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**Institutions and the Management of Human Resources:  
Incentive Pay Systems in France and Great Britain**

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## **Abstract**

Using data from large-scale establishment surveys in Britain and France, we show that incentive pay for non-managers is more widespread in France than in Britain. We explain this finding in terms of the 'beneficial constraint' arising from stronger employment protection in France, which provides an impulse to develop incentive pay; employer networking activities in France, which facilitate joint learning about its development and operation; and government fiscal incentives for profit-sharing, which reduces the cost of its operation.

Key words: incentive systems, merit pay, profit-sharing, employer networks

JEL classifications: J3, J5, M5, M52

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# **Institutions and the Management of Human Resources: Incentive Pay Systems in France and Great Britain<sup>1</sup>**

## **1. Introduction**

Recent decades have witnessed the growing use of incentive systems that link pay to performance, at individual and at group level, in Britain, and even more so, in France. In this paper, we explore the influence of the institutional environment on employers' adoption of different incentive pay systems. We draw on the now substantial literature in the New Economics of Personnel (NEP) and Human Resource Management (HRM) which broadly recommends that managers should match their incentive pay systems to the type of work system they operate as these affect their ability to monitor and manage employee performance. One limitation of these theories is that they seek to explain each organisation's decision in relation to such internal factors. Yet, as we show in this paper, even after controlling for these work organisational influences, there remain large differences in the use of incentive pay schemes between firms in Britain and France. We seek to explain these by looking at how different institutional environments shape the implementation and adoption of incentive pay systems.

It is common to think of the institutional environment in which firms make their HR decisions as an external constraint. For example, collective agreements which embody rate-for-the-job and pay-for-grade principles restrict management's scope to reward individual performance. Indeed, the logic of the OECD's Employment Protection Legislation Index (EPL), which covers both legal rules and collective agreements, is that although protection may benefit employees, it nevertheless restricts firms' flexibility to adjust to changing conditions (OECD, 2004). However, this is only part of the story. The institutional environment also provides resources which can make it easier and less risky for organisations to adopt innovative HR policies, and so widens the options open to firms. Levine and Tyson (1990) and Appelbaum and Batt (1994) argue that the weak institutional environment in the US delayed the introduction of innovative work practices. In similar vein, it has been argued that strong employer networks can favour development of transferable skills and innovative HR practices (Finegold 1991, Erickson and Jacoby, 2003), and that strong institutional coordination facilitated the spread of more flexible working practices in the Netherlands (Visser 1998), and the rise of diversified quality production in Germany (Streeck, 2004). In all of these cases, institutions have acted less as constraints, dictating a particular course of action, than by providing solutions to collective action problems that stood in the way of efficiency enhancing practices.

The British and French workplace surveys, respectively, WERS (Workplace Employment Relations Survey) and REPONSE (Relations Professionnelles et Négociation d'Entreprise), enable us to explore these questions in much finer grain owing to their detailed information on work organisation and HR practices at establishment level. Their historical dimension, 1990/92-2004, sheds valuable light on changes that led to the current position. Their

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comparability of methods and definitions enables matching of many practices captured by the two surveys. We consider three main kinds of institutional influence on the use of incentive pay: the effect of employment protection on use of the dismissal threat, which we argue has been a stimulant for the use of all types of incentive pay as employers have to motivate those whom they cannot easily dismiss; peer support from employers' local and national organisations, which has been especially relevant for developing more sophisticated incentive pay systems; and state encouragement of profit-sharing and employee share schemes by means of fiscal incentives.

We focus on individual payment-by-results (IPBR) linked to measurable performance indicators, 'merit pay' increases based on supervisory appraisal, and profit-sharing and to a lesser degree share schemes, which concern savings rather than pay. We compare these with plants that do not use incentive pay (NIP: no-incentive-pay), which, we hypothesise make greater use of the threat of dismissal as an alternative performance incentive. Comparisons between the two countries could not be made for other types of incentive pay because of differences in question design. The analysis is restricted to private sector establishments with 20 or more employees, the population covered by the 2004 REPONSE. We focus on non-managerial employees as this is the category to which the work organisation variables most closely relate.

We start by comparing incentive pay use in Britain and France. Then we outline the theories likely to explain the observed differences, notably, those from NEP and HRM and explore how the institutional environment relates to them. Next, we present the data and methods, followed by the regression results, and their interpretation. In conclusion, we argue for greater attention to the institutional environment as an influence on firms' choice of incentive pay systems, and more widely of their HR strategies.

## **2. Patterns of Incentive Pay Use in Britain and France**

Despite the stronger institutional regulation of pay and employment relations in France, compared with Britain, French establishments make considerably greater use of individual and collective forms of incentive pay. Table 1 presents an overview, focusing on our core set of incentive schemes, grouped in a number of different ways. Although the differences between the two countries are strong, they require careful interpretation because of the need to ensure comparable definitions of incentive pay schemes. Individual schemes in the two surveys comprise individual payment-by-results (IPBR) and 'merit pay' (for questions used, see Appendix Table 1). Individual PBR is defined in similar ways in both surveys: related to quantitative measures of physical and value output, such as piecework and sales commissions.

'Merit pay' is an individualised pay increase or supplement based on a judgemental evaluation of employees' individual performance by their line managers (Heneman and Werner 2005). It is the hardest scheme to measure because of variations in how well 'merit' is assessed in practice, and is complicated by a difference of terminology used in the two countries. WERS asks explicitly about 'merit pay' and shows a card defining it as 'related to a subjective assessment of individual performance by a supervisor or manager'. REPONSE asks about similar pay practices, but uses the term current among French employers and unions by referring to 'individualisation', or individualised pay increases, which it distinguishes from IPBR, general increases for all employees, and from collective bonuses.<sup>2</sup>

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<sup>2</sup> In France, 'merit pay' has a negative connotation and is not widely used (Roussel, 2000).

To clarify, we distinguish three situations in which establishments might report the use of merit pay:

- (a) where performance appraisals are linked to individual pay awards;
- (b) where managers conduct separate evaluations for merit pay, often to prevent pay from distorting performance appraisal;
- (c) where managers make individual pay awards without any real evaluation.

The spirit of Heneman and Werner's review includes (a) and (b) but would exclude (c), and that is the definition adopted here. By combining the pay system questions in both surveys with other questions, we seek to align both countries with Heneman and Werner's definition. Both surveys ask whether the establishment has a formal appraisal system for some or all their employees, and whether appraisal is linked to pay. Thus it is fairly easy to identify situation (a) for both countries. Distinguishing situations (b) and (c) is more delicate, but is necessary because 48% of British establishments reporting use of merit pay do not link it with their performance appraisal systems. The commonest cause of weak evaluation systems is that line-managers lack the skills and organisational support to conduct proper evaluations, which if done badly can be very conflictual. On the other hand, if the establishment has a performance appraisal system, and applies it to all its non-managerial employees, then, very likely, it has the necessary management support systems, and consequently the capability to conduct separate evaluations for pay purposes. Hence, we use this criterion to distinguish situation (b) from (c), which we exclude. In addition, REPONSE asks about the criteria used for awarding individualised increases, and we include only those that relate to individual performance. Thus, the definition we apply to France may be slightly more demanding than for Britain. Nevertheless, Table 1 shows that merit pay is much more widespread in France than in Britain: 42% compared with 13% of private establishments with 20 or more employees. It remains more widespread in France if we apply the over-restrictive definition (a) in which appraisal is linked to pay: 22% against 7%. Individual bonuses, IPBR, are also much more common in France: around 55% against 30%. Taking both types of individual incentive pay, French establishments stand out as much more intensive users at 69% compared with 37% for Britain.

Collective incentives covered by the two surveys comprise team, group and establishment or enterprise bonuses, profit-sharing, and employee share ownership. They are recorded differently between the two surveys, reflecting partly their tax treatment in the two countries. French governments have long encouraged 'intéressement', which is mostly profit-sharing, but may also include collective bonuses tied to specific productivity, quality or other collective performance targets. To qualify for tax advantages, 'intéressement' must apply equally to all employees, as must share schemes, the sums paid must be variable and set out in an establishment agreement (Cellier and Chaput, 2007). Profit-sharing benefited from similar tax incentives in Britain up to 2000, when they ceased for both new and existing schemes (HMRC, 2009). REPONSE does not provide information on collective bonuses separately from 'intéressement', whereas WERS does. Table 1 shows that, for non-managers, French establishments also use collective bonuses and profit-sharing more widely than in Britain: 59% against 33%. Profit-sharing for non-managerial employees is practiced by 21% of British establishments, and intéressement, by 42% of those in France. The percentages are similar in both countries if we include managerial schemes, highlighting Britain's relative concentration of profit sharing on managers.

Although share schemes relate to savings rather than pay, as Bryson and Freeman (2008) point out, they have grown rapidly in Britain, encouraged by tax incentives, and provided an

alternative to profit-sharing when its tax incentives were withdrawn.<sup>3</sup> In 2004, they were used by 20% of establishments for non-managers, and 25% including managers. This compares with about 10% of establishments in France. Nevertheless, if we consider profit-sharing and share schemes together as forms of financial participation, French firms remain more extensive users of these types of incentives for non-managers: 46% for France against 34% for Britain, although the British figure rises to 52% if managers' schemes are also included. Profit-sharing and share schemes tend to be universal for all employees in France, but some are more occupationally specific in Britain, with a strong leaning towards managers.

The fourth category concerns establishments without incentive pay for their non-managerial employees: 'non-incentive pay' (NIP) establishments. These represent about half in Britain (53% excluding share schemes and 47% including them), compared with 18% in France. This may slightly overstate the numbers without incentive pay, because neither survey provides information on pay rises linked to promotion which may also be considered as a form of incentive.

France has used incentive pay more intensively than Britain for a number of years. REPOSE shows that IPBR was already widely used among French establishments in 1992, and that it increased only modestly up to 2004 (establishments with 50 or more employees – the size threshold in 1992). In contrast, in Britain, having spread from 1984 to 1990, from 25% to 31% of private establishments, its incidence then fell back to 26% in 2004 (Pendleton et al. 2008, Figure 2, establishments with 25 or more employees). Thus, Britain's current lower rate of usage compared with France is not of recent origin. In both countries, use of IPBR declined in manufacturing and grew in financial and business services. Use of merit pay increased in both countries between 1990/92 and 2004, dramatically in France, but only modestly in Britain. In France, merit pay increased from 25% of establishments in 1992, through 38% in 1998 to 50% in 2004. This trend is corroborated by a number of other studies in France.<sup>4</sup> The growth has occurred across the manufacturing and service sectors. For Britain, because of definitional changes in WERS, we compare changes within the two WERS panels for 1990-98 and 1998-2004. These indicate only a modest expansion in the use of merit pay.<sup>5</sup> The French have also been heavier users than the British of collective forms of incentive pay for non-managers, throughout the period, but the gap narrows when we include managers' schemes, and share schemes. Looking across a longer time period, from 1984 to 2004, Pendleton et al. (2008) report that use of collective bonuses grew from 15% to 25%, and that of profit-sharing, from just under 20% to 44% - their figures include managers.<sup>6</sup> Bryson and

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<sup>3</sup> See HM Revenue and Customs: [http://www.hmrc.gov.uk/stats/emp\\_share\\_schemes/menu.htm](http://www.hmrc.gov.uk/stats/emp_share_schemes/menu.htm)

<sup>4</sup> See: Ministère des Affaires Sociales et de l'Emploi (1988), Ministère du Travail (1992), Sandoval (1996) and (1997), and Barreau and Brochard (2003), Coutrot and Mabile (1993), and Coutrot.(1998).

<sup>5</sup> Because of the definitional changes and the lack of supplementary questions on appraisal for the whole period, the authors examined the WERS panels for 1990-98 and 1998-2004 separately. For 1990-98 we took the question on use of merit pay, but without the qualificatory questions on appraisal, and that showed usage rates of about 38-39% in both years. For 1998-2004, the variable pay question, which combined individual and collective forms, showed a progression from 24% to 33%, but when combined with the question on use of individual performance measures, this fell to 15% and 17% respectively for 1998 and 2004. These results are on the same population of establishments as those of Table 1.

<sup>6</sup> Forthcoming, reported in Bryson and Freeman (2008: 2). The figures relate to private establishments with 25 or more employees, and include managers.

Freeman (2008) also report a strong growth in share schemes among British establishments in the years leading up to 2004, although apparently not as a result of quitting profit-sharing.<sup>7</sup>

Finally, Pendleton (2006) and Bryson and Freeman (2008) for Britain, and Brizard and Koubi (2007) for France, report evidence of growing use of multiple types of incentive pay within the same establishments, and that behind the overall trends, many establishments switch between different schemes. Brizard and Koubi observe increasing use of profit-sharing and merit pay in tandem. Pendleton proposes that managers may mix incentives to balance weaknesses of one with the strengths of another, and Bryson and Freeman find that some schemes, such as share schemes and profit-sharing may be mutually enhancing and lead to higher productivity when used in combination. Some figures for multiple use are shown in the bottom rows of Table 1.

### **3. Factors Shaping the Choice of Incentive Pay Systems**

Comparing incentive pay patterns in Britain and France makes it possible to consider simultaneously the effects of both motivational or incentive factors and the institutional context. Here, we sketch out the main theories. NEP and HRM theories emphasise internal factors within organisations, notably, that incentive pay systems can contribute to organisational performance if they fit the work environment. In contrast, institutional theories stress collective action and the externalities associated with different types of incentives. We also consider the impact of market environment, a factor in theories of pay strategy, and establishment size and sector.

#### **The influence of work organization, technology and skills**

Work organisation, technology and skills shape the choice of incentives according to agency theory because they affect the ease or difficulty with which management monitors employee effort and performance (Prendergast, 1999; Lazear, 1998). If skills are simple, and there are few information asymmetries between managers and their employees, then it is often possible to monitor the work process directly, to identify those who are ‘slacking’ and, if necessary, threaten dismissal. In more complex organisations, managers have more specialised roles, lack familiarity with many aspects of the work process, and face information asymmetries which make direct monitoring unreliable and inefficient. In these more complex environments, they face two broad options: whether to coordinate work by ‘standardisation’ or by ‘mutual adjustment’ (Mintzberg, 1979).

Standardisation makes performance easier to plan and to monitor although it requires a predictable external environment. Taylorist patterns of work organisation have often focused on standardising individual work *outputs*. Individual jobs are designed for ease of work flow, monitoring, training inputs and rewards. Thus, by standardising and pacing work, the process technology provides much of the quality and effort monitoring needed. Depending on how much autonomy workers retain, a firm may additionally choose to adopt output-based incentives to sustain the work pace and penalise defects. For example, many firms pay their sales staff commissions to ensure that sales targets are reached. On the other side of the coin, withdrawal of effort through irregular attendance can be particularly disruptive in this kind of environment (Lanfranchi and Treble, 2008). Hence, it is often accompanied by close

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<sup>7</sup> The 98-04 panel shows that about 14% of establishment that switched into esops between 1998 and 2004 had done so by switching out of profit-sharing since 1998. The population referred to is that of private establishments with 20+ employees. It should be said that the sample numbers concerned are quite small.

monitoring of absence, and its output-based rewards supplemented with sanctions against absenteeism.

Alternatively, firms may choose to standardise *work roles*. This is common in white collar environments where both effort and output are hard to measure in the short-run, often because of the informational complexity of the work and the judgement that employees are required to exercise. In such cases, if management focuses on what can be measured easily, it risks biasing performance towards those items (Holmstrom and Milgrom, 1991). An alternative solution is to use *subjective* evaluations by line managers provided they are well-informed about their staff's performance (Milgrom and Roberts, 1992, Baron and Kreps 1999). This type of evaluation enables management to take greater account of many complex facets of work and its multiple objectives. These evaluations are often used to support 'merit pay'.

There are also many work environments in which line managers are not well-placed to evaluate employees' performance in the short-run, for example, because of long-term outcomes, or employees' expert knowledge. Such might be the case of a professional bureaucracy, for example, in health care and education. In such cases, a longer monitoring cycle may be appropriate, such as for promotion systems, although these are not covered by WERS and REPONSE.

In organisational environments of greater uncertainty and informational complexity, coordination by mutual adjustment is often preferred because standardisation is inefficient in such conditions. Work roles need to adapt as new demands and new information emerge. In research and development, for example, those involved often have only an intuitive idea of what has to be achieved, and this is concretised as new information is discovered. It makes little sense to plan detailed work roles in advance, and it is more efficient to adopt broad job descriptions with flexible work allocation. The tightly codified job descriptions that facilitate individual monitoring are inappropriate in such conditions (McNabb and Whitfield, 2001). Hence, a more suitable form of organisation is that of flexible work teams, with rewards linked to group rather than individual performance.

The risk of free-riding in team organisation increases with group size. Kandel and Lazear (1992) propose that peer monitoring can be efficient in such environments, and can be encouraged by means of group rewards. However, peer groups can also be dysfunctional: they may be discriminatory, and they may coalesce around vested interests. Thus, a potential solution is to supplement peer monitoring with individual appraisal by line managers.

In recent years, with the spread of 'high performance work systems', there has been a considerable effort to promote greater use of mutual adjustment where in the past firms relied heavily on standardisation. This can be seen in increased use of quality circles, multi-skilling, job rotation, and use of teams (Ichniowski and Shaw 2003), all of which complicate the task of individual performance measurement, and especially for output-based pay. These developments, in conjunction with new technologies, such as greater use of computers, have raised the technical demands on employees, which place a premium on employee task discretion, at least for the categories affected, and hence require more judgemental approaches to performance evaluation (Gallie et al., 2004). Conversely, simple output incentives often require a rather rigid pattern of work organisation in order to keep output monitoring simple, but the price is reduced adaptability to a changing environment (Kleiner, and Freeman, 1998).

The contribution of this broad theoretical approach can be summarised in the decision tree sketched in Figure 1. It emphasises the close relationship between organisational decisions on work organisation and incentives, looking first at the complexity and information



asymmetries of work process, then at the choice of coordination mechanism, the influence of this on the design of the key outputs, which in turn affects the appropriate type of measurement, and choice of incentive pay system.

### **Human resource management systems and procedural aspects of incentive pay**

Whereas agency theory stresses the objective conditions for monitoring performance, HRM theories stress procedures and their fairness. Folger and Cropanzano (1998) argue that it is mistaken to think of performance appraisal as the subjective equivalent of objective performance measures, something they refer to as the 'test metaphor'. A more suitable metaphor is that of a 'trial', in which matters of procedural justice play a critical part. Employees will only accept the outcome if they believe it has been reached by fair means.

Their view is concordant with the main motivational theories of the HRM literature. According to expectancy theory, employees' willingness to supply the required effort depends on their perception of a link between performance and reward (Lawler 1971, Ambrose and Kulik, 1999). This will be influenced by their perceptions of management's fair dealing and its competence to measure their performance. If IPBR systems have long been popular with employees it is because, in addition to any match with the work system, they have made the link between performance and reward more visible and predictable. In contrast, merit pay needs checks and balances on managers' fair dealing if it is to motivate effectively.

Goal setting theory also stresses the importance of the quality of the objective setting and appraisal process highlighting the dialogue between management and workers in the establishment of work objectives (Locke and Latham 2002). Such dialogue can improve the information on which objectives are based and foster a greater sense of goal commitment among employees (Covaleski et al. 1998). Goal clarification can also benefit team working especially when individuals do not have standardised work roles. Thus, we expect good quality performance appraisal systems to be associated with the use of merit pay and to supplement collective incentives such as profit-sharing. On the other hand, they would be less in evidence in firms relying mainly on IPBR or on the dismissal threat.

### **Business strategy and market conditions**

Firms may seek to align their pay systems with their wider business strategies (Gerhart and Rynes, 2003). These authors identify three types of fit: vertical, horizontal, and internal within pay strategy. Vertical alignment concerns the fit with product market strategies. This may occur if firms focus their competitive strategies on price or on quality. In the first case, seeking cost-minimisation practices, they would be expected to use either the dismissal threat or robust forms of IPBR, whereas in the latter, they would use more complex incentive systems to build employee involvement. Another aspect of competitive strategy concerns risk-sharing with employees: often manifest in profit-sharing which makes pay more responsive to market fluctuations (Mabile, 1998). A high percentage of management respondents to REPOSE 2004 cited this as one of its benefits.<sup>8</sup> Horizontal alignment concerns the fit with other organisational practices, and overlaps largely with the theories already discussed. The third type of fit concerns how firms position themselves in their labour markets, for example,

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<sup>8</sup> This was indeed one of the advantages recognised by French HR directors when replying to Réponse. 79% of management respondents answered that profit-sharing (intéressement) enabled firms to increase their employees' pay without commitment to future pay levels (Question 6.14). Respondents with profit-sharing agreements were more likely to agree strongly than those without (50% compared with 38%). As Mabile points out, despite a legal principle of non-substitution between basic pay and profit-shares in the French government schemes, in practice, there has been some substitution, and hence a potential increase in pay variability as a result of profit-sharing, particularly in small firms (Mabile 1998).

by paying ‘efficiency wages’ above the market rate in order to elicit higher performance. This is sometimes presented as a way of making the dismissal threat more effective, because the dismissed employee has more to lose, and sometimes as a partial gift exchange, inducing reciprocal goodwill on the employee’s part (Akerlof, 1982).

These monitoring, alignment and procedural justice considerations influence what Bryson and Freeman (2008) refer to as the ‘transaction’ or operational cost of incentive pay schemes. The economic significance of performance monitoring lies in its cost so that it weighs on firms’ business decisions. These include, from agency theory, costs of measuring performance and keeping records, to which one can also add the cost of HR policies designed to improve employees’ perceptions of fair treatment, and those of training managers, setting up appraisal procedures, due process, and so on. They affect incentive pay systems in different ways. Merit pay is probably the most expensive to operate, for a given amount of bonus, because of the need for procedural justice mechanisms, and to ensure managers have the training and resources to operate them effectively. The cost of IPBR often lies in setting up standardised work systems in which output can be measured quantitatively, although it often also involves due process because of disputes over measurement criteria and their application. Profit-sharing, on the other hand, has rather low operational costs, although the designers of the early (1959) profit-sharing legislation in France found it was necessary to opt for audited profits because of conflicts between employers and unions (Camerlynk and Lyon-Caen, 1977). In some respects, the dismissal threat might appear the least costly, although this may be affected by dismissal procedures. All of these elements focus on internal organisational factors.

### **Externalities and the influence of collective action on diffusion**

Three types of external influence are particularly relevant to the differences in incentive pay patterns between Britain and France: employment protection, employer networking, and fiscal subsidies. Employment protection rules are based on legislation and encompassing collective agreements that affect all, or large numbers of firms in a given economy. This is the sense of the OECD’s EPL index. It places the British and French labour markets at opposite poles. Mostly, employment protection rules allow dismissals, but raise their cost to the employer, for example, by requiring notice periods, due process and financial compensation. This raises the cost of using the dismissal threat, and so encourages firms to invest in alternative motivators, such as incentive pay. In contrast, fiscal incentives, which are also available to all private employers, reduce the operational cost of the incentives to which they apply. Of the three externalities, the employer networking requires the most explanation.

The actions of other firms impinge upon an individual firm’s choice of incentive pay in a number of ways, particularly for independent, or single, establishments, and smaller sized firms. The decisions on pay levels by other firms have an obvious impact because they are labour market competitors. Mobility may also affect the working of HR practices. As workers move between firms, they take their expectations of how management operates with them. The same is true of managers. Thus, if they are familiar with low-trust relations from their previous employment, they are likely to be cynical about promises made by their new employers. Individual firms can break out of this cycle, but they have to invest in the employee selection and training required for a more high trust work environment. Levine and Tyson (1990) argue that rival employers can undermine these efforts when they target such workers for poaching. Likewise, if managers see their own job markets as comprising low-trust firms, they may orient their performance towards short-term goals in order to boost their external career prospects (Appelbaum and Batt, 1994). On the other hand, if there is a critical mass of employers who want to innovate, then there is scope for sharing knowledge and experience in the development of new types of HR systems and new pay practices. The

effectiveness of learning by doing depends on the range of unusual problems encountered (Koike and Inoki, 1990). When firms pool their diverse experiences with new pay systems, they learn from a wide variety of different problems encountered across a range of organisations, and they can incorporate these into improved design and operation. The willingness to engage in such activities is enhanced by the existence of suitable employer networks (Erickson and Jacoby, 2003).

Although managers can easily get ‘off-the-peg’ information about pay systems, they do not usually know in advance which best fit the conditions of their own organisation. The WERS and REPONSE panels indicate that many establishments switch incentive pay systems, suggesting a good deal of experimentation. Indeed, Belfield and Marsden (2003) found that switching was more common when there was a poor fit between pay system and work environment. Firms can also hire consultants, but as Cole (1989 and 1998) argued, conflicts of interest between consultants and their clients can reduce the effectiveness of the learning process compared with using network relations with peer organisations – the collective action solution. Firms might use local employer organisations and human resource manager clubs, for example, as a basis for such network activities, as discussed later on.<sup>9</sup> We anticipate that such externalities will be greatest for independent establishments that are not able to draw on the resources of a larger organisation.

Such negative and positive externalities arising from the actions of other employers affect, in different ways, each of the four types of incentive system: IPBR, merit pay, profit-sharing, and the dismissal threat. In general, the impact is greater, the higher the initial investments and operating costs. In many respects, they are least for the dismissal threat, arguably the most robust, albeit the most negative, of the incentive systems considered here. In the NEP literature, it is presented as one of the commonest alternatives to positive incentives (Belman et al, 1992). If a firm’s employees are easily replaced, and its investment in their human capital small, then it might consider that the dismissal threat will motivate its employees more cheaply than incentive payments. It is robust because it cannot be undercut by competing employers, although in the long-run it may well inhibit firms from investing in their workers’ skills. It is an option that is more readily available to employers in labour markets where employment protection rules are weak.

Individual PBR systems are also fairly robust because they focus on objective performance measures which are easy to observe, and in many sectors, both managers and workers have long been familiar with their operation - they are ‘tried and tested’. On the other hand, in sectors where their use is new, their operation can be problematic because of lack of experience on both sides. Since the early 1990s, in both countries, the decline in IPBR in manufacturing has been offset by growth in private services, and especially in financial and business services, arguably where there is less experience of their operation<sup>10</sup>. Thus, recent examples in these sectors illustrate the risks of poorly designed IPBR such as the miss-selling pensions and insurance policies, and excessive risk-taking.<sup>11</sup> As Pendleton (2006) argued, some firms have supplemented IPBR with collective schemes in order to moderate

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<sup>9</sup> I am grateful to Eric Verdier for explaining to me how these have worked in the French environment. This view is based on his extensive fieldwork contacts with local and national employers there.

<sup>10</sup> Evidence for Britain back to 1984 can be found in Bryson et al (2008). Evidence from the REPONSE panel shows overall stability in the use of IPBR by French establishments, a modest decline in manufacturing being compensated by growth in financial services and in distribution.

<sup>11</sup> See for example, ‘City watchdog to focus on bankers’ bonuses’, Financial Times, 20.5.08.

excessively individualistic rewards. Thus as with merit pay, there is scope within IPBR for the learning and knowledge sharing processes mentioned earlier, especially in the sectors where its operation has grown in recent years.

Merit pay depends heavily upon employee confidence in an evaluation process they cannot observe directly. The perceived unfairness of many of the early merit pay schemes in France bears this out (Eustache 1986). In their new form, there was a greater need to learn how to operate such schemes in practice, to improve their design, and to blend them with existing practices, such as pay negotiations. As stressed earlier, the investments required for merit pay are greater than for the other types of incentive pay systems considered here. They give rise to externalities of two kinds: the gains from joint learning, and potential losses from poaching because of the human resource investments required to make these policies more effective.

Profit-sharing, at first sight, might seem easy to apply, and free from most obvious externalities. However, potential free-rider issues need to be avoided. It may be for such reasons that many employers, especially in France, have sought in recent years to supplement profit-sharing with appraisal and merit pay, as observed by Brizard and Koubi (2007). Peer pressures are likely to be less effective the larger the group. Similar observations apply to share schemes. Therefore, there is scope also for multi-employer activities to improve their design and operation, albeit to a lesser degree than for merit pay. It is likely too that the presence of fiscal subsidies will exert a significant influence by reducing operating costs.

Faced with the considerable outlay for an outcome that is uncertain, many firms may prefer to use the dismissal threat, especially if it is readily available because of permissive employment protection rules. Thus one can easily envisage the development of a low-incentive equilibrium, analogous to the low-skill equilibrium of Finegold and Soskice (1988). Major interdependencies between the decisions of individual firms penalise lone innovators, and therefore require some form of collective action for their solution. In this context, the existence of restrictive employment protection rules could provide the push necessary to cause large numbers of firms to consider substituting positive for negative performance incentives.

The strength of formal employment relations institutions has an ambiguous role with regard to incentive pay. Historically, union representation has built on the concept of the common rule that applies to all employees in a particular category (Webb and Webb 1902). Applied to pay systems, it has often translated into rate-for-the-job and pay-for-grade principles. Such rules underpin effective union action because it is easier to mobilise members around a common goal (Traxler, 1995), and because employees can more easily monitor the application of clear and simple pay rules. Because merit pay blurs the perceived link between effort and reward, one would expect strong workplace unions to oppose it, at least initially, and to insist that if incentive pay is to be used, it should follow clear and predetermined rules (Barkume, 2004)<sup>12</sup>.

On the other hand, a desire to increase procedural justice may cause managers to seek ways of 'tying their own hands'. To allay suspicions that they will abuse their discretion in awarding merit pay, they can use existing representation channels in new ways: to discuss or agree the overall amount of money and criteria for its distribution with local employee representatives. In France, 50% of private establishments held negotiations or discussions on pay in 2004, and

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<sup>12</sup> Barkume (2004) found that in a sample of US plants, union presence tended to be associated with pay supplements calculated according to fixed rules related to the type of work, and that IPBR was more common in non-union plants. On the other hand, Gregg and Machin (1988) found that union presence of itself did not inhibit use of certain forms of contingent pay, although presence of strong unions did.

of those with merit pay, 47% negotiated over the kitty, and 39% the criteria to be applied. In Britain, many fewer private establishments have this resource (just over 20% of plants in our sample were covered by pay agreements)<sup>13</sup>. National and sectoral employer organisations can assist such processes by facilitating change at lower levels. For example, in order to encourage local pay developments, national employer organisations may have to press for below-inflation increases at national level, to leave more headroom for local negotiation (Schager, 1993).

Finally, the density of the web of employment relations institutions can reinforce local employer networking. In appearance, networking is a fragile process, both to promote joint learning and to restrain poaching. When considered in isolation, networks have limited sanctions against deviant members. However, if they are embedded in a number of other employment relations activities, such as involvement in employer associations, sectoral bargaining, and dealing with the same unions as other local firms, then we are in a situation that Aoki (2001, Ch. 2) describes as ‘linked games’. These are very important for the development of cooperation because when an employer behaves disloyally in one ‘game’, its fellows can reduce or withdraw their cooperation across a range of other linked activities. Thus, although employer network activities are present in both countries, one might expect them to be more effective when embedded in a stronger web of employment relations activities, and hence for their impact on incentive pay choice to be greater in France than in Britain.

Our key expectations concerning the influence of these factors on establishments’ choice of incentive pay systems are summarised in Table 2.

## **4. Data and Statistical Method**

### **Description of key survey variables**

How the main influences on incentive choice shown in the decision chart in Figure 1 translate into the survey questions is shown in Table 2, together with the expected signs attaching to each. More detail on the questions is given in Appendix Table 2. Thus, complex work environments, characterised by information asymmetries between workers and their managers, can be identified by a high training intensity, high use of computers, high percentages of management and professional, and of technical staff, and use of formal qualifications instead of on-the-job training. Simple skill environments can be identified by the inverse of these.

Coordination by mutual adjustment is signalled by use of teams, and small group activities which involve continuous adaptation to changing work demands. Coordination by standardisation is signalled by extensive use of business targets and absence monitoring, TQM, and high levels of administrative staff to manage these systems. Both types of organisation require investments in coordination routines which must be learned by employees so that other categories of staff are needed as employment buffers to provide flexibility against variations in demand. Agency personnel are one such category, but their use is expensive owing to agency fees, so they are used when there is a need for predictability over supply and quality. In contrast, organisations that coordinate by direct control, can invest less in their human resources so that numerical flexibility can be spread across all their

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<sup>13</sup> 22%, based on the variable used in Appendix Table 3 (fcover) taking the percentage of establishments in which no employees had their pay determined by collective bargaining.

employees. They are more likely to use a second type of buffer: general fixed-term employees, who do not incur agency fees. A high percentage of these would denote low investments in firm-specific skills and low attachment between the firm and its employees, and hence scope for the dismissal threat. However, many new hires are also offered probationary fixed-term contracts, especially in France (INSEE 2008), and their presence could reflect employment growth. Therefore, we interact the percentage of fixed-term employees with the absence of employment growth, ‘fixed-term-no-growth’, which we expect to be positively related to low attachment and use of the dismissal threat. A second indicator of use of secondary labour market workers with low dismissal costs is the percentage of women workers. This is not ideal, but as shown by a detailed study of British and French labour markets, women workers in both countries, but especially in Britain, continue to be concentrated in secondary labour markets (Valette 2007, Ch 4).

Job discretion is one of the key mediating factors in both incentive and motivation theory. This is captured by the questions on job autonomy and managerial control in both surveys, and was the measure used by Brown and Heywood (2005). However, the two surveys have adopted different approaches: WERS measures the influence workers have over how they organise, and pace their work, whereas REPONSE measures their independence from management intervention. These two approaches may reflect a difference in managerial hierarchies in the two countries, notably with more tightly structured hierarchies in France (Maurice et al. 1980, Gallie 1983). In many circumstances, they give similar results. Both correlate positively with the measures of occupational level, training intensity, computer use, and sector, variables that Green (2008) found were correlated with job discretion. Nevertheless, they could diverge in certain types of work environment: in standardised environments the same narrowly defined jobs might benefit from high task discretion within the job combined with frequent management intervention because skills involved are narrow. Likewise, under direct control, the same low-skilled job might have low autonomy, but require infrequent management intervention because of its routine nature. Thus, IPBR could be associated with opposite scores of job autonomy, high in Britain and low in France, and the opposite way round for NIP. In the pooled regression, we use a country interaction to capture these contrasting definitions.

Use of performance appraisal has a dual significance. It can be a performance monitoring practice used when objective measures are inappropriate (Baron and Kreps, 1999: Ch 10), and so may indicate the complexity of individual work performance. It can also provide procedural justice (Folger and Cropanzano, 1998: Ch 5). For both reasons, we expect appraisal to correlate negatively with NIP and IPBR, and positively with merit pay and profit-sharing. It may also be used to counter potential free-rider effects under group incentives. However, use of this measure for merit pay is problematic because it is used in our definition. We therefore omit appraisal from the merit pay regressions in the main tables. Institutional resources that could underpin either pay-for-grade rules or procedural justice mechanisms are well-covered by both surveys but in ways that reflect the different institutional arrangements in both countries. Our chosen indicator of workplace union strength, which could pressurise employers to keep to pay-for-grade systems, was the presence of a workplace trade union employee representative. As the focus of this study is on incentive pay, we are concerned about the influence of collective agreements on its use. In Britain, coverage of the workplace by a collective agreement would normally capture this. In France, we used whether the establishment followed bonus rates in the relevant industry pay agreement.<sup>14</sup>

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<sup>14</sup> In 56% of cases they did; in 11% they did not even though bonus rates were covered by the agreement – French employers are at liberty to pay above the industry agreement rates; and in 26% the industry agreement did not cover bonuses. In the remaining cases, the respondent did not know.

Another key institutional resource concerns employer networking at local level. This can be measured partially by involvement in local and regional employer association activities, and other local employer bodies such as chambers of industry and commerce. REPOSE specifies an additional category, not used in WERS, on involvement in ‘clubs’ of HR directors and entrepreneurs. We were not able to replicate for both countries the measure of networking used by Erickson and Jacoby (2003) by counting the number of activities in which firms were involved. However, from our consideration of externalities, networking should be particularly valuable for independent establishments which often lack the internal resources to develop fully their own HR practices. Thus, we interact involvement in local employer activities with being an independent establishment. By the same argument, large establishments, and those in multi-unit organisations, are likely to benefit from internal resources, and so have less to gain from networking.

Local employer networking can benefit from being embedded in a strong employment relations milieu. National employer organisations can help them get started and provide frameworks for developing local pay strategies. Local bargaining itself may stimulate employer networks as they deal with the same unions at local level. This can be seen from the two surveys: establishments engaged in local activities are more often members of national associations in France, than in Britain (71% to 50%). They more often have a workplace union rep (44% to 9%), and more often have a collective agreement on bonuses or a local agreement on pay (70% and 22%). Thus, although networking has a special role to play in the development of organisational capacities to run complex incentive pay systems, it derives strength from the web of employment relations activities in which establishments are involved. Therefore, when analysing the different rates of incentive pay adoption in the two countries, we look closely at networking in relation to this whole bundle of variables.

In contrast to firms with sophisticated incentive pay systems, those using NIP may often affiliate to national employer associations in order to be covered by sectoral agreements on industry pay minima, and thus ‘out-source’ pay-setting, and economise on their HR expenditures. We therefore restrict the variable on membership of a national employers’ body to establishments that are involved at that level only.

Workplace climate, according to a number of studies, is a factor in the success of incentive pay schemes (eg. Drago and Heywood, 1995), and is therefore likely to favour their adoption, especially the higher transaction cost schemes such as merit pay. It is measured directly in both surveys by asking management and employee representatives. Although the replies of managers and employee reps correlate moderately well, the sample numbers for reps are significantly smaller, so we stick with the management perceptions.<sup>15</sup>

Market strategy (which has been stressed as a factor in shaping organisations’ pay strategies) (eg. Gerhart and Rynes, 2003), is partially captured by whether or not the establishment competes on price or on quality. Two other factors associated with the pay strategy literature are whether the firm seeks to pay above the ‘market rate’ in order to attract better employees and to reinforce motivation, which we capture by whether establishment average pay is above the mean for its industry, and its ability to pay, which we capture by the management respondent’s estimate of their firm’s financial performance relative to their main competitors.

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<sup>15</sup> It is possible also to look at individual employee perceptions. However, only a minority of establishments have sufficient employee respondents to compute a reliable measure for the establishment as a whole.

Economic sector serves partly as a conventional control variable, but it also captures other influences. In France, unlike in Britain, it remains an influence on sectoral pay bargaining, as on, job classifications, and some bonuses. There are also well-known sectoral work patterns, such as the use of sales commissions in Distribution and part of Financial Services, of bonuses in Construction for on-time completion of building projects, and use of pay-for-grade systems in professional bureaucracies such as in Health and Education.

For the two-country comparison, in many cases, we were able to match single questions. Where several questions appeared to focus on closely related practices or measures, we combined them to form an index, and checked its internal consistency using factor analysis and Cronbach's alpha.<sup>16</sup> All our variables are scaled to values between zero and unity to facilitate comparisons. Where possible, we retained continuous scales to avoid loss of information, but where the match of questions was less robust, or they were of a simple 'yes/no' kind, we opted for binary measures (see Appendix Table 3).

Finally, for the effects of employment protection and fiscal subsidies, which apply to all private establishments in an economy, we mobilise the country dummy in the pooled regressions, using the other variables as indicators of the paths through which these factors influence incentive choice. The OECD's EPL index shows that British workers are considerably less protected than their French counterparts so that their employers are correspondingly less constrained by legal and collective agreement rules over dismissals, a fact reinforced by the relative decline of union strength in Britain since the 1980s (Blanchflower et al. 2006, and Amossé 2006). In fact, French employment law provides streamlined dismissal and consultation procedures for small firms with less than 50 employees, and this size threshold will be used later to test for the effect of EPL. Lesser protection is also reflected in the greater proportion of unstable and secondary labour market jobs, from which dismissal is easier, in Britain compared with France (Valette, 2007), indicators of which we shall also use in our establishment level analysis. Valette shows that in Britain these cover about 50% of British workers compared with 30% in France. Thus, the labour market environment in Britain means that the dismissal threat is a more readily available option to enforce work discipline than in France.

### **Characteristics of the sample establishments in the two countries**

Despite broad similarities between establishments in the two countries, there are some notable differences between the two economies which could contribute to the overall patterns of incentive use (Appendix Table 3). More British establishments use teams: nearly three-quarters of British private establishments use teamwork for the majority of their employees, as against about a fifth in France. They also score more highly for job autonomy: 0.68 against 0.35 in France, with values ranging between zero and one. In contrast, French establishments more often use small group activities (0.64 compared with 0.52). Thus a first impression is that British establishments provide more job autonomy and teamwork, and French ones, more management-led small group activities.

Appraisal for all employees is widespread in both countries, but more so in Britain, as is the monitoring of absence. French establishments make more use of business targets, quality

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<sup>16</sup> For example, our measure of small group activities combined questions on the presence of quality circles and workshop meetings. Each was binary, so we added their respective scores and divided by two. We used factor analysis and Cronbach's alpha to see how far the questions loaded onto a single factor. We also checked across our key work organisation measures to ensure they were distinct. Thus, although team working, might seem related to job autonomy measures, in practice it loaded onto a separate factor, and alpha score was low, so we treated teams and autonomy as separate independent variables.



standards, and agency personnel, which are often used in conjunction with just-in-time. They compete more on quality and less on price. French establishments employ more technicians, and British ones, more administrative and sales staff. This suggests a somewhat different management focus: France having a greater emphasis on technical issues, tight management control, clarity of plant objectives. French establishments are generally more heavily engaged in collective activities with a stronger web of collective employment relations.

### **Estimation model**

For practical reasons, we chose a simple additive model for estimating the probability that an establishment will use a particular type of incentive pay.

$$\begin{aligned} \text{Incentive Choice} = & a + b(\text{country}) + c(\text{information asymmetries/ skill complexity}) + \\ & d(\text{type of coordination}) + e(\text{work discretion}) + f(\text{institutional resources}) + g(\text{controls}) \\ & + \text{error term} \end{aligned}$$

Institutional resources cover the web of employment relations institutions, employer networking, and government incentives. The controls included measures of product market strategy, establishment size, and sector of activity. We explore the effect of these variables on incentive use in the two countries individually (see Appendix Table 4), and by pooling the data using a country dummy variable (Table 3).

To interpret the country coefficient we need to consider three different types of effect. First of all, it captures the influence of factors that bear on establishments in one country but not in the other. Thus if tax incentives for profit sharing apply in one country but not in the other, and they are effective, one would expect to see a positive sign on the dummy for the country concerned. On the other hand, the dummy variable would not reflect the influence of factors represented by other variables included in the equation. Thus if firms use profit-sharing in order to support team working and small group activities, we would expect this effect to be picked up by these variables and not by the country dummy. One of the drawbacks with country dummies is that they may embody the impact of all the unmeasured country-specific influences on choice of pay system. A third effect that can help to resolve this problem relates to the use of appropriate interactions. For example, to assess the impact of EPL, we shall use the size threshold at which employers' obligations over dismissals become more onerous. In same vein, interactions can be used to deal with another problem, namely that the same variables might have different effects in either country. The pooled analysis assumes that the underlying influence of each variable on incentive adoption is the same in both countries. This is reasonable on theoretical grounds for many of the variables reflecting processes dealt with by NEP or HRM theories, and for some of the control variables such as size and sector. However, interactions can be expected for some of the institutional variables, such as networking, where their effect may vary according to the surrounding employment institutions. This is explored in the results section (see Table 4 below).

We make two key simplifications in our model. First, we leave aside the analysis of 'bundles' of practices, despite the important work on this subject (eg. Godard, 2004). Differences in the way some questions were posed, reflecting in part major differences in the institutional arrangements and common managerial practices in the two countries of the kind discussed earlier, meant that the data were too coarse-grained to progress far in this direction<sup>17</sup>. Secondly, we treat managers as choosing between the items on the 'menu' independently of

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<sup>17</sup> Some interactions were tested, for example between job autonomy and the variables used to identify coordination type, but none proved significant either in the pooled or in the individual country analysis.

each other. Although there are theoretical arguments for modelling the choice as interdependent (Rayton, 2006), and some evidence from the two surveys<sup>18</sup>, in practice, we found that this meant deriving a set of mutually exclusive options, such as merit pay only, merit pay with profit-sharing, and profit-sharing only, with the result that many options on the ‘menu’ were chosen by only small numbers of establishments, so that the estimated coefficients proved erratic. Combining the types of incentive systems into larger categories, such as individual and collective, eases the statistical problem but at the price of obscuring the distinction between well-established pay systems recorded by the two surveys.

## 5. Regression Results

For each type of incentive pay system we ran both pooled two-country and single-country regressions.<sup>19</sup> Because some British establishments may have substituted share schemes for profit-sharing, we include also results for share schemes even though they are not strictly incentive pay. We present first the more synthetic view given by the pooled analysis first, and then look at exceptions arising from the individual country regressions. To simplify reading, the logit coefficients are shown as marginal effects which can be read as showing how a proportionate change in the variable concerned affects the probability that a particular type of incentive pay will be used.<sup>20</sup> For binary variables, it shows the effect of a change from zero to unity (see Appendix Table 3). Although the most important findings of this paper relate to the institutional influences on incentive choice, following the logic of the earlier discussion, we start with the factors associated with the NEP and HR theories which provide the background against which to interpret collective action.

### Impact of factors related to incentive theory

Firms in both countries appear to be influenced by many of the factors highlighted by the NEP and HR theories when adopting incentive pay systems, as can be seen by comparing the anticipated outcomes of Table 2 with the pooled regressions of Table 3. Nevertheless, some caution is needed because several relationships have the expected sign, but are not statistically significant. Where information asymmetries and skill complexity are low, managers are more likely to use NIP, and where these factors are high, they are more likely to use merit pay. The marginal effects show that, for example, a 10% increase in computer use is associated with a 1.25% reduced probability of NIP, and a 1.75% increased probability of merit pay. IPBR lies in-between. For profit and share schemes, it appears that current or recent fiscal incentives, which reduce the firm’s net cost of operating them, have muted the effect of work organisational factors as most of them are not significant.

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<sup>18</sup> There are signs of complementarity between some of the incentive pay systems, as indicated by including the three incentive pay systems (IPBR, MP and profit-sharing) on the right hand side in each other’s regressions, and by a Poisson regression run on the number of schemes in operation in the same establishment. In both cases, we used the regression model of Table 3. IPBR and profit-sharing were positive and significant at 1% when regressed on merit pay, as was merit pay at 1% when regressed on IPBR, and positive but significant only at 12% when regressed on profit-sharing. Significantly for our analysis, engagement in local activities by independent establishments was positive and significant for both IPBR and merit pay, and also for the number of incentive schemes used, in the Poisson regression (Appendix Table 5). Thus, it proved robust to both types of analysis.

<sup>19</sup> For the pooled analysis, the combined sample was reweighted to adjust for the different sample numbers for Britain and France.

<sup>20</sup> These were calculated using STATA’s standard mfx command for logit postestimation (dy/dx).

Turning to the forms of coordination, mutual adjustment, as signalled by teams, small group activities and use of a core workforce (agency) broadly favour merit pay compared with NIP. Standardisation clearly favours IPBR, and disfavors non-incentive use, and as anticipated, it seems neither to favour nor disfavor the more sophisticated types of incentive pay. For example, applying TQM, a binary variable, reduces the probability of NIP by 6%, but increases that of IPBR by 7% and that of merit pay by 6%.<sup>21</sup> Coordination by direct control, as signalled by use of secondary labour market groups (women and non-probationary fixed-term) favours NIP and disfavors use of incentive pay.

Employee job discretion has the expected effect on the use of IPBR and NIP once allowance is made for the definitional differences explained earlier, by means using an interaction. Thus IPBR is positively associated with high job autonomy in Britain, as incentive theory would predict, and in France, with high management control because of the associated monitoring system. Conversely, NIP is associated with limited job autonomy in Britain, and infrequent management intervention in France.

On procedural justice, as anticipated, appraisals are negatively related to NIP, weakly positive with IPBR, and strongly so with profit and schemes. For merit pay, we ran the regression on the broadest definition of merit pay, which made no reference to appraisal, and included all the appraisal measures, which were positive and significant. A good employment relations climate, a potential indicator of workplace trust, even if the view expressed is by management, is positively associated with merit pay and profit-sharing, negatively with NIP, and non-significantly with IPBR whose objective performance measures rely less on trust than do the subjective measures used for merit pay.

The pay and market strategy factors, relative pay and ability to pay and competition price or quality, did not come through with strong statistical significance, except that NIP establishments are likely to have below average pay and financial performance. More surprising is that merit pay should be associated with below average pay given the expectation that employers might choose to make paying above the market conditional on performance. On the other hand, it was to be expected that share schemes would accompany above average financial performance, as a way of sharing good and bad times with employees.

Among the controls, the positive effect of establishment size on the use of profit and share schemes has been observed elsewhere by Pendleton (2006), who explains it in terms of the need to develop a common interest among employees across all the establishments of an enterprise. We return to the issue of merit pay when discussing networks. Notable sectoral effects include the widespread use of IPBR and merit pay in finance and business services in both countries, and the absence of incentive pay of any form in private education, health and personal services. In education and health, it is likely that this reflects the use of pay for grade systems combined with promotion opportunities which provide a form of long-term performance incentive of the kind described in Chart 1. In private personal services, the story may be rather different in view of the lesser importance of professional qualifications than in education and health.

### **Impact of institutional factors**

*Employment protection and the strength of the dismissal threat* depend largely on the organisation of the labour markets in which establishments operate. This is reflected in the country coefficient (marginal effect: -0.68) which shows that French establishments are

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<sup>21</sup> . The marginal effects for a binary variable are calculated in terms of a shift from 0 to 1, or a 100% change.

roughly two-thirds less likely to use NIP than British ones, which is consistent with the frequencies shown in Table 1. On the other hand, it shows that the variables considered below do not greatly reduce the size of the country effect. Nevertheless, they shed light on the intervening processes through which employment protection may affect choice of NIP.

Many firms operating NIP are geared up to take advantage of the prevailing labour market regime. This can be seen in the employment of ‘secondary labour market’ categories of workers, in this case women and temporary workers, as in terms of other indicators of low investment in worker skills and organisational practices in both the individual country and the pooled regressions. The percentage of women workers is positively associated with use of NIP and negatively with several of the incentive pay systems. The same is true of use of non-probationary fixed-term employees. It is also of note that the British establishments employ more women workers than the French ones (45% compared with 38%). The regressions also show that NIP establishments are less likely to use highly skilled labour and computers, and they invest less in expensive procedural justice mechanisms such as appraisals, and are less active in local employer networks. They also compete more often on price than on quality. Thus, although we cannot give a precise figure, it is very likely that the greater use of NIP in Britain can be explained largely by the presence of a more permissive environment for use of the dismissal threat than in France, coupled with the way that more British establishments use employment patterns that enable them to take advantage of it.

It was suggested earlier that employment protection could cause French establishments to use merit pay more often than British ones. One test of this is to use the size threshold at which employment law protections become more onerous, and interact it with the France dummy. The results are shown in Table 4. To test whether the 50 employee threshold of the law was the relevant one in the data, we experimented with 40 and 100 employees. As can be seen, the sharpest effect came at 50 employees, showing that French firms on average were 26% more likely to use merit pay than their British counterparts, whereas those with less than 50 employees were only 15% more likely to do so (0.26-0.11).

*Associational resources and employer network activities* play a key role in the use of incentive pay systems, and for this reason, as will be seen, the country coefficient on merit pay, already lower than for NIP and profit-sharing, further declines when we include interactions between associational activities and country (Table 4). One of the key arguments is that these activities help to discourage poaching, and support the joint learning needed to underpin the investments for high transaction cost incentive systems, notably merit pay. A key indicator of this is the involvement of the establishment’s management in local employer activities such as those local employer bodies and HR and entrepreneur clubs.

As argued earlier, employer networking is likely to be of greatest value to managers in independent establishments, and therefore, to be signalled by a positive interaction between involvement in local activities and independence, especially for merit pay, but to a lesser extent also for some of the other forms of incentive pay. Being a networking independent establishment reduces the probability of NIP by 8%, and increases that of having IPBR by 11% and of merit pay by 13% (Table 3). There is no significant relationship for profit or share schemes. Reinforcing this line of argument is that establishments which have the option of drawing on internal HR expertise from elsewhere in the same multi-plant company, or from within a large establishment which has its own in-house HR resources are also more likely to adopt high transaction cost incentives. In our sample, 49% of French and 29% of British plants were single establishments, so that the demand for networking activities would be greater in France than in Britain.

Compared with Britain, employer networking activity in France is embedded in a richer web of collective employment relations activities which will bring greater contact with other employers. We expect the interaction between country, employment relations and incentive choice to differ between the two countries, with a stronger effect in France. Compared with the country coefficient on France of 0.211 for merit pay shown in Table 3, when we introduce the institutional variables as interactions, the figure falls markedly. Considered in isolation, the interaction with local networking activities causes the country coefficient to drop by about 8% (from 0.211 to 0.195, Table 4). The interaction with the other institutional variables, having a workplace union representative, being covered by a pay agreement and affiliation to a national employer organisation, causes the coefficient on France to drop by 18%, from 0.211 to 0.173. However, when considering the effect of local activities in conjunction with these other institutional factors, they cause the country coefficient to drop by a further 20%, from 0.173 to 0.136, bringing it close to non-significance. Thus, these results both trace the boost given to the use of merit pay in France by the more effective employer networking and also highlight the importance of their being embedded within the wider framework employer activities.

REPONSE provides additional evidence on the strategic role of these employer network activities in France. Establishments whose managers regularly take part in HR club activities are more intensive users of individualised pay increases and of appraisal than are non-participants, and they have become increasingly so since 1992.<sup>22</sup> Through 1992, 1998 and 2004, among HR club participants, those using *individualisation* rose from 58% to 83%. Likewise, those using appraisals increased from 44% to 66%. In both cases, use by non-participants was lower and increased by considerably less. HR club participants were also more likely than non-participants in 2004 to agree or discuss locally the budgets and criteria for awarding merit pay: 26% against 15% for budgets, and 19% against 11% for criteria.

Finally, Eustache (1986) and Linhart et al (1993) suggest that national employer pay negotiators helped the spread of individualisation by seeking settlements for pay increases that left room for local level developments, whether by negotiation or unilaterally. Although it is widely known that French industry agreements set minimum rates some way below employees' actual earnings (Meurs and Skalli, 1997), they remain influential on annual pay increases, and leaving part of the cost-of-living to be made up at local level gives individual employers more scope for innovations in pay systems.

Three checks on the robustness of the effect of networking on merit pay are used. We applied the most restrictive definition (a) of merit pay shown in Section 2 above. The coefficient on networking independent establishments in the pooled regression is slightly lower, and significant at the 7% level, but this may be because only half of the original number of establishments qualify as operating merit pay, and those running separate evaluations for pay are omitted. Secondly, we included country interactions for the four employment relations variables (workplace reps, coverage, national affiliation, and networking) in order to capture the greater institutional embeddedness of networking in France. The effect is mainly to reinforce the impact of the networking measure, which remains positive and significant at the 3% level. Thirdly, we ran a poisson regression on the number of systems operated by an establishment to gain an alternative view on the sophistication of incentive pay policies (Appendix Table 5). Again, independent establishments engaged in networking were more likely to use multiple incentive pay systems, this being significant at 3% in the pooled analysis, 2% for France, and positive but not significant for Britain.

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<sup>22</sup> For comparison with 1992, the size threshold was 50 or more employees.

*Fiscal incentives for profit-sharing and employee share-ownership* have also played a part in the development of these forms of incentive pay, it was argued, largely by reducing the cost to the employer of adopting such pay systems. Given the pattern of fiscal incentives for profit-sharing, current in France but discontinued in Britain, one would expect a positive coefficient on the dummy for France, predicting that French establishments are one-third more likely to use profit-sharing. Fiscal reliefs for shares schemes are present in both countries, and the coefficient is considerably smaller. Both figures are somewhat lower than the relative frequencies of Table 1, suggesting that measures to reduce the operational cost of an incentive scheme affect but do not necessarily override other considerations for managers.

One consequence of government fiscal incentives is that employers may be more willing to risk a mismatch between their organisational needs the incentive system. As a result, one would expect the effects of work organisation on the adoption incentive pay to be weaker, resulting in regression coefficients that are less well determined than for the other pay systems. Thus we observe the weak influence of many of the variables that NEP theory predicts should be correlated with collective incentives, such as teams, small group activities, and the measures associated with mutual adjustment. On the other hand, there are signs that firms with profit-sharing have been using appraisals, which may stem from a concern to reduce free-rider effects within group incentives.

As a final robustness check on the whole of the pooled regressions and on the argument of this paper, we computed the same regressions separately for each country. The results are shown in Appendix Table 4. Two main conclusions stand out. First, although the individual country regressions lead to broadly similar conclusions concerning the effects of the work and establishment organisation variables, the results appear considerably closer to the theoretical predictions for France than for Britain, even when using the adjusted significance levels for Britain which allow for the smaller sample numbers. Thus the evidence supporting these theories appears to be weaker for Britain than it does for France. This leads to a second conclusion illustrated by the different sectoral and establishment size effects in the two countries. In Britain, the financial sector exerts a strong influence on the adoption of incentive pay, and education and health a consistently negative influence. In France, the sectors most using incentive pay include utilities, construction, distribution and business services. Health and education were low users as in Britain. The greater array of distinct sectoral influences in France seems likely to reflect the sectoral pattern of French employer organisations, especially as many of the other factors likely to influence choice are present in the regressions. Turning to establishment size, in Britain, large establishments with 1000 or more employees are more likely to use incentive pay, especially merit pay and share schemes, whereas in France, medium-sized ones seem to be the greatest users. These patterns are consistent with the institutional argument developed in this paper. The closer alignment of French practice to theory suggests that French managers have had to invest more in developing incentive pay systems that fit with their conditions. The lesser sectoral influence, and greater impact of large establishments in Britain suggests that collective solutions have figured less than in France, and that adoption of incentive pay has depended more on establishments using their own internal resources which are more available in large units possessing their own specialist HR function.

Thus, it seems that a significant part of the gap in incentive use between British and French private establishments in 2004 can be explained by institutional differences in the organisation of labour markets in the two countries, government action, and in the case of merit pay, by the greater ability of French employers to coordinate their activities on incentive pay owing to a stronger web of employment relations institutions.

## 6. Conclusion

Bringing together the two national workplace surveys has made it possible to break new ground in an old debate about whether HR practices are determined largely by factors internal to the organisation, in this case the influence of work organisation, monitoring and appraisal on the choice of performance incentives, or whether they are determined by societal, institutional factors. With a good deal of caution about the comparability of measures used by the two surveys, it has been possible to show that work organisation factors do indeed influence the choice of incentive pay system, particularly when we look across the full range of the four types examined in this paper. However, it is clear that when controlling for their influence, as well as for sector and establishment size, a substantial unexplained gap remains between the rates of adoption in the two countries. French establishments make more intensive use of both individual and collective pay incentives for their non-managerial employees. Without being able to quantify it precisely, we have been able to show that institutional factors exert a substantial influence on firms' choices. This is partly reflected in the country dummies and their interactions, but also in other variables in the regressions which enable us to trace some of the processes behind the institutional effects.

Analysis of these surveys also shows that 'institutional' need not be confined to formal institutions, and even when it does, as in the case of employment protection, necessity can be the mother of invention. Restricting the dismissal threat encouraged employers to develop alternative motivational practices. Often, these practices are not available 'off-the-peg', and need to be developed, hence the importance of the learning processes involved. The French field studies show that initially many employers did not appreciate their importance, hence the divisiveness and conflict associated with the early schemes. Formal institutions in this case strengthened the process of networking and peer activities among employers, especially in France, which in turn helped them to develop coordinated solutions to the externality problems they faced. While the local associations supported the networks, national associations could create the headroom for local pay initiatives, and existing workplace institutions created opportunities for developing procedural justice measures to support the more sophisticated pay systems: hence the importance of local workplace representation to discussing and agreeing the kettles and criteria for merit pay. In generating a critical mass of innovating employers, these activities may also have reduced fears of poaching. In contrast, the more weakly institutionalised labour market environment in Britain has left firms freer to use the dismissal threat as a motivator, and where those using incentive pay have tended to be large, or else to rely on low operational cost ones, namely profit and share schemes.

Inevitably, studies such as this one are subject to limitations. Despite the great comparability of methods and concepts used in the two surveys, it is never possible to replicate questions completely because of the different institutional environments in which the surveys are carried out. The term 'merit pay' is a good example. For one of our key arguments, notably on employer networking and learning, we had to rely on indirect measures which establish a plausible case, but not one that can be proven. There are also limitations because of the need to rely on the 2004 cross-section for much of the analysis, the panel elements of the two surveys being less comparable and more limited. The choice of statistical method was a compromise between two constraints. Sceptics might object that the adoption of incentive pay schemes has little to do with motivation, and that we have taken the wrong theories. In fact, the majority of management respondents to REPOSE stressed the motivational benefits of both merit pay and profit-sharing, a view shared by a substantial, but smaller, number of

employee representatives.<sup>23</sup> Finally, as with all such studies, there must be doubts about the endogeneity of some of the processes that are treated as exogenous. One such is the level of employment protection, treated as exogenous in our analysis, but in the longer term, one has to ask why workers seek and employers accept varying degrees of protection in different economies, such as might be affected by the prevalence of internal labour markets (Eyraud et al. 1990). Perhaps more questionable is to treat choice of work system as independent of choice of incentive pay system. This is justifiable if organisations choose first their work systems, and then consider how to reward their employees, and is consistent with the approach of the NEP and strategic pay theories. It would be more questionable if organisations implemented whole bundles of work system and reward practices, however most organisations implement them piecemeal.

Finally, some key assumptions go beyond the data provided by the two surveys, and this is of course true of the inferences about the importance of externalities. As with Levine and Tyson (1990) and Appelbaum and Batt (1994), the argument that externalities have held back the spread of different types of incentive pay depends on evidence that their adoption would improve business performance. There is now considerable evidence that incentive pay can improve performance, notably for IPBR, profit-sharing and employee share ownership (Bryson and Freeman, 2007). Although not conclusive, owing in part to numerous measurement problems, it provides a good basis for believing that firms can improve performance by achieving the right ‘fit’ between incentives, work systems and other HR strategies. The argument of this paper has also been one of ‘fit’. The evidence for Britain in this paper is consistent with the idea of this kind of equilibrium: establishments without pay incentives are lower paid, perform less well than their peers, have less job autonomy, less appraisal, less computers, and although not statistically significant, less stable employment, less small group activities, less teamwork and less training. This may be a form of low-incentive, low-HRM equilibrium into which many firms may settle. It exists in both countries but is more extensive in Britain. If more French firms have climbed out of it, it is because of the push from greater employment protection, and the pull from the network activities that have supported learning about the advantages and operation of different approaches to incentives and the management of performance.

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<sup>23</sup> For example, 85% of management respondents to REPOSE believed that merit pay motivated their employees, that it was fairer than the same increase for all (82%), and that it was not divisive (52%). 62% believed profit-sharing was good for workforce cohesion, and 63%, that its absence would demotivate employees.



## **Appendix 1: The Two Surveys**

WERS (Workplace Employment Relations Survey) and REPONSE (Relations Professionnelles et Négociations d'Entreprise) are surveys of representative samples of about 2000 establishments carried out respectively in Great Britain and France. The surveys were carried for the Department for Trade and Industry (DTI), Advisory Conciliation and Arbitration Service (ACAS), the Economic and Social Research Council (ESRC), and the Policy Studies Institute (PSI) in Britain, and the DARES of the Ministry of Labour in France. The analysis is restricted to private sector establishments with 20 or more employees, the coverage of the 2004 REPONSE, and uses the establishment weights provided to adjust for sample stratification and a measure of non-response. It also excludes private firms classified as Public Administration in France. These were adjusted for the different number of country observations in the pooled regression. More information about the surveys can be found in Kersley et al (2006) for WERS 2004 and in Amossé (2006) and Amossé et al (2008) for REPONSE.

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## 7. Main Text Tables and Charts

**Table 1. Use of incentive pay systems in France and Great Britain in 2004**  
(% of establishments)

	GB	France
<b>Incentive pay for non-managerial employees</b>		
<b>Individual incentive pay</b>	%	%
Merit pay (situations (a) + (b))	12.6	41.8
<i>Merit pay if appraisal linked to pay (situation (a) only)</i>	6.6	22.1
<i>Merit pay (a) + (b) (all employees including managers)</i>	14.4	52.9
'Merit pay' (GB) & 'individualised increases' (Fr) unrefined situation (c) non-managers*	21.3	75.9
IPBR	29.5	55.7
<i>IPBR (all employees including managers)</i>	34.7	70.6
Any type of individual incentive pay	36.6	68.7
Exclusively individual incentive pay	13.2	23.1
<b>Collective incentive pay</b>		
Profit-sharing	20.6	41.8
<i>Profit-sharing (any occupational group, including managers)**</i>	41.9	41.8
Collective incentive pay (group, establishment etc bonuses***)	20.7	50.2
Profit-sharing & collective bonuses	7.9	33.2
Any type of collective incentive pay	33.4	58.6
Exclusively collective incentive pay	10.1	13.0
Any of the above individual or collective pay incentives	46.6	81.7
<b>Employee share ownership schemes</b>		
Employee share ownership	19.9	10.4
Either share ownership or profit-sharing	33.5	45.7
<i>Either share ownership or profit-sharing (inc managers)**</i>	51.6	45.7
<b>Absence of incentive pay, NIP (non-mgrs) *****</b>		
Absence of incentive pay (pay schemes only)	53.4	18.3
Absence of incentive pay (pay & share schemes)	46.6	17.8
<b>Combinations of specific pay schemes (non-managers)</b>		
Merit pay & IPBR	5.5	28.6
Merit pay & profit sharing	4.2	22.9
IPBR & profit sharing	8.3	25.0
Any individual & any collective incentive pay	23.3	45.6

Source: Réponse and WERS 2004, private sector establishments with 20 or more employees, using establishment weights.

\* Note: the definitions shown here correspond to different concepts: 'merit pay' as defined by WERS and 'individualised pay increases' as requested by REPONSE.

\*\* In France, profit sharing and share schemes must be available to all employees in order to qualify for tax relief, as do some share schemes in Britain.

\*\*\* In Réponse, collective bonuses include profit sharing (intéressement).

\*\*\*\*\* NIP is defined as absence of IPBR, merit pay, profit-sharing and any other forms of collective pay incentive recorded in the two surveys, the most important of which concern the category (c) of merit pay, discussed in Section 2. Share schemes are not counted as incentive pay.

**Table 2. Expected signs of the regression coefficients on the key variables**

Theoretical variable	Survey measures	No incentive pay	IPBR	Merit pay	Profit-sharing/ share schemes
<b><i>Information asymmetry (Skill and job complexity)</i></b>	Training intensity +, Formal quals + (inversely proxied by OJT for skilled jobs, Computer use +, Prof & Tech occupations+	--	-	++	+
<b><i>Coordination mechanisms</i></b>					
Mutual adjustment	Teams +, QCs +, Job rotation +	--	-	+	++
Standardisation	JIT +, TQM +, Monitor absence +, Use of targets+, Agency use ++, Admin & sales +	--	++	n/s	-
Direct control	Fix-term emp +, Secondary LM (proxied by % women) +	+	n/s	--	--
<b><i>Employee discretion</i></b>	Job autonomy +	-	++	+	+
<b><i>Procedural justice measures</i></b>	Appraise +, Agree apprsl criteria +, Good ER climate +	--	n/s	++	n/s
<b><i>Pay strategy</i></b>	Pay, profitability > average +	--	+/-	+/-	++
<b><i>Market strategy</i></b>	Compete on quality + / price +	Price+	Price+	Quality+	Quality+
<b><i>Workplace TU presence</i></b>	TU rep + CB coverage +	n/s	+	+/-	+/-
<b><i>Employer networking</i></b>	Local activities & single estab +, Foreign +, National association only (-)	--	+	++	n/s
<b><i>Employment protection</i></b>	Strong protection, & for merit pay: employment size threshold*France	--	+	++	++
<b><i>Government support for profit/share schemes</i></b>	Strong support	n/s	n/s	+/-	++

Note: the sign indicates the expected direction of the relationship, a double sign indicates an expected strong relationship, and n/s denotes an expected zero or non-significant relationship. +/- contrasted theoretical predictions.



**Table 3. Pooled logit regressions on type of pay system in Great Britain and France in 2004 (Marginal effects)**

	NIP			IPBR			Merit Pay			Profit-sharing			Share schemes		
	dy/dx	t	sig t	dy/dx	t	sig t	dy/dx	t	sig t	dy/dx	t	sig t	dy/dx	t	sig t
France	-0.678	-8.63	****	0.471	6.27	****	0.211	2.89	****	0.335	5.13	****	-0.148	-3.38	****
<i>Skill complexity</i>															
Training intensity	-0.035	-0.70	-	0.076	1.30	+	0.108	2.13	**	0.029	0.53	-	0.017	0.67	-
OJT for skill jobs	0.090	1.59	+	-0.083	-1.23	-	0.109	1.96	**	-0.116	-2.08	**	0.085	3.08	****
% using computer	-0.125	-2.62	****	0.097	1.68	*	0.175	3.58	****	0.063	1.15	-	-0.019	-0.72	-
% managers & prof	0.089	0.93	-	-0.038	-0.36	-	0.291	3.27	****	-0.100	-1.02	-	0.076	1.70	*
% technicians	0.064	0.89	-	0.113	1.23	-	0.222	2.78	****	-0.029	-0.37	-	0.007	0.15	-
<i>Type of coordination</i>															
<i>a) Mutual adjustment</i>															
Teams	0.022	0.73	-	-0.036	-1.01	-	0.027	0.87	-	0.031	0.95	-	0.038	2.23	**
Small group activities	-0.001	-0.04	-	0.029	0.70	-	0.149	4.18	****	0.043	1.13	-	0.040	1.79	*
Job rotation	0.025	0.80	-	-0.054	-1.53	+	-0.030	-1.05	-	0.008	0.24	-	-0.020	-1.44	+
<i>b) Standardisation</i>															
Business targets	-0.090	-2.06	**	0.210	3.82	****	0.113	2.29	**	0.052	1.09	-	0.076	3.11	****
Total quality workplace	-0.064	-2.47	**	0.065	2.21	**	0.058	2.37	***	-0.006	-0.21	-	-0.018	-1.36	+
Monitor absence	-0.084	-3.14	****	0.088	3.04	****	0.017	0.68	-	0.038	1.47	+	0.023	1.68	*
Use agency staff	-0.133	-5.49	****	0.115	3.75	****	0.095	3.55	****	0.089	3.19	****	0.010	0.66	-
% admin & sales	-0.132	-2.19	**	0.231	3.24	****	0.155	2.53	***	0.191	2.89	****	0.054	1.96	**
<i>c) Direct control</i>															
% fix term employees	-0.073	-0.47	-	0.152	0.77	-	0.321	1.96	*	-0.206	-1.15	-	-0.024	-0.29	-
% fix-term & no growth	0.105	0.42	-	-0.140	-0.42	-	-0.596	-2.24	**	0.093	0.29	-	0.011	0.09	-
% women	0.110	1.87	*	-0.159	-2.20	**	-0.060	-0.92	-	-0.154	-2.39	***	0.005	0.17	-
<i>Job discretion</i>															
Job autonomy	-0.250	-2.90	****	0.362	3.00	****	-0.174	-1.43	+	0.152	1.53	+	-0.068	-1.60	+
Job autonomy*france	0.316	3.21	****	-0.496	-3.82	****	0.209	1.64	+	-0.128	-1.19	-	0.065	1.30	+
<i>Procedural justice</i>															
Appraisals	-0.220	-7.31	****	0.068	1.77	*	omitted			0.141	4.15	****	0.043	2.28	**
Good ER climate	-0.106	-1.65	*	0.010	0.14	-	0.170	2.71	****	0.149	2.21	**	0.028	0.78	-
<i>Pay strategy indicators</i>															
Pay above industry average	-0.067	-2.32	**	0.020	0.59	-	-0.062	-2.21	**	0.038	1.19	-	-0.005	-0.30	-
Relative financial perf	-0.094	-1.49	+	0.005	0.07	-	0.069	1.01	-	0.095	1.39	+	0.087	2.68	****
Compete on price	0.041	1.15	-	-0.033	-0.81	-	-0.022	-0.64	-	0.033	0.90	-	-0.013	-0.70	-
Compete on quality	-0.029	-1.11	-	0.047	1.44	+	0.026	0.92	-	0.050	1.69	*	-0.027	-2.03	**

	NIP dy/dx	t	sig t	IPBR dy/dx	t	sig t	Merit Pay dy/dx	t	sig t	Profit- Sharing dy/dx	t	sig t	Share schemes dy/dx	t	sig t
<i>Associational activities</i>															
Workplace TU rep	-0.023	-0.82	-	-0.064	-1.99	**	0.017	0.61	-	0.097	3.34	****	0.004	0.24	-
Pay Agt coverage	0.066	2.29	**	-0.062	-1.89	*	-0.022	-0.82	-	-0.010	-0.35	-	0.039	2.60	****
Employer National Body Only	0.094	2.96	****	-0.049	-1.40	+	-0.053	-1.81	*	0.010	0.32	-	0.026	1.53	+
Employer local activities	0.056	1.54	+	-0.041	-0.99	-	-0.031	-0.94	-	0.014	0.39	-	-0.004	-0.27	-
Local activities & single est	-0.079	-1.78	*	0.115	2.02	**	0.129	2.53	***	0.005	0.09	-	0.016	0.50	-
<i>Establishment size</i>															
Single establishment	0.069	2.25	**	-0.028	-0.78	-	-0.118	-3.66	****	-0.160	-4.58	****	-0.079	-4.09	****
Emp size 50-99	0.015	0.54	-	-0.037	-1.14	-	0.026	0.91	-	0.060	2.08	**	0.017	1.09	-
Emp size 100-199	-0.016	-0.53	-	-0.047	-1.39	+	-0.006	-0.21	-	0.064	2.06	**	0.016	0.94	-
Emp size 200-499	-0.063	-1.94	*	-0.059	-1.50	+	0.047	1.36	+	0.118	3.29	****	0.088	4.13	****
Emp size 500-999	-0.042	-0.96	-	-0.040	-0.89	-	0.101	2.46	***	0.110	2.68	****	0.086	3.50	****
Emp size >=1000	-0.041	-0.90	-	-0.125	-2.37	***	0.076	1.58	+	0.120	2.33	***	0.190	5.27	****
<i>Economic sector</i>															
Utilities	-0.144	-2.31	**	0.313	2.74	****	0.287	2.09	**	0.170	1.08	-	0.196	2.38	***
Construction	-0.079	-1.87	*	0.190	3.35	****	0.055	1.16	-	-0.123	-2.75	****	0.026	0.94	-
Distribution	-0.040	-0.97	-	0.096	2.01	**	0.153	3.44	****	-0.051	-1.19	-	0.014	0.63	-
Transport	0.076	1.36	+	-0.094	-1.53	+	-0.039	-0.72	-	-0.042	-0.76	-	0.028	0.87	-
Finance	-0.134	-2.27	**	0.227	2.94	****	0.244	3.10	****	0.075	1.01	-	0.048	1.46	+
Business services	-0.024	-0.59	-	0.115	2.43	***	0.119	2.74	****	-0.050	-1.23	-	0.004	0.19	-
Education-Health (private)	0.505	6.49	****	-0.333	-5.16	****	-0.205	-3.79	****	-0.279	-5.62	****	-0.104	-3.94	****
Personal services	0.113	1.65	*	-0.026	-0.36	-	0.112	1.65	*	-0.118	-2.08	**	-0.011	-0.34	-
Constant		5.57	****		-5.93	****		-8.54	****		-6.27	****		-6.97	****
Pseudo R2	0.3389			0.1632			0.2427			0.1756			0.1948		
n	3889			3889			3893			3889			3889		

Significance: \*\*\*\* 1%; \*\*\* 2%; \*\* 5%; \* 10%; + 20%, based on robust standard errors. Source: REPOSE, WERS 2004. Logit coefficients presented as marginal effects.

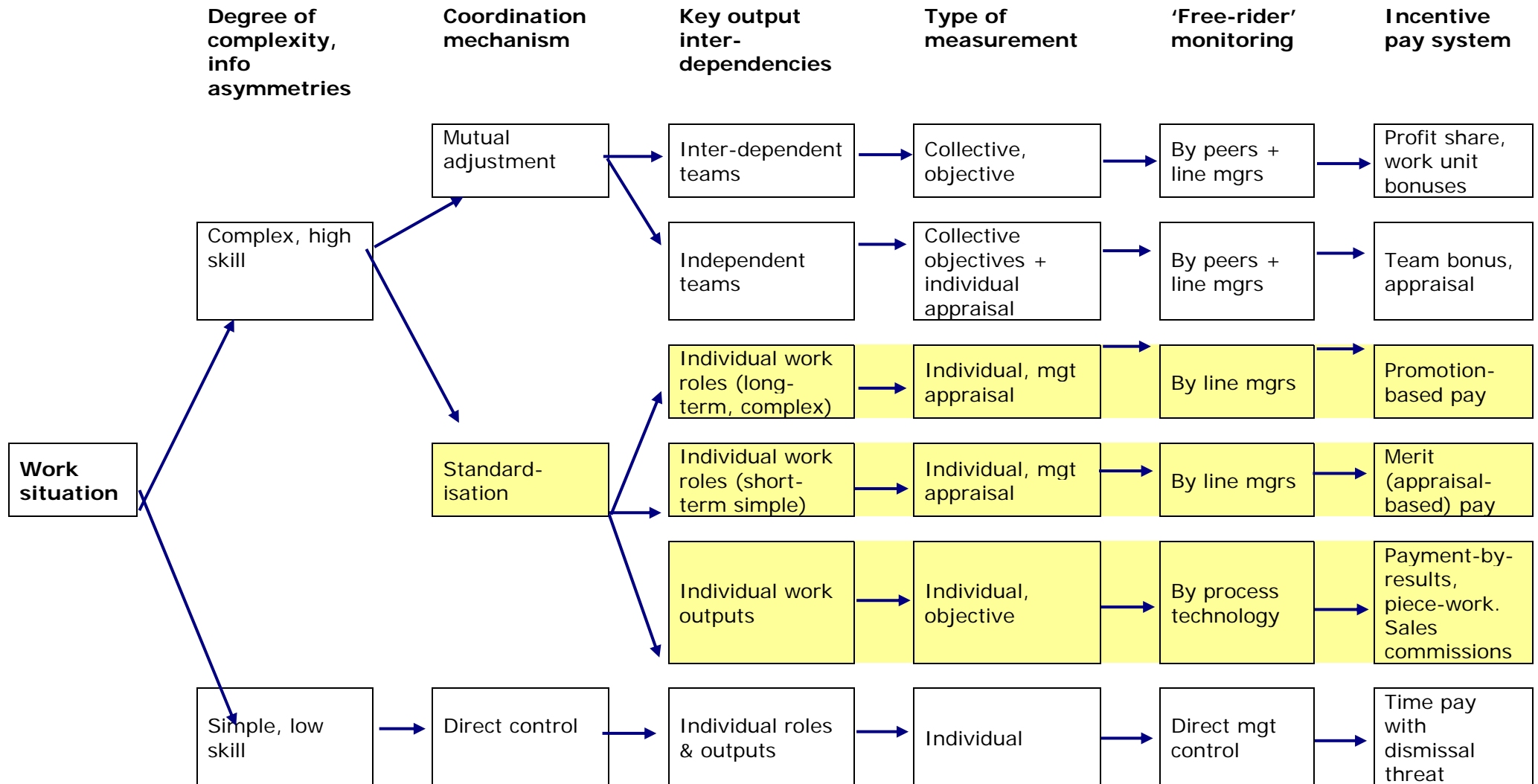
**Table 4. Effects of interactions on the coefficient on France for Merit Pay**  
(marginal effects)

	France coefficient dy/dx	t	sig t
No interactions (as in Table 3)	0.211	3.33	****
<i>Coefficient on France dummy in the presence of interactions with the institutional variables</i>			
(a) Employer local activities	0.195	2.85	****
(b) Employer national body, workplace TU rep., Pay agreement coverage.	0.173	2.44	***
(a) + (b) Employer local activities + Employer national body, workplace TU rep., Pay agreement coverage	0.136	1.66	*
<i>Coefficient on France dummy in the presence of interactions with establishment size thresholds</i>	dy/dx	t	sig t
France coefficient	0.228	3.69	****
France * establishment size<40	-0.062	-1.76	*
France coefficient	0.260	4.22	****
France * establishment size<50	-0.114	-2.07	**
France coefficient	0.231	3.82	****
France * establishment size<100	-0.037	-0.70	-

Note: Sample coverage and other regression variables as in Table 3.

Significance: \*\*\*\* 1%; \*\*\* 2%; \*\* 5%; \* 10%;

**Figure 1. Decision tree matching work system characteristics to choice of incentive pay system**



## 8. Appendix Tables and Charts

**Appendix Table 1. Incentive system questions in WERS and REPONSE**

	WERS	REPONSE
IPBR	<p>Do any of the employees in this establishment get paid by results or receive merit pay?: Answer: PBR=1, MP=2. (fperf_ 636)</p> <p>Showcard: 'Payment by results' includes any method of payment where the pay is determined by the amount done or its value, rather than just the number of hours worked. It includes commission, and bonuses that are determined by individual, establishment or organisation productivity or performance. It does not include profit-related pay schemes.</p> <p>This can be combined with other questions, on individual performance (fmeasur_, 651) and occupational group (fperwh_, 639).</p>	<p>In 2004, did non-managerial employees receive bonuses that are linked to individual performance (individual objectives, payment by results). (nprimi, Q 6.6).</p> <p>NOTE: question also enquires about general pay increases that are the same for all employees, and individualised increases, see below.</p>
Merit pay	<p>Do any of the employees in this establishment get paid by results or receive merit pay? Answer: PBR=1, MP=2. (fperf_ 636)</p> <p>Showcard: 'Merit pay' is related to a subjective assessment of individual performance by a supervisor or manager.</p> <p>What proportion of non-managerial employees at this workplace have their performance formally appraised? (fmeaspr, 778)</p>	<p>In 2004, did non-managerial employees receive: Individualised pay increases, excluding individual or collective performance bonuses, (naugmi, Q 6.6).</p> <p>Do non-managerial employers periodically have review meetings with their line-manager (eg. performance evaluation, review, objective setting)?</p> <p>Replies: All, some, none. (nentret, Q.10a)</p> <p>For the LOG, which of the following criteria are used to select employees for individualised increases (or promotions) in 2004?</p> <p>a) intensity of work effort; b) capacity to respond to unexpected demands; c) achievement of precise individual objectives set in advance; d) contribution to team-work; e) commitment to goals of the enterprise. (augint ff, Q 6.8a)</p>
Profit sharing	<p>Do any employees at this workplace receive profit-related payments or profit-related bonuses? (frprof, 659)</p> <p>Plants with management only schemes identified by means of fnonman (674).</p>	<p>Are employees in your establishment covered by an agreement on 'intéressement' for 2004 (as defined by the 1986 government regulation)? (intere, Q 6.13a).</p>
Share schemes	<p>Does this company operate any of the employee share schemes listed on this card for any of the employees at this workplace? : Share Incentive Plan (SIP), Save As You Earn (SAYE or Sharesave), Enterprise Management Incentives (EMI), Company Share Option Plan (CSOP), Other employee share scheme (fshare1, 676).</p>	<p>Do employees own shares in the enterprise?</p> <p>Next question enquires about type of scheme: issue reserved for employees, distribution of free shares, stock options, individual share purchase (eg privatisation), investment in a company savings scheme, employee buy-out, company is a workers' cooperation (SCOP). (actions, Q 6.17a).</p>

Note: variable names and position or question numbers from the surveys are shown in parentheses. LOG: largest occupational group. Non-managerial schemes were identified in WERS using the questions on occupational coverage, and in REPONSE, respondents were asked separate questions about individualised increases and bonuses for managers and for non-managers. For Britain we used managerial and professional occupations to gain a group of similar size to that of 'cadres' used by REPONSE. The occupational categories available for both data sets are very broad, somewhat less detailed than ISCO at the one-digit level.

**Appendix Table 2. Linking of survey questions to work environment measures**

	WERS	REPONSE
<i>Skill complexity &amp; Information asymmetries</i>		
Complex v. simple skills	<p><b>Training intensity:</b> average days training for LOG members in past year, (ctrain, 322) [Note: index used is relative intensity within each country].</p> <p><b>OJT for skill jobs:</b> time to reach skilled level for LOG (cstuckin, 318)</p> <p><b>% employees using computers);</b> (ccomput, 539)</p> <p>% of managerial &amp; professional;</p> <p>% technical staff; based on on WERS mgt respondents</p>	<p><b>Training intensity:</b> training expenditure for 2004 as % of pay bill (depform, 5.4a)</p> <p><b>OJT for skill jobs:</b> time to reach skilled level for LOG</p> <p><b>% employees using computers</b> (micro, 5.12);</p> <p>% of managerial &amp; professional;</p> <p>% technical staff; based on data supplied by DARES.</p>
<i>Coordination mechanisms</i>		
a) Mutual adjustment	<p><b>Teams:</b> majority of LOG in formally designated teams, (cteam, 352).</p> <p><b>Small group activities:</b> quality circles &amp; workshop meetings with line managers: (dcircles + dbrief, 472, 381)</p> <p><b>Job rotation</b> for majority for employees: % of LOG do jobs other than their own &gt;= once a week (cothdo, 346)</p>	<p><b>Teams:</b> majority of employees in autonomous production teams (groupau, 5.12).</p> <p><b>Small group activities:</b> quality circles &amp; workshop meetings with line managers: (cq04 + ra04, 3.3a)).</p> <p><b>Job rotation:</b> do employees move between jobs as part of their usual work (mobil, 5.8a); does the majority do so (majmob, 5.8b)?</p>
b) Standardisation	<p><b>Business targets:</b> profits, sales, total costs, labour costs, quality (ktarge, 1379),</p> <p><b>Total Quality Management:</b> attained quality standards BS5750 or ISO9000? (kwrkplac, 1360)</p> <p><b>Monitor absence:</b> keeps records of absence (krecper1, 1370)</p> <p><b>Use of buffer staff (agency);</b> % temporary agency staff (zagency, 92)</p> <p><b>% administrative &amp; sales staff:</b> based on WERS mgt respondent data</p>	<p><b>Business targets:</b> objrent, objcroi, objbudg, objcout, objqual (4.6a)</p> <p><b>TQM :</b> Démarche ‘qualité totale’ (qualtot : 5.13a)</p> <p><b>Monitor absence:</b> use absence records to assess workplace climate (abscli, 8.3)</p> <p><b>Use of buffer staff (agency):</b> % agency staff at year end (inter_nb, 0.9)</p> <p><b>% administrative &amp; sales staff:</b> based on data supplied by DARES</p>
c) Direct control	<p><b>% fixed term employees:</b> working on temporary or fixed-term contracts (zfixterm, 90).</p> <p><b>% fixed term employees in plants with no employment growth:</b> Interaction of above combined with employment change over past year (zallemp-zemplago, 2 &amp; 57) taking quantile ranges to match French interval scale.</p> <p><b>% secondary labour market workers:</b> proxied by % women employees.</p>	<p><b>% fixed term employees:</b> employees with fixed duration contracts (cdd 0.2b)</p> <p><b>% fixed term employees in plants with no employment growth:</b> interaction of above combined with whether volume of activity of plant growing over past 3 years, no growth if said to be stable or declining (croiss, 4.1)</p> <p><b>% secondary labour market workers:</b> proxied by % women employees.</p>
<i>Job Discretion in work roles</i>	<p><b>Job discretion:</b> involvement in decisions over how work is organised (cdesign 351); discretion over how do work (cdiscret 349); control over pace of work (control, 350) [Note: index used is weighted score of each binary variable]</p>	<p><b>Job discretion:</b> in the case of minor incidents, refer to supervisor or resolve oneself (autonom, 5.7); work defined by precise tasks or global objectives (ordres 5.6); frequency of management monitoring of work (control, 5.10)</p>
<i>Procedural justice measures</i>	<p><b>Appraisal:</b> % of non-manager employees have performance formally appraised (fmeaspr 778);</p>	<p><b>Appraisal:</b> non-manager employees have a periodic appraisal discussion with line-manager (nentret, 6.10a);</p>

	<b>Good employment relations climate - management respondent:</b> how would you rate the relationship between management and employees generally at this workplace? (mrelate, 1427)	<b>Good employment relations climate - management respondent:</b> how would you describe the current social climate in your workplace? (climat, 8.1)
<i>Pay &amp; Business strategy</i>		
Pay strategy	<p><b>Pay above the industry average:</b> calculated using WERS management respondent pay data for plant average earnings and sectoral average.</p> <p><b>Relative financial performance:</b> Management respondent estimate comparing with other establishments in same industry (kestper1, 1411).</p>	<p><b>Pay above the industry average:</b> estimated using plant average earnings provided from a separate source by DARES &amp; comparing with sector average.</p> <p><b>Relative financial performance:</b> Management respondent: profitability compared with main competitors (rentab, 4.12)</p>
Product Market strategy	<p><b>Compete on price:</b> demand for main product depends on lower prices than competitors (kprice 1341)</p> <p><b>Compete on quality:</b> demand for main product depends on offering better quality than competitors?; (kqual, 1342)</p>	<p><b>Compete on price:</b> is competing price the firm's main strategy – select from a list of alternatives (strat1, 4.10)</p> <p><b>Compete on quality:</b> is competing product or service quality the firm's main strategy – select from a list of alternatives (strat1, 4.10)</p>
<i>Institutional resources</i>		
Workplace union rep and collective agreement on bonuses	<p><b>Workplace employee representative:</b> presence of a trade union rep or steward in the workplace (excl health and safety) (esteward, 566).</p> <p><b>Collective agreement on bonuses:</b> proportion of employees in plant whose pay is set by collective agreement (fcover, 744)</p>	<p><b>Workplace employee representative:</b> are there recognised union delegates in the workplace (dsetab, 2.1)</p> <p><b>Collective agreement on bonuses:</b> Branch collective agreement used for calculation of bonuses (ccanc, 6.5) [Note: if a branch agreement covers an establishment it generally relates to all non-manager employees irrespective of occupation]</p>
Employer networking resources	<p><b>National employer association</b> only (excluding local activities): Establishment a member of a national Employers or Trade Association (bmember, 218).</p> <p><b>Local employer activities:</b> Establishment a member of a local employers or business organisation or other similar group (bmember, 218)</p>	<p><b>National employer association</b> only (excluding local activities): Management takes part in an industry employers' organisation (branch, 1.10).</p> <p><b>Local employer activities:</b> Management takes part in a local employers' organisation or HR or entrepreneur's 'club' (branch, 1.10).</p>
Single establishment	<b>Single establishment:</b> single independent establishment not belonging to another body (asingle, 94)	<b>Single establishment:</b> Number of establishments owned by the enterprise in France (multi, 0.6)
Employment size	As in Table 3, omitted size: 20-49	As in Table 3, omitted size: 20-49
Sector	As in Table 3, omitted sector: Manufacturing.	As in Table 3, omitted sector: Manufacturing.

Notes: Numbers appearing next to variable names are the location number for WERS and the question number for Réponse 2004. LOG: largest occupational group.

**Appendix Table 3. Means and standard deviations of variables**

Variable description	Variable type	GB		France	
		Mean	Std. Dev	Mean	Std. Dev
No incentive pay	Binary	0.528	0.499	0.184	0.387
IPBR	Binary	0.299	0.458	0.556	0.497
Merit Pay	Binary	0.129	0.335	0.417	0.493
Profit-sharing	Binary	0.207	0.405	0.418	0.493
Share scheme	Binary	0.254	0.435	0.103	0.305
Training intensity	Scale	0.570	0.290	0.426	0.236
OJT for skill jobs	Scale	0.676	0.207	0.736	0.219
% using computer	Scale	0.496	0.289	0.379	0.310
% managers & professionals	Scale	0.179	0.182	0.134	0.171
% technicians	Scale	0.068	0.146	0.229	0.196
Teams (50%+ in teams)	Binary	0.723	0.448	0.208	0.406
Small group activities	Scale	0.522	0.313	0.636	0.366
Job rotation (affects majority)	Binary	0.195	0.396	0.197	0.398
Business targets	Binary	0.596	0.355	0.779	0.263
Total quality workplace	Binary	0.314	0.464	0.504	0.500
Monitor absence	Binary	0.820	0.384	0.574	0.495
Use agency staff	Scale	0.203	0.403	0.376	0.485
% admin & sales	Scale	0.394	0.325	0.264	0.284
% fix term employees	Scale	0.055	0.179	0.056	0.128
% fix-term & no growth	Scale	0.032	0.118	0.028	0.070
% women	Scale	0.449	0.286	0.379	0.268
Job autonomy	Scale	0.572	0.237	0.349	0.281
Appraisals	Scale	0.730	0.407	0.631	0.429
Good ER climate	Scale	0.864	0.128	0.875	0.187
Workplace TU rep	Binary	0.103	0.304	0.621	0.457
Pay Agreement coverage	Binary	0.183	0.370	0.257	0.437
Pay above industry average	Binary	0.443	0.497	0.309	0.462
Relative financial performance	Scale	0.647	0.196	0.531	0.168
Compete on price	Binary	0.616	0.283	0.204	0.403
Compete on quality	Binary	0.402	0.490	0.636	0.481
Employer National Body Only	Binary	0.206	0.405	0.383	0.486
Employer local activities	Binary	0.369	0.483	0.195	0.396
Local activities & single establishment	Binary	0.112	0.316	0.493	0.500
Single establishment	Binary	0.291	0.455	0.117	0.321
Emp size 50-99	Binary	0.194	0.396	0.202	0.402
Emp size 100-199	Binary	0.090	0.286	0.096	0.294
Emp size 200-499	Binary	0.051	0.219	0.050	0.219
Emp size 500-999	Binary	0.011	0.106	0.010	0.101
Emp size >=1000	Binary	0.004	0.064	0.003	0.059
Utilities	Binary	0.003	0.050	0.012	0.108
Construction	Binary	0.064	0.245	0.088	0.283
Distribution	Binary	0.356	0.479	0.204	0.403
Transport	Binary	0.062	0.241	0.071	0.256
Finance	Binary	0.044	0.206	0.035	0.183
Business services	Binary	0.154	0.361	0.180	0.384
Education-Health (private)	Binary	0.115	0.319	0.090	0.286
Personal services	Binary	0.050	0.218	0.073	0.261
N		1151		2738	

Note: binary variables have values 0 or 1, and ‘scaled’ variable values range between 0 and 1. Omitted categories for the regressions are: occupation: % manual occupations; employment size 20-49; sector: manufacturing. All values based on establishment weights. Private sector establishments with >=20 employees.



***Details of composite variables:***

*Job autonomy*: based on scope for problem-solving, discretion and work pace. Score of 3 if all three present, zero if none; rescaled to 0-1 for the regression analysis.

*Training intensity*: based on training expenditures in France and training days in Britain; rescaled to 0-1.

*OJT duration for skilled jobs*: zero to six months, rescaled to 0-1.

*Teams*: =1 if the majority of employees work in teams.

*Small group activities*: use of quality circles and workshop meetings. Score of 1 if both present, 0.5 if one only, 0 if none.

*Targets set for establishment*: targets for profits, sales, overall costs, labour costs, and quality; scaled 0-1.

Detailed STATA programmes for computing these variables are available on request from the authors.

**Appendix Table 4a. Summary logit regressions on type of pay system in 2004: Great Britain**

Variable description	NIP	t	sig	Sig adj	IPBR	t	sig	Sig adj	Merit pay	t	sig	Sig adj	Profit share	t	sig	Sig adj	Share scheme	t	sig	Sig adj
<i>Skill complexity</i>																				
Training intensity	-0.048	-0.50	-	-	0.104	1.30	+	##	0.003	0.07	-	-	-0.021	-0.32	-	-	-0.019	-0.32	-	-
OJT for skill jobs	0.162	1.11	-	#	-0.197	-1.67	*	##	0.052	0.82	-	-	-0.012	-0.15	-	-	0.169	2.10	**	##
% using computer	-0.142	-1.30	+	##	0.071	0.81	-	-	0.061	1.20	-	#	0.087	1.11	-	#	-0.044	-0.65	-	-
% managers & prof	0.183	0.88	-	-	-0.249	-1.63	+	##	0.018	0.26	-	-	-0.048	-0.37	-	-	0.136	1.27	-	#
% technicians	0.135	0.76	-	-	-0.176	-1.15	-	#	0.051	0.74	-	-	-0.069	-0.63	-	-	0.107	0.82	-	-
<i>Type of coordination</i>																				
<i>a) Mutual adjustment</i>																				
Teams	-0.055	-0.84	-	-	-0.013	-0.23	-	-	0.036	1.10	-	#	0.046	1.06	-	-	0.021	0.53	-	-
Small group activities	-0.080	-0.93	-	-	0.069	0.94	-	-	0.101	2.63	****	##	0.039	0.65	-	-	0.078	1.34	+	##
Job rotation	0.012	0.18	-	-	-0.059	-1.12	-	#	-0.044	-1.80	*	##	0.037	0.90	-	-	-0.001	-0.04	-	-
<i>b) Standardisation</i>																				
Business targets	-0.029	-0.33	-	-	0.140	1.97	**	##	-0.031	-0.75	-	-	0.042	0.82	-	-	0.124	2.27	**	##
Total quality workplace	0.052	0.77	-	-	-0.029	-0.58	-	-	0.011	0.35	-	-	-0.090	-2.50	***	##	0.076	2.09	**	##
Monitor absence	-0.148	-2.05	**	##	0.112	2.06	**	##	0.018	0.57	-	-	0.028	0.62	-	-	0.016	0.35	-	-
Use agency staff	-0.162	-2.42	***	##	0.059	1.08	-	#	-0.009	-0.37	-	-	0.133	2.74	****	##	-0.025	-0.69	-	-
% admin & sales	-0.243	-1.92	*	##	0.097	1.05	-	-	0.060	1.21	-	#	0.138	1.66	*	##	0.069	1.06	-	-
<i>c) Direct control</i>																				
% fix term employees	-0.262	-0.81	-	-	0.142	0.56	-	-	0.198	2.19	**	##	-0.393	-1.68	*	##	-0.066	-0.40	-	-
% fix-term & no growth	0.192	0.43	-	-	-0.034	-0.09	-	-	-0.193	-1.57	+	##	0.428	1.42	+	##	0.020	0.09	-	-
% women	0.344	2.37	***	##	-0.227	-1.92	*	##	0.013	0.19	-	-	-0.157	-1.77	*	##	0.176	2.01	**	##
<i>Job discretion</i>																				
Job autonomy	-0.324	-2.54	***	##	0.363	3.65	****	##	-0.061	-1.10	-	#	0.029	0.45	-	-	-0.128	-1.69	*	##
<i>Procedural justice</i>																				
Appraisals	-0.248	-3.33	****	##	0.035	0.53	-	-	omitted				0.107	2.09	**	##	0.116	2.46	***	##
Good ER climate	0.075	0.36	-	-	-0.086	-0.51	-	-	-0.020	-0.23	-	-	0.006	0.05	-	-	0.040	0.30	-	-
<i>Pay strategy indicators</i>																				
Pay above industry average	-0.176	-2.93	****	##	0.106	2.25	**	##	-0.007	-0.25	-	-	0.112	2.63	****	##	0.009	0.24	-	-
Relative financial perf	-0.182	-1.38	+	##	-0.037	-0.34	-	-	0.038	0.66	-	-	0.136	1.80	*	##	0.140	1.89	*	##
Compete on price	-0.058	-0.59	-	-	-0.049	-0.66	-	-	-0.013	-0.31	-	-	0.060	0.96	-	-	-0.095	-1.85	*	##

Compete on quality	0.037	0.66	-	-	-0.007	-0.18	-	-	0.011	0.46	-	-	0.028	0.82	-	-	-0.045	-1.47	+	##
Variable description	NIP	t	sig	Sig adj	IPBR	t	sig	Sig adj	Merit pay	t	sig	Sig adj	Profit share	t	sig	Sig adj	Share scheme	t	sig	Sig adj
<i>Associational activities</i>																				
Workplace TU rep	0.140	1.55	+	##	-0.041	-0.53	-	-	-0.008	-0.18	-	-	0.024	0.41	-	-	0.008	0.16	-	-
Pay Agt coverage	0.053	0.55	-	-	-0.142	-1.52	+	##	-0.025	-0.48	-	-	0.010	0.17	-	-	0.142	2.68	****	##
Employer National Body Only	0.128	1.83	*	##	-0.019	-0.34	-	-	-0.052	-2.06	**	##	-0.043	-1.08	-	#	0.016	0.39	-	-
Employer local activities	0.067	0.95	-	-	-0.013	-0.23	-	-	-0.040	-1.50	+	##	0.018	0.45	-	-	0.027	0.74	-	-
Local activities & single est	-0.137	-1.05	-	-	0.123	1.04	-	-	0.161	1.68	*	##	-0.050	-0.67	-	-	-0.045	-0.39	-	-
<i>Establishment size</i>																				
Single establishment	0.102	1.34	+	##	-0.101	-1.59	+	##	-0.075	-2.22	**	##	0.029	0.53	-	-	-0.157	-2.58	****	##
Emp size 50-99	0.037	0.58	-	-	-0.034	-0.68	-	-	-0.029	-1.10	-	#	-0.032	-0.82	-	-	0.043	1.07	-	#
Emp size 100-199	0.052	0.72	-	-	-0.050	-0.92	-	-	-0.032	-1.24	-	#	-0.058	-1.45	+	##	0.055	1.17	-	#
Emp size 200-499	-0.093	-1.15	-	#	-0.020	-0.33	-	-	0.018	0.58	-	-	-0.039	-0.94	-	-	0.135	2.69	****	##
Emp size 500-999	-0.048	-0.46	-	-	-0.044	-0.62	-	-	0.097	2.02	**	##	-0.037	-0.75	-	-	0.096	1.44	+	##
Emp size >=1000	-0.145	-1.53	+	##	-0.042	-0.51	-	-	0.187	3.47	****	##	0.006	0.11	-	-	0.147	2.14	**	##
<i>Economic sector</i>																				
Utilities	-0.122	-0.62	-	-	0.017	0.10	-	-	0.050	0.74	-	-	0.002	0.01	-	-	0.165	1.26	-	#
Construction	0.084	0.71	-	-	-0.053	-0.57	-	-	0.089	1.28	-	##	-0.046	-0.73	-	-	0.138	1.59	+	##
Distribution	0.038	0.41	-	-	-0.037	-0.48	-	-	0.046	1.06	-	-	-0.045	-0.78	-	-	0.097	1.62	+	##
Transport	0.029	0.25	-	-	-0.072	-0.76	-	-	-0.019	-0.42	-	-	-0.030	-0.41	-	-	0.195	1.72	*	##
Finance	-0.381	-2.62	****	##	0.370	2.72	****	##	0.195	2.46	***	##	0.113	1.30	+	##	0.238	2.25	**	##
Business services	-0.029	-0.29	-	-	0.013	0.16	-	-	0.143	2.46	***	##	0.021	0.32	-	-	0.036	0.55	-	-
Education-Health (private)	0.306	2.56	***	##	-0.217	-2.18	**	##	-0.033	-0.62	-	-	-0.134	-2.08	**	##	-0.169	-2.80	****	##
Personal services	0.165	1.30	+	##	-0.115	-1.21	-	#	0.014	0.21	-	-	-0.080	-1.09	-	#	0.102	1.09	-	#
Pseudo r2	0.1888				0.1501				0.1527				0.1535				0.2953			
N	1151				1151				1151				1151				1151			

**Appendix Table 4b. Logit regressions on type of pay system in 2004: France (marginal effects)**

Variable description	NIP	t	sig	IPBR	t	sig	Merit pay	t	sig	Profit share	t	sig	Share scheme	t	sig
<i>Skill complexity</i>															
Training intensity	-0.026	-0.67	-	0.053	0.74	-	0.168	2.39	***	0.042	0.62	-	0.046	1.77	*
OJT for skill jobs	0.074	2.01	**	-0.031	-0.42	-	0.124	1.61	+	-0.121	-1.70	*	0.029	1.18	-
% using computer	-0.086	-2.64	****	0.094	1.40	+	0.239	3.58	****	0.049	0.72	-	-0.001	-0.04	-
% managers & prof	0.027	0.37	-	0.140	1.10	-	0.442	3.16	****	-0.111	-0.86	-	0.069	1.44	+
% technicians	0.009	0.19	-	0.245	2.30	**	0.307	2.74	****	0.003	0.03	-	-0.017	-0.43	-
<i>Type of coordination</i>															
<i>a) Mutual adjustment</i>															
Teams	0.037	1.61	+	-0.058	-1.42	+	0.037	0.87	-	0.031	0.76	-	0.031	1.77	*
Small group activities	0.021	0.88	-	0.019	0.40	-	0.163	3.26	****	0.037	0.78	-	0.025	1.20	-
Job rotation	0.019	0.83	-	-0.040	-0.94	-	-0.002	-0.05	-	-0.017	-0.39	-	-0.025	-1.76	*
<i>b) Standardisation</i>															
Business targets	-0.086	-2.91	****	0.235	3.59	****	0.236	3.24	****	0.098	1.49	+	0.049	1.98	**
Total quality workplace	-0.062	-3.43	****	0.085	2.51	***	0.083	2.45	***	0.033	0.98	-	-0.034	-2.48	***
Monitor absence	-0.047	-2.85	****	0.079	2.50	***	0.021	0.64	-	0.041	1.33	+	0.019	1.58	+
Use agency staff	-0.076	-4.63	****	0.121	3.52	****	0.135	3.62	****	0.091	2.70	****	0.011	0.74	-
% admin & sales	-0.046	-1.06	-	0.278	3.14	****	0.159	1.76	*	0.202	2.42	***	0.036	1.14	-
<i>c) Direct control</i>															
% fix term employees	-0.052	-0.46	-	0.173	0.63	-	0.471	1.60	+	0.258	0.93	-	-0.049	-0.61	-
% fix-term & no growth	0.103	0.58	-	-0.227	-0.45	-	-1.197	-1.98	**	-0.937	-1.94	*	0.153	1.17	-
% women	0.033	0.91	-	-0.084	-1.02	-	-0.123	-1.39	+	-0.168	-2.07	**	-0.046	-1.68	*
<i>Job discretion</i>															
Job autonomy	0.033	1.07	-	-0.156	-2.60	****	0.042	0.70	-	0.051	0.85	-	-0.000	-0.02	-
<i>Procedural justice</i>															
Appraisals	-0.124	-6.42	****	0.061	1.47	+	omitted			0.142	3.36	****	0.019	0.99	-
Good ER climate	-0.076	-1.98	**	0.026	0.33	-	0.233	2.80	****	0.176	2.19	**	0.026	0.90	-
<i>Pay strategy indicators</i>															
Pay above industry average	-0.022	-1.08	-	-0.038	-0.91	-	-0.090	-2.13	**	-0.011	-0.26	-	-0.014	-0.88	-
Relative financial perf	-0.028	-0.61	-	0.039	0.45	-	0.081	0.83	-	0.062	0.67	-	0.073	2.08	**
Compete on price	0.008	0.32	-	0.004	0.08	-	0.016	0.29	-	0.023	0.44	-	0.007	0.32	-
Compete on quality	-0.056	-2.59	****	0.094	2.23	**	0.066	1.47	+	0.051	1.18	-	-0.010	-0.58	-

Variable description	NIP	t	sig	IPBR	t	sig	Merit pay	t	sig	Profit share	t	sig	Share scheme	t	sig
<i>Associational activities</i>															
Workplace TU rep	-0.031	-1.64	+	-0.049	-1.34	+	0.023	0.62	-	0.110	3.03	****	-0.004	-0.29	-
Pay Agt coverage	0.022	1.25	-	-0.034	-0.97	-	-0.007	-0.20	-	0.001	0.02	-	0.003	0.24	-
Employer National Body Only	0.037	1.80	*	-0.044	-1.09	-	-0.039	-0.92	-	0.035	0.85	-	0.028	1.69	*
Employer local activities	0.037	1.35	+	-0.045	-0.90	-	0.007	0.15	-	-0.006	-0.13	-	-0.013	-0.78	-
Local activities & single est	-0.044	-1.58	+	0.109	1.76	*	0.108	1.66	*	0.058	0.91	-	0.023	0.83	-
<i>Establishment size</i>															
Single establishment	0.041	2.03	**	-0.001	-0.02	-	-0.128	-2.94	****	-0.238	-5.89	****	-0.053	-3.05	****
Emp size 50-99	0.004	0.19	-	-0.033	-0.88	-	0.072	1.85	*	0.102	2.75	****	0.013	0.81	-
Emp size 100-199	-0.025	-1.35	+	-0.047	-1.18	-	0.013	0.33	-	0.120	3.03	****	-0.000	-0.03	-
Emp size 200-499	-0.039	-1.83	*	-0.077	-1.65	*	0.053	1.11	-	0.199	4.26	****	0.078	3.29	****
Emp size 500-999	-0.037	-1.67	*	-0.028	-0.57	-	0.072	1.37	+	0.205	4.03	****	0.092	3.32	****
Emp size >=1000	0.036	0.79	-	-0.144	-2.21	**	-0.028	-0.43	-	0.147	2.08	**	0.190	4.46	****
<i>Economic sector</i>															
Utilities	omitted			0.303	2.47	***	0.321	1.84	*	0.193	0.97	-	0.141	1.97	**
Construction	-0.073	-3.14	****	0.251	4.07	****	0.037	0.59	-	-0.157	-2.64	****	-0.011	-0.48	-
Distribution	-0.051	-1.97	**	0.120	2.31	**	0.228	3.85	****	-0.043	-0.81	-	-0.009	-0.45	-
Transport	0.051	1.50	+	-0.074	-1.12	-	-0.040	-0.52	-	-0.042	-0.60	-	-0.010	-0.37	-
Finance	-0.011	-0.20	-	0.113	1.25	-	0.228	2.10	**	0.046	0.45	-	-0.012	-0.39	-
Business services	-0.014	-0.55	-	0.134	2.69	****	0.120	2.07	**	-0.080	-1.63	+	-0.010	-0.54	-
Education-Health (private)	0.436	5.57	****	-0.368	-4.84	****	-0.290	-3.78	****	-0.347	-5.39	****	-0.081	-4.16	****
Personal services	0.068	1.38	+	0.001	0.01	-	0.180	1.95	*	-0.133	-1.81	*	-0.033	-1.04	-
Pseudo r2	0.371			0.1404			0.2225			0.1766			0.1222		
N	2738			2738			2742			2738			2738		

Significance: \*\*\*\* 1%; \*\*\* 2%; \*\* 5%; \* 10%; + 20%, based on robust standard errors. Significance adjusted for smaller GB sample: ## 5%, # 10%, + 20% (standard errors adjusted to French sample size)

Source: REPONSE, WERS 2004. Logit coefficients presented as marginal effects.

**Appendix Table 5. Poisson Regression on the number of incentive pay schemes reported in use at the establishment (non-manager schemes)**

	Pooled Coef.		GB Coef.	sig	France Coef.	sig
France	1.227	****				
Training intensity	0.049	-	0.091	-	0.037	-
OJT for skill jobs	-0.092	-	-0.161	-	-0.059	-
% using computer	0.157	****	0.365	*	0.127	**
% managers & prof	-0.067	-	-0.476	+	0.072	-
% technicians	0.107	-	-0.425	+	0.194	**
Teams	-0.004	-	0.108	-	-0.032	-
Small group activities	0.073	+	0.295	+	0.032	-
Job rotation	-0.087	**	-0.124	-	-0.078	*
Business targets	0.223	****	0.158	-	0.259	****
Total quality workplace	0.036	-	-0.171	+	0.063	**
Monitor absence	0.087	****	0.265	+	0.070	***
Use agency staff	0.169	****	0.279	****	0.153	****
% admin & sales	0.353	****	0.438	**	0.253	****
% fix term employees	0.080	-	0.257	-	0.191	-
% fix-term & no growth	-0.180	-	-0.099	-	-0.554	-
% women	-0.271	****	-0.572	**	-0.187	***
Job autonomy	0.569	****	0.490	**	-0.047	-
Job autonomy*france	-0.633	****				
Appraisals	0.782	****	0.652	****	0.794	****
Good ER climate	0.143	*	-0.186	-	0.171	**
Pay above industry average	0.054	+	0.317	****	-0.023	-
Relative financial perf	0.089	-	0.234	-	0.073	-
Compete on price	-0.002	-	0.013	-	0.015	-
Compete on quality	0.066	+	0.061	-	0.086	*
Workplace TU rep	0.022	-	-0.036	-	0.049	+
Pay Agt coverage	-0.057	*	-0.240	-	-0.032	-
Employer National Body Only	-0.055	+	-0.238	*	-0.023	-
Employer local activities	-0.028	-	-0.073	-	-0.017	-
Local activities & single est	0.135	**	0.269	-	0.137	***
Single establishment	-0.175	****	-0.247	+	-0.168	****
Emp size 50-99	0.034	-	-0.173	+	0.062	*
Emp size 100-199	0.035	-	-0.257	*	0.057	*
Emp size 200-499	0.070	*	-0.099	-	0.072	**
Emp size 500-999	0.067	+	-0.025	-	0.055	+
Emp size >=1000	0.042	-	0.162	-	-0.026	-
Utilities	0.202	****	0.107	-	0.180	****
Construction	0.010	-	-0.028	-	0.039	-
Distribution	0.001	-	-0.099	-	0.050	-
Transport	-0.164	**	-0.221	-	-0.123	+
Finance	0.203	****	0.595	****	0.061	-
Business services	0.029	-	0.207	-	0.015	-
Education-Health (private)	-1.298	****	-1.111	****	-1.283	****
Personal services	-0.180	**	-0.442	+	-0.101	-
Constant	-1.863	****	-1.678	****	-0.764	****

3787

1151

2636

Dependent variable: using 0-3 types of incentive pay system (NIP, IPBR, Merit Pay and Profit sharing)

Significance: \*\*\*\* 1%; \*\*\* 2%; \*\* 5%; \* 10%; + 20%.

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