>
<td>Minimum fees for subcontracting of security services agreed by social partners to encourage MW payment and formalise employment</td>
<td>Strong higher level ripple effects in construction assisted by dual MW. Weaker in retail due to re-classification of skilled jobs</td>
</tr>
<tr>
<td>UK</td>
<td>High use of MW as going rate reflects absence of collective bargaining</td>
<td>Success of company wage agreements to sustain pay-gap contingent upon trade union bargaining power. In business services sectors, differential results reflect pervasiveness of client-led wage agreements</td>
</tr>
</tbody>
</table>
Weak higher level ripple effects evidenced by sustained high incidence of low wage work despite rising MW.
Appendix 1.

Drawing on data for a sample of OECD countries and new EU member states, the following four graphs plot the relationship between the Kaitz index (value of minimum wage relative to median earnings) and the employment rates for specific groups of workers. Figure A1 covers male and female employment rates for workers aged 25-54 years old. Figure A2 covers male and female workers with less than secondary school education. For core-age workers, the association between variables is very weak. Interestingly, however, it is positive for women (0.171) and negative for men (-0.205). For workers with less than secondary school education the correlation measures are positive for both women and men, 0.136 and 0.138, respectively.

Figure A1. The Kaitz index and employment rates for core-age workers

Note: Data for 18 OECD countries plus 5 new EU member states.

Figure A2. The Kaitz index and employment rates for workers with less than secondary school education

Note: Data for 17 OECD countries.
Source: OECD minimum wage database, 2009 data; OECD Employment Outlook, 2007 data.
Appendix 2

Figure A3. Collective bargaining coverage in countries with and without a statutory minimum wage, 2006 (EU-27 plus Croatia)

Note: Data for Romania missing. 2006 data except Greece and Hungary (2005).
Source: ICTWSS (Visser 2009); except Croatia (Nestić and Bakarić 2010) and Ireland (eironline 2007); see appendix table A1.

Appendix 3

Figure A4. Change in minimum wage value (2000-9) and strength of collective bargaining coverage (averaged over 1995-2006)

Note: The level of collective bargaining coverage is averaged over the period 1995-2006, except Croatia which refers to an estimate for 2010 (Nestić and Bakarić 2010). The change in the minimum wage level refers to the difference in percentage points between the Kitz index in 2000 and in 2009 – except Ireland, 2001-2009, and Slovenia, 2005-2009.
Source: OECD minimum wage database plus data for Croatia from (Nestić and Bakarić 2010); Collective bargaining data from ICTWSS (Visser 2009) except Croatia (Nestić and Bakarić 2010) and Ireland (eironline).
Bibliography


ENDNOTES:

1 As Heery (2010) observes, this counter-claim is a classic example of what Hirschmann (1991) refers to as the ‘perversity thesis’, which involves a method of argument that seeks to demonstrate that the end result is absolutely the opposite of what was intended by the policy intervention.
2 The authors were members of a 5-country project, coordinated by Damian Grimshaw: ‘Minimum wage systems and changing industrial relations in Europe’ VS/2009/0159 (EWERC, University of Manchester) funded by the European Commission, DG Employment, Social Affairs and Equal Opportunities, Social Dialogue Unit during 2009-2010. The results are available on the EWERC website in the form of five national reports – for Croatia (Nestic and Bakaric 2010), Germany (Bosch and Weinkopf 2010), Hungary (Neumann 2010), Spain (Banyuls et al. 2010) and the UK (Grimshaw et al. 2010) - and a comparative report (Grimshaw and Rubery 2010).
3 The lens of analysis is widened further in some recent studies (Rubery and Grimshaw 2011, Salverda and Mayhew 2009) to include interaction effects with the institutions of employment protection and welfare benefits, on the one hand, and economic conditions relating to aggregate demand and industry competition on the other.
4 There are seven member states without a national minimum wage: Austria, Denmark, Finland, Italy, Cyprus, Sweden and Germany. Austria implemented a new minimum wage in 2009 (a gross monthly wage of €1,000 or €14,000 per year accounting for the 14 monthly payments) as part of a national, cross-sectoral agreement negotiated by social partners. However, it is not a statutory requirement and this has raised questions regarding lack of coverage of workers in sectors and regions where social partners have not concluded a collective agreement (Hofbauer and Adam 2009).
5 Our findings complement the EC (2008) study which reports various statistically significant correlations between the Kaitz index and industrial relations variables including employer density (0.741), union density (0.600) and bargaining centralisation (0.581).
6 These figures are supported by national earnings data which suggest a drop in the relative level of the minimum as a share of average earnings from 36% to 29% during 1992-2000 (Neumann 2010).
7 In 2007 the European Court of Justice ruled that a Latvian construction firm (Laval un Partneri) could not be forced to enter into collective negotiations with a Swedish union on rates of pay for its posted workers. Moreover, in a controversial legal decision, the strike was ruled illegal because it was said to have precluded the company’s freedom to provide services with its posted employees. The decision affirmed the criteria of the Posted Workers Directive which requires firms from other member state countries to comply with a national MW set through legislation.
8 It is notable that the picture for Sweden is remarkably similar. Minimum rates of pay in a sample of sectors range from 49% (local government) to 66% (bakery) of average earnings (personal correspondence with Per Skedinger; see, also, Skedinger 2009: 367).
9 In December 2010, Francis Maude, Minister for the UK government’s Cabinet Office, stated: ‘The code did little to protect staff, while deterring responsible employers from delivering public service contracts. … We should not be making it more difficult for small businesses and voluntary organisations to succeed in the public service market.’ The statement is rather extraordinary. It is clear from several studies that the code did a great deal to protect staff, especially their pensions.