

Schwalbach, Joachim, Conyon, Martin J.

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Humboldt-Univ.  
2000

Nr. 97-7

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von

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## Acknowledgements

We would like to thank Michael Lemmon, Steve Machin, Todd Milbourn, Kevin Murphy, Simon Peck & participants at the Stern School, New York University conference on executive compensation and shareholder value for helpful comments and suggestions. Sourafel Girma was kind enough to collect some of the British data and Ulrike Grasshoff and Annett Klein the German data. We are grateful to German Sonderforschungsbereich 373 for supporting this research. We are responsible for the contents.

## Abstract

This paper examines the level and structure of executive pay across a sample of European economies in the mid-1990s. Our results indicate that there are significant differences in executive pay across Europe which are explained in large part by the particular job position and company size. However, after controlling for these factors we find that country specific effects are important in executive pay determination. Our cross section results indicate that country effects on pay are not wholly eradicated by the effects of the internationalisation of capital and labour markets through factor price equalisation. The effects of different board structures on executive pay turns out to be ambiguous in our sample.

Keywords: Corporate governance, directors' compensation

JEL Classification:

# 1. Introduction

Executive pay and corporate governance issues continue to attract wide academic, media and policy attention.<sup>1</sup> The very high salaries enjoyed by senior executives in corporations in some economies are often contrasted with the relatively low pay received by executives in other economies. The case of the United States (high CEO pay) and Japan (low CEO pay) is an obvious example. At the same time, the stark differences in the corporate governance structures between such economies is often highlighted. For instance, the governance system in the US and UK (which stress the market for corporate control as a means of correcting managerial failure) is compared with the German and Japanese system (which stress long-term commitment). There is an implicit assumption that these alternative systems of corporate control and governance may result in quite different economic outcomes and in particular patterns of executive pay.

Despite the continued fascination with executive pay issues, as well as what constitutes an optimal corporate governance mechanism, there has been very little academic research comparing executive pay across economies. Furthermore, little has been attempted by way of seeing how these international patterns of executive pay vary according to the boardroom governance structure that particular economies have adopted. In part this can be attributed to the difficulties in obtaining and assembling the requisite data. The primary aim of this paper, then, is to present some new evidence on the pattern of European executive pay in the mid-1990s, one of the first papers to do so. Specifically, we address the following questions:

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<sup>1</sup> For instance, Jensen and Murphy (1990) and Murphy (1985) document the effects of corporate performance and scale on executive compensation. A review of recent UK research is found in Conyon, Gregg and Machin (1995). Mayer (1996) outlines recent evidence underlying economic performance and corporate governance.

1. Are differences in European executive pay correlated with job level/function?  
Are the returns to job level the same through-out the managerial hierarchy?
2. Are differences in European executive pay correlated with corporate scale?  
Are the effects of company size the same at different levels of company size?
3. Are differences in European executive pay correlated with country specific effects? If country characteristics are important in shaping executive compensation, are these effects similar for each country?
4. Are differences in European executive pay determined by differences in corporate governance regimes. Do economies with radically different board structures have different levels and structures of executive pay?

Each of the above, we argue, are consistent with alternative explanations of executive pay determination. Executive job level and company size are important proxies for managerial talent and should clearly influence executive pay outcomes. Cross country variation in pay can provide evidence the degree to which managerial labour markets are internationally integrated. Finally, the system of corporate governance (particularly board structure) may give rise to different patterns of executive pay. This may occur because different board structures are associated with different arrangements for establishing executive pay. We hope to cast some light on each of these issues.

More generally, an analysis of the level and structure of European executive pay is warranted given the lack of existing evidence. We use pay data derived from expert remuneration consultants presented at the macro level for each of ten European economies separately. Despite the difficulties in using macro data (specifically in

attributing causation) we believe our analysis to be useful. We can compare directly, using international data, the level and structure of executive compensation across a range of European economies. Accordingly, we can describe how executive pay levels and structure vary according to job function, corporate size, international integration, and basic board governance structures.

The rest of this paper is organised as follows. In section 2 we detail the alternative corporate governance mechanisms in place across a variety of European economies. Section 3, details the potential determinants of executive pay and describes the European data that we use pay. In section 4 we present our results. Finally, in section 5 we draw together our analysis, and offer some concluding remarks.

## **2. Corporate governance and executive pay**

### 2.1 Corporate governance

Corporate governance refers to the way in which firms are directed and controlled. Shareholders are the ultimate owners of the firm who typically delegate decision making authority to a management team. The fundamental question arises: are the interests of the management team aligned with those of the ultimate owners? If there are incentives for the interests of each group to diverge, then we have to examine those forces that provide potential re-alignment. This is the domain of corporate governance. European economies have evolved different mechanisms to resolve these agency issues. In this section we wish to describe the main features of the European governance scene by focusing on two economies: Germany and the United Kingdom.<sup>2</sup>

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<sup>2</sup> A more complete review is provided in Charkham (1995).

To fix ideas we will follow Nickell (1995) who usefully characterises two governance types.

Type I. This is characterised by large, well-developed, equity markets where the equity in each company is controlled by shareholders. These are institutions or private investors who are not closely involved with the firm. In type I economies hostile take-overs (mergers and acquisitions) are (relatively) easy. The market for corporate control disciplines the management team.

Type II. Equity markets are organised so that substantial amount of equity in each company is controlled by shareholders. These shareholders have a long-term commitment to the company. Hostile take-overs do not occur (friendly take-overs may). The market for corporate control (hostile take-over) does not function.

Economies such as the United Kingdom and USA are examples of type I governance systems, whereas Japan and Germany conform to type II systems. Type I and type II economies can use different internal and external governance mechanisms (or some mixture) to align the interests of managers and owners. These may promote long-term value maximising activity. Type I economies make extensive use of the threat of take-over, and the actual take-over mechanism, to persuade management to pursue profit maximisation (external control). Type I economies have outside or non-executive directors who sit on the company board who act as representatives of shareholders and monitor the performance of the management team (internal control). Type II economies are characterised by dual boards where financial institutions have an important role in representing the owners interests (external control).

In our empirical work below we are interested in examining how the level and structure of European pay is correlated with differences in corporate governance



systems and board structure. Boards may influence executive pay outcomes by directly setting executive pay and by monitoring executive effort. However, the incentives for outside (non-executive) directors in Type I governance systems to effectively monitor and evaluate directors may be blunted (see Nickell, 1995, Hart, 1995, Jensen, 1993). This may be due to lack of information on the part of outside directors, lack of private rewards to the monitoring function, or indeed capture by the incumbent CEO who may have appointed them in the first place or control information flows to them. These problems *may* not be so acute in Type II systems which effectively divorces the management from monitoring function. In our empirical work, then, we simply allow for international differences in executive pay outcomes according to type I and II systems.

On a practical level one has to identify the European Type I and II economies in terms of their board structure. Such an exercise may be influenced by judgement. We have identified the Type I and II board structures according to the Korn Ferry (1996) method.<sup>3</sup> Accordingly, the following 5 economies, from our European pay data set of 10 economies, were classified as Type II economies with two-tier board structures: Germany, Austria, Denmark, the Netherlands, and Switzerland. Those economies which were classified as Type I (single board economies) are the United Kingdom, Ireland, Italy, Spain and Belgium.<sup>4</sup>

## 2.2 Executive compensation

Both type I and type II economies are characterised by asymmetric information

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<sup>3</sup> Despite the difficulties in always allocating specific countries to particular governance systems, we use the classification outlined by Korn Ferry. The data refers to 1995.

<sup>4</sup> Korn-Ferry classify Belgium as a mixed system country.

between owners (or their representatives) and the management team. Agency models predict that incentive contracts of various kinds (relating pay to observed measures of performance) will be observed in such situations. The owners of the firm have incomplete information about the performance (or effort) of the management team. They are concerned with maximising the long-term prospects (value) of the enterprise. This is an increasing function of the effort expended by management, but is also affected by random shocks (which may be aggregate, firm or industry specific). Both effort and the shock are not observable *ex ante* (the performance function is non-separable in its arguments) but performance is observable (or may be approximated) *ex post*. It is usual to suppose that management is both risk and effort averse and holds an outside job opportunity. The optimal (linear) contract will tie some proportion of management pay to observed profit. Consider 2 contracts. Under contract 1 the firm pays the manager a fixed wage and receives the residual income. Here the incentive for effort is minimal as pay is not related to outcomes. Under contract 2 the firm receives a fixed income (dividend) and the manager receives the residual income (profit). Incentive to management effort is very large (and so is risk and compensation). The second-best (share-cropping) contract is the intermediate case where some income depends on performance.

Much of the academic research on executive pay focuses on United States data. The high pay received by executives at US leading companies is sometimes contrasted with the salaries received by directors in Japanese companies & elsewhere (see Kaplan, 1994, Crystal, 1992). In comparison to the voluminous US literature, there are relatively few European studies. Of those that do exist most are single

country studies and do not explicitly compare executive pay across Europe<sup>5</sup>. The two variables that characterise these type of regression analyses are corporate performance and company size. Empirically, the most important predictor of executive pay is company size reflecting the returns to managerial talent in large companies (see Rosen, 1992). Company performance variables (either market or accounts based) appear to play less of a role in shaping executive pay (see Conyon et al, 1995).

In our empirical work we have available two measures that may proxy managerial talent. First, is job position. We are able to identify executive pay for one of 5 job levels ranging from CEO to middle manager. Economic theory (e.g. tournament models<sup>6</sup>) would suggest that the pay is positively related to job level. Second, we can identify the pay of an executive in one of six size class bands. So, in common with micro-econometric work on the determination of pay we can examine the returns to company scale. We provide such for a range of European economies in 1996.

### **3. European differences in executive compensation**

Assembling data on executive pay across European countries is difficult (see Abowd and Bognanno, 1993). Different country governance structures (type I and II), legal and accounting systems and alternative ways of measuring executive compensation complicates the data assembly exercise. Usually, there are no unifying datasets which allow cross-country comparisons possible

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<sup>5</sup> For instance, some recent European studies of executive pay determination include: Conyon (1997), Cosh and Hughes (1997), Main, Bruce and Buck (1996)- United Kingdom. Schwalbach and Grassoff (1997), Grasshof and Schwalbach (1997) - Germany, Angel and Fumas (1997) – Spain. Eriksson (1997) and Eriksson and Lausten (1997) – Denmark. Alcouffe (1997) - Franc; Brunello, Graziano and Parigi (1996) - Italy.

<sup>6</sup> See Lazear & Rosen (1981), Lazear(1986, 1995)

However, in this paper we use as our primary data source information on executive compensation by the European Independents Remuneration Network (EI-RN) supplied by P-E International to provide evidence on the cross-national level and growth in European pay. The data refers to the period 1996. There are 10 countries included in the review (Austria, Belgium, Denmark, Germany, Ireland, Italy, Netherlands, Spain, Switzerland and the United Kingdom). The data collection methodology involves survey data assembled by prestigious compensation consulting companies throughout Europe. In total there are 2,846 companies represented across the 10 economies accounting for 30,288 incumbents.<sup>7</sup> The EI-RN survey represents one of the largest and most extensive reports of its kind in Europe. Because of the way that executive pay is defined in this data set (i.e. it is essentially total cash compensation - see below) we also supplement this pay data source with data from a Towers Perrin survey.<sup>8</sup> This allows us to construct a richer pay variable which includes, for instance, the value of long term incentive plans (see below). Our analysis also seeks to explain whether there are systematic differences in executive pay according to types of board structure. In particular, we wish to identify those European economies which have so called two tier board structures (see above).

Before formally stating the hypotheses, we describe in more detail our primary data source. The Remuneration in Europe data (P-E International) contains information on total cash compensation and bonus for executives in each country. The pay information can be collected for job levels and corporate size. We define our first pay measure (PAY1) as Total Cash / Remuneration is defined as Base Salary +

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<sup>7</sup> The distribution of companies across Europe is given in the appendix.

<sup>8</sup> We thank Clara Graziano for helping to get access to the survey.

Variable Cash<sup>9</sup>. Base Salary means the annual contractual salary (EI-RN page 6). Variable Cash includes bonuses (performance and / or merit), commissions, profit-share or other non-guaranteed payments (EI-RN page 7). Total Cash / Remuneration excludes the estimated value of stock options and other equity held by directors (this may be more appropriate for some than other economies – see Abowd and Bognanno, 1993 and our supplement data below). The data for each of the countries is transformed to a common unit using the currency conversion rates supplied by Remuneration in Europe. The descriptive data below is reported in D-Marks, Sterling and Ecus.

There are 5 job levels. Job level 1 is defined as the most senior full time executive of the company<sup>10</sup>. Job level 2 is usually a director of the company<sup>11</sup>. Job level 3 is the Head of a major department who is not a director. This person may be referred to as a senior manager<sup>12</sup>. Job level 4 is a senior manager responsible for establishing new methods of implementing a defined strategy and plans within a given discipline. Finally, Job level 5 is a middle manager of the company concerned (typically reporting to levels 3 / 4).

Our data set also contains pay information by employee size bands (of which there are a maximum of six bands).<sup>13</sup> The size bands are defined as: Band 1, 1-99 employees; Band 2, 100-249 employees; Band 3, 250-499 employees; Band 4, 500-

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<sup>9</sup> PAY2 and PAY3 use data from Towers Perrin and are described below.

<sup>10</sup> The individual is responsible for defining strategy, in agreement with the stated policy of the board and or shareholders. He / she can make suggestions to the board regarding the adoption of policy. He / she is responsible for the profit / loss of the organisation and the company's overall management; he she reports to the board shareholders.

<sup>11</sup> The individual will usually sit on the board or at least the executive committee of the organisation. He she is responsible for developing strategy and planning within the business unit function. He / she reports to Job Level 1.

<sup>12</sup> The individual is responsible for planning and implementation of strategy within a department and usually reports to levels 2.

<sup>13</sup> Employees are defined as the number of full-time equivalent employees at the company.

999 employees; Band 5, 1000-4999 employees; and Band 6, 5,000 plus employees. Each country provides data in four to six size bands depending on the most appropriate end point to produce valid data. (see EI-RN page 6).

Conceptually, then, our estimated pay equations which follow can contain 300 data points (i.e.  $5 \times 6 \times 10$ ). However, in practice the actual number is less. Some countries have fewer size band data (e.g. Austria) and in some of the regressions reported below we can only focus on CEOs (rather than the full compliment of executives). This latter issue arises when we are matching in CEO only data from Towers Perrin.

The supplementary Towers Perrin data set contains a much richer specification of the pay variable which we are keen to exploit. The data is available for CEOs in 1995 only. In addition, three of our economies were excluded due to lack of data (Austria, Denmark & Ireland). We define our second pay measure (PAY2) as Total Cash Compensation plus compulsory and voluntary contributions, perquisites and the value of long term incentives. Compulsory contributions include employer contributions and expenses for social security, compulsory benefits and termination indemnities. Voluntary contributions are employer contributions for private retirement, life insurance programs medical and other employee benefit plans. Perquisites include the annual cash value of cars, club memberships and other sundry perquisites. Finally, the value of long term incentives is usually the value of executive stock options. The value of PAY2 was arrived at in local currency and deflated by the exchange rate given by EI-RN.

The final pay measure (PAY3) tries to make an allowance for differentials in European personal rates of income taxation. That is we examine the after tax value of

pay. This measure aims to focus more on the purchasing power of income, rather than the pre-tax cost to the employer. To this end we calculate PAY3 simply as  $(1 - \text{tax rate}) \times \text{PAY2}$ . The tax rates that we use are drawn from Abowd and Bognanno (1993) and are presented in Appendix table A2.

Using the information contained in our main data set we can model executive pay as:

$$y_{ijk} = w + \alpha_i + \beta_j + \delta_k + \varepsilon_{ijk} \quad (1)$$

where  $y$  is the log of pay in job level  $i$  in company size band  $j$  in country  $k$ . The pay measures that we use are PAY1 to PAY3. The term  $\alpha_i$  is the contribution of the job level in explaining the cross section variation in  $y$ ,  $\beta_j$  are the contribution of corporate scale to the variation on  $y$  and  $\delta_k$  is the contribution of country specific effects (see below).  $\varepsilon_{ijk}$  and  $w$  are the equation error and an arbitrary constant. Since  $\alpha_i$ ,  $\beta_j$ , and  $\delta_k$  are indicator variables, identification requires that one variable be excluded in estimation. We choose the lowest size class band and job level. Arbitrarily, we choose Austria as the excluded country. All other dummy variables are relative to these.

Equation 1 is not amenable to structural or causal interpretation (see Schamlensee, 1985). However, as a reduced form model we can test some important statistical restrictions. We test that job level or position has no effect on the level of pay ( $\alpha_i = 0$ ). In addition, we can test whether the effects of job level are identical  $\alpha_1 = \dots = \alpha_4$ . We would expect that CEOs earn more than middle managers. Similarly, we can test the importance of company size in the pay regression (i.e.  $\beta_j = 0$ ). The null is that pay outcomes are not related to the size of the company. Furthermore, we can test

whether the size effect is the same within each employee band.  $\beta_2 = \dots = \beta_6$  (where 6 is large company and 2 is a small company).

Finally, we introduce a role for country specific effects. Increased European integration and the effects of factor price equalisation would tend to predict that executive compensation should be equal for individuals with similar abilities and characteristics. If this process was complete, then after controlling for individual factors the country specific effects should be negligible. So,  $\delta_k = 0$  implies that pay outcomes are independent of country specific factors. If valid, this suggests that pay outcomes do not depend on country factors but instead purely on other factors (e.g. human capital, job position, company effects). However, if country effects are important we can test whether executive pay responds the same way in all countries. We test the restriction that  $\delta_k$  are identical. That is there are no differences in the country effect on executive pay.

We are also interested in the impact of board structure on executive pay. Having classified the European economies into governance types I and II we define an indicator variable (Board) set equal to one if the economy is type II and zero otherwise. Since Board and the economy-wide dummies are linearly dependent identification requires the exclusion of the country effects. Accordingly, we estimate:

$$y_{ijk} = w + \alpha_i + \beta_j + \lambda \text{Board}_k + \varepsilon_{ijk} \quad (2)$$

where  $\lambda$  is the (cross section) proportional effect of a Type II board system on the level of executive pay.<sup>14</sup>

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<sup>14</sup> We note that it will pick up all country characteristics that are common to the countries going to make up the composite variable Board. This is an inevitable consequence of not having within country variation on board characteristics. However, Conyon and Schwalbach (1997) use detailed micro data on German and UK companies to overcome these problems.



## 4. Results

Basic descriptive statistics are contained in Table 1 and are expressed in 1996 ECU's, D-Marks and pounds sterling. The data refer to CEO total cash compensation from our primary data set. Table 1a considers those CEOs at large companies (i.e. those CEOs in the largest employee size band) and Table 2 contains the mean of CEO pay across the six employee size bands. The most striking feature to note about the data is the considerable heterogeneity across countries in terms of the cash compensation received by CEOs. CEO pay in large companies in Germany is 421916 Ecus, and in the UK its is 281862 Ecus. Ireland has the lowest pay for CEOs at 104459 Ecus. This pattern is also more readily seen in Figure 1 which plots CEO compensation (in pounds sterling). In addition, the distribution of European executive pay is not just an artefact of the returns to large companies. The heterogeneity in executive pay is largely unaltered when one considers CEO pay across all size bands (Table 1b).

These differences in CEO pay, however, are not wholly attributed to the different structure of European executive compensation. Although there are differences in the structure of CEO compensation this does not result in a complete harmonisation of CEO pay levels across Europe. Indeed, the standard deviation of CEO pay excluding non-cash remuneration (PAY1) is 76,336.32. The standard deviation for the wider pay measure including such non-cash benefits (PAY2) was 84,632.64. So, controlling for these wider payment attributes increases (rather than decreases) the variation in our executive compensation measure across the European economies.

Table 2 documents the differences in structural characteristics of CEO pay using the supplementary data from Towers Perrin. In column 1 we compute the total

non-cash remuneration as a percentage of total cash remuneration. Recall that total non-cash remuneration is simply the sum of compulsory contributions, voluntary contributions, perquisites and the value of long term incentives. The average across the available 7 countries is approximately 41%. There is variation though. Germany has the lowest ratio (25%) and the United Kingdom the highest (67%). Together, this tends to harmonise the value of total compensation of these two countries as can be seen by inspecting Figures 2 & 3. However, as these figures also show (and noted above) there remain other significant differences in European CEO compensation.

The decomposition of non-cash remuneration into their separate elements is also of some interest. The value of long term incentives as a percentage of total cash remuneration is highest in the UK.<sup>15</sup> Indeed, in this sample of economies the UK is by the far most extensive user of long term incentives as a way of rewarding CEOs. The practice is not used to any extent in other European economies.

The econometric results are contained in Table 3. This examines the relationship between executive pay, job level, company size and board structure. Dealing with the job level variables we find that there is a strong positive effect on CEO pay. In all regressions (in columns 1 – 4) the estimated impact of the job level increases monotonically as one moves to higher corporate positions. The result is not sensitive to the inclusion of size, country or board effects. The return to being the CEO (job level 1) relative to middle managers (job level 5) is 132% (column 3).

Similarly, there is a strong positive correlation between company size and executive pay as evidenced by the increasing magnitude of the coefficient estimates as one moves from employee band 2 up to the largest employee band 6. The result is

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<sup>15</sup> Long-term incentives can be thought of as the value of stock options or other instruments that count as part of executive wealth (for instance phantom option schemes)

obtained after controlling for job position and country specific effects (column 3). The picture that emerges, then, is that executives are rewarded for corporate scale (i.e. large companies pay more). This is consistent with most micro research on executive compensation which reveals that the pay elasticity with respect to company size is in the range 0.2 to 0.35. Also, our data revealed that more talented individuals (who achieve the top job slot) are also more highly rewarded.

In column 4 we replace the country effects with basic board structure effect. This indicator variable of a Type II (2 tier) board system attracts a positive and significant coefficient. The implication is that countries with a 2-tier board system have higher levels of total CEO cash compensation than single board countries. Our prior expectation was that 2-tier boards may have exercised a stronger monitoring function which *may* have been associated with lower pay.<sup>16</sup> Before we investigate the robustness of this finding to alternative pay measures we consider various restrictions placed on our basic pay equation.

Table 4 details the results of various restrictions on our pay equations. Column 1 provides a test that the joint impact of each pay determinant is zero. In column 2 we test whether the effects of the pay determinant are the same. In the final column we present the  $R^2$  from a regression of executive pay on that determinant of pay only. The row by row results are easy to summarise.<sup>17</sup> The effect of job levels in explaining executive pay is highly significant. A test that the effects are jointly zero is easily rejected ( $F=344.55$ ). Moreover, these effects are not identical throughout the

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<sup>16</sup> Of course, this relies on us assuming that the supervisory board is simply putting a halt to management entrenchment. It may well be the case that supervisory board systems realising the superior management talent of their executives may pay them more.

<sup>17</sup> We report the results based on the measure which is simply total cash compensation. The use of wider pay measures did not alter the qualitative results on the size and country effects reported below.

corporate hierarchy ( $F=306.58$ ). Indeed, this confirms our earlier finding that CEOs are paid significantly more than other levels (e.g. directors) in the corporation. Such a finding is consistent with tournament theories of compensation determination which stress that high pay in the CEO position is needed to motivate executives at lower levels in the company organisation. The effects of job level alone explains 61% of the variation in executive pay. This is an important finding. Managerial talent and the position one holds within a company seems to be a very important factor in shaping company pay outcomes.

In row 2 the effects of company scale are examined. Again, the results indicate that the combined effect of the company size factors on pay cannot be rejected ( $F=24.57$ ). In addition, the effects of each size band are not equal ( $F=29.47$ ). Finally, the effect of company size alone (excluding job position and country differences) explains 12.24% of the variation in executive pay.

In row 3 we focus on the country effects. Clearly, there are important international differences in explaining European pay outcomes. A test that the country effects are jointly equal to zero is rejected ( $F=56.71$ ). Moreover, given that there are such effects, our results indicate that these are not identical in each country. Indeed, a formal test that the country effects on executive pay are identical is rejected ( $F=63.66$ ). Together, these results imply that despite the internationalisation of product, capital and labour markets there are still marked national differences which explain executive pay awards across Europe.

Table 5 explores the effect of board type on executive pay further. These regressions do not cater for job effects due to data limitations. First, we should note that regardless of pay measure, the effect of size on executive pay remains strongly

positive as before. In column 1 we report the board effect on total CEO cash remuneration. The effect is positive and significant. In column 2 we regress total real compensation (PAY2) on company size and board type. Now the effect has become insignificant. We suspect that this result comes about because of the harmonisation between pay rates (particularly Germany and the UK) that occurs when one moves from a cash compensation to a total compensation measure which includes estimates of the value of non-cash components of executive pay. The same conclusion is arrived at when one makes an attempt to control for tax effects (using PAY3) measure. The result here is negative now, but not significant at conventional levels. Overall, we must conclude that countries with two-tier style board structures have an ambiguous relationship with CEO pay. The result, using this macro data, will depend on the type of adjustments that have been made to compensation.

## **5. Conclusions**

This paper has examined differences in executive pay across a sample of 10 European economies. The research was motivated by the paucity of cross-country evidence on the level and structure of executive pay. To aid our analysis we have used a unique data set which has information on executive pay, classified by job level, company size and country. Our international comparison of executive pay has used macro data assembled for each country by remuneration specialists. Micro-data on individual firms across these economies simply was not available.

Our main results indicated that there are many complex drivers of European executive pay. Not least are the positive influences of managerial talent which we

proxied by job position and corporate size. Our results indicated that both job level and company size were important statistical determinants of European pay. Indeed, together these variables explained much of the variation in executive pay.

We examined whether increased European integration and the effects of factor price equalisation resulted in executive compensation that was more equal for individuals with similar abilities and characteristics. If such a process was complete, then after controlling for individual factors the country specific effects should be negligible. Our results, though, indicated a significant role for country effects in shaping executive pay. Factor price equalisation has not yet resulted in similar executive pay outcomes across Europe for individuals working in a given job level, with similar talents, or in the same size company.

We also exploited the level and structure of pay according to the governance system in operation. Having classified the European economies into governance types I and II we found that the effect of boards on executive pay was ambiguous. Economies with type II board structures had higher total cash compensation for executives. However, once the effect of other components of compensation had been accounted for then the correlation between board type and CEO pay was not significant. We found that the board effect depended on how the executive compensation variable was defined.

Finally, our analysis contributes to the wider debate about executive pay in Europe and the governance mechanisms that shape it. Our analysis here has taken place using essentially macro data. Accordingly, we have provided a broad picture of the European scene. We are, however, acutely aware that such data are prone to many methodological problems that, in the context of this paper, cannot be addressed. An

immediate problem to square up to is the role of individual firms in setting pay. A worthy future project would take individual company level data from a set of European economies and then test what factors are most important in explaining executive pay. This would have the very real advantage of being able to discriminate between board & governance effects by having within country variation on such variables.

Figure 1

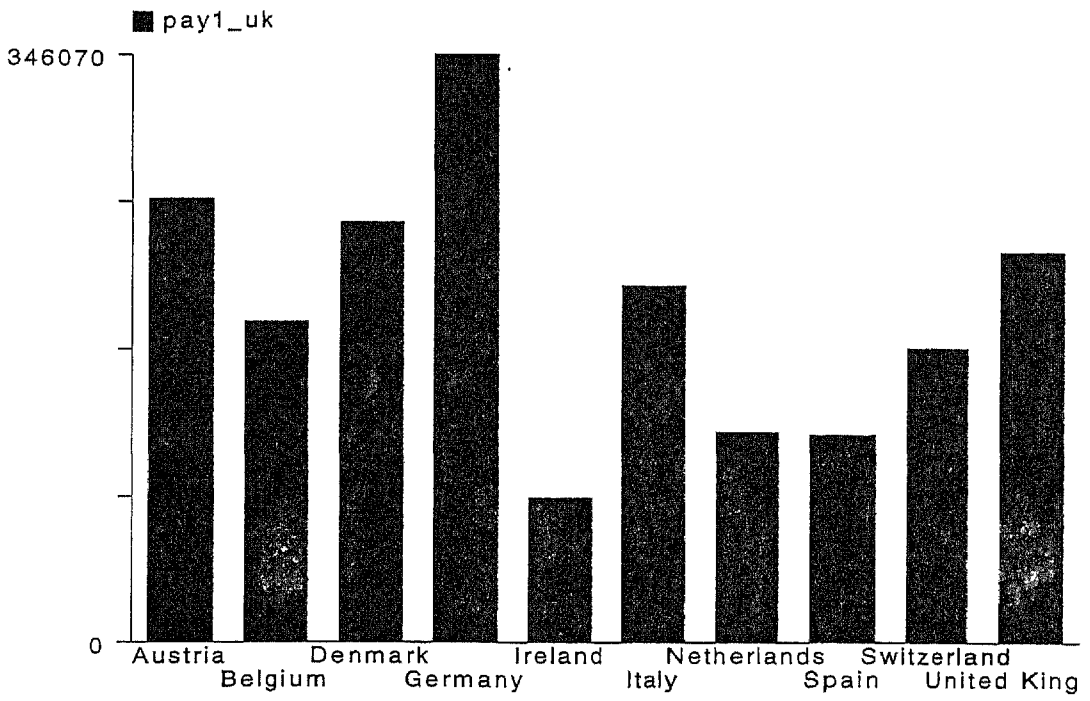


Figure 2

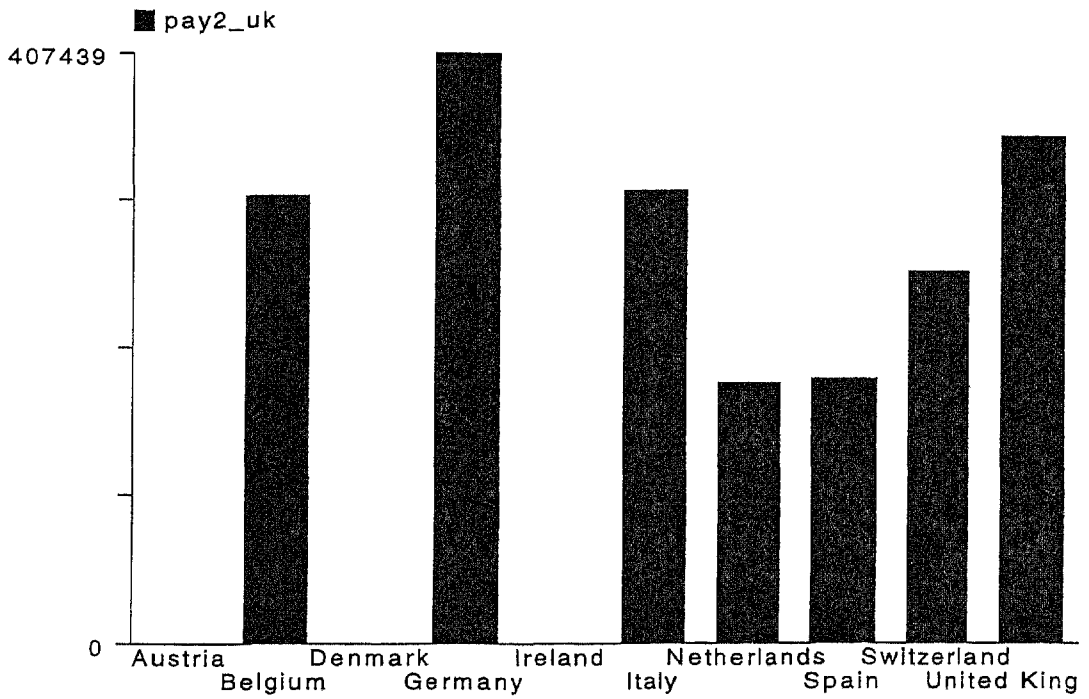
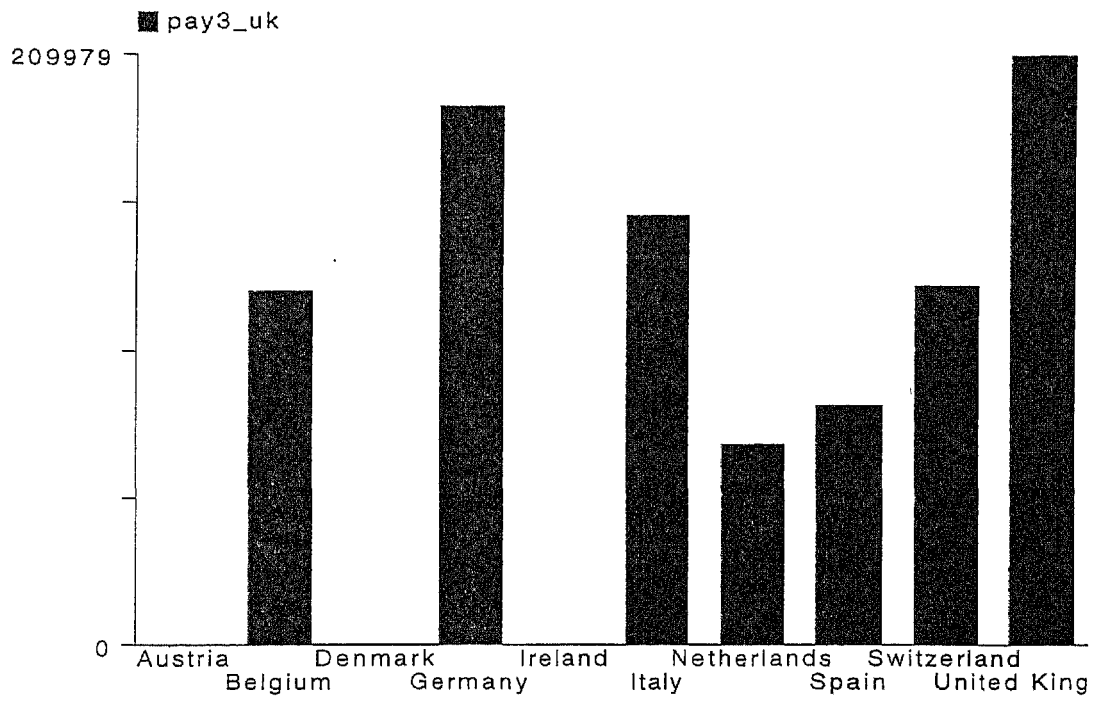




Figure 3



**Table 1a: The 1996 European distribution of CEO pay (total cash) in large companies**

	Executive pay (Ecus)	Executive pay (DM)	Executive pay (Sterling)
Austria	320105.84	601904.50	261258.50
Belgium	231027.36	434255.19	188540.12
Denmark	302946.84	569505.56	247246.58
Germany	421916.34	797000.00	346070.34
Ireland	104649.68	196531.09	85395.01
Italy	257599.17	484027.09	210260.72
Netherlands	151988.64	285841.50	124081.95
Spain	150037.41	282001.41	122410.98
Switzerland	212418.30	399262.91	173333.33
United Kingdom	281862.75	529953.94	230000.00
Total (average)	243455.23	458028.32	198859.75

Source: Remuneration in Europe (1996)

**Table 1b: The 1996 European distribution of CEO pay (total cash) in all companies**

	Executive pay (Ecus)	Executive pay (DM)	Executive pay (Sterling)
Austria	204572.95	384664.59	166964.85
Belgium	156750.12	294638.52	127922.89
Denmark	233636.28	439209.61	190679.56
Germany	268660.66	507500.00	220364.74
Ireland	113255.28	212692.34	92417.25
Italy	149557.79	281018.07	122073.87
Netherlands	121354.17	228227.96	99072.29
Spain	150037.41	282001.41	122410.98
Switzerland	177385.62	333415.23	144746.67
United Kingdom	137692.40	258887.11	112357.00
Total (average)	174845.58	328970.42	142833.21

Source: Remuneration in Europe (1996)

**Table 2: The European distribution of CEO pay characteristics**

Country	Total non-cash remuneration as a percentage of total cash remuneration	Compulsory contributions as a percentage of total cash remuneration	Voluntary contribution as a percentage of total cash remuneration	Perquisites as a percentage of total cash remuneration	Long-term incentives as a percentage of total cash remuneration
Austria					
Belgium	56.70	34.90	13.00	8.80	0.00
Denmark					
Germany	25.19	3.00	14.67	7.53	0.00
Ireland					
Italy	50.57	31.49	6.28	7.59	5.21
Netherlands	25.43	0.46	16.83	8.14	0.00
Spain	28.27	3.27	12.00	13.60	0.00
Switzerland	30.11	12.22	10.80	3.00	4.69
United Kingdom	66.05	10.20	23.36	8.09	25.00
Total (average)	40.59	13.65	13.85	8.11	4.98

Source: Towers Perrin (1995)

1. Total cash remuneration is the sum of compulsory and voluntary contributions, perquisites and the value of long-term benefits.

**Table 3: Executive pay, job level, company size and country effects**

Job level 1	1.409245 (.0842358)	1.390294 (0.0694167)	1.318252 (0.0423995)	1.342932 (0.0613862)
Job level 2	1.083095 (0.085981)	1.075747 (0.0728957)	1.004212 (0.0465385)	1.032775 (0.0627872)
Job level 3	.6175078 (0.0863835)	.6060097 (0.078974)	.5346266 (0.0653046)	.5602658 (0.0765828)
Job level 4	.2952679 (0.0773527)	.2824502 (0.0651665)	.2107491 (0.0404236)	.2407003 (0.0619451)
Employee band 2		.0737623 (0.071982)	.0789343 (0.0712601)	.0301635 (0.0641698)
Employee band 3		.1502625 (0.0744208)	.1585637 (0.0735691)	.0893218 (0.0635507)
Employee band 4		.2734745 (0.0773514)	.2817671 (0.0743735)	.2123899 (0.0660026)
Employee band 5		.3742642 (0.0739393)	.3909055 (0.0726628)	.3507556 (0.0695235)
Employee band 6		.7798669 (0.082358)	.6934816 (0.1030254)	.7563583 (0.0815921)
Belgium			-.0603339 (0.0914677)	
Denmark			.238954 (0.0754262)	
Germany			.2726915 (0.0787384)	
Ireland			-.520916 (0.0760244)	
Italy			-.1199689 (0.0829434)	
Netherlands			-.2404168 (0.0748655)	
Spain			-.070632 (0.0950545)	
Switzerland			.0835173 (0.0767271)	
United Kingdom			-.308989 (0.1166789)	
Board				.3247183 (0.0386842)
Observations	236	236	236	236
R <sup>2</sup>	0.6106	0.7225	0.8621	0.7847

1. Dependent variable is (log) total cash compensation (PAY1)
2. White (1980) adjusted standard errors reported below coefficient estimates

**Table 4: Statistical restrictions**

	Test the effect is jointly zero	Test the effect are the identical	R <sup>2</sup> contribution of the effect on pay
Job level effect	$\alpha_i = 0$ F(4,217) = 344.55	$\alpha_1 = \dots = \alpha_4$ F(3,217) = 306.58	0.6106
Company scale effect	$\beta_j = 0$ F(5,217) = 24.57	$\beta_2 = \dots = \beta_6$ F(4,217) = 29.47	0.1224
Country effects	$\delta_k = 0$ F(9,217) = 56.71	$\delta_2 = \dots = \delta_{10}$ F(8,217) = 63.66	0.2329

- Tests in columns 2 & 3 refer to the estimated model:

$$y_{ijk} = w + \alpha_i + \beta_j + \delta_k + \varepsilon_{ijk}$$

- where y is (log) total cash compensation (PAY1)
- In column 3 the R<sup>2</sup> are from a regression of y on  $\alpha_i$ ,  $\beta_j$ ,  $\delta_k$  separately.

**Table 5: CEO pay regressions (alternative measures) on job level and board type**

	Total cash compensation (PAY1)	Total real compensation (PAY2)	Total real compensation (tax adjusted) (PAY3)
Employee band 2	.0980323 (0.1093878)	.0585926 (0.0850925)	.0668554 (0.1273862)
Employee band 3	.252351 (0.1113394)	.1349018 (0.0928522)	.1431648 (0.1255037)
Employee band 4	.3800286 (0.1300702)	.1778448 (0.1110045)	.2249904 (0.1582765)
Employee band 5	.4879323 (0.1309718)	.3371488 (0.0960133)	.3454116 (0.1321474)
Employee band 6	.9657734 (0.1043368)	.6537454 (0.0898001)	.732474 (0.1250801)
Board	.3916926 (0.071508)	-.0242032 (0.0634398)	-.1232482 (0.0859694)
Observations	48	33	33
R <sup>2</sup>	0.6533	0.5696	0.4880

Notes

1. Regression of different chief executive pay measures on employee band size and board type.
2. White (1980) adjusted standard errors reported below coefficient estimates

## Appendix

Table A1. The distributions of companies for the European pay comparisons

Countries	Number of companies
Austria	175
Belgium	49
Denmark	353
Germany	647
Ireland	182
Italy	350
Netherlands	173
Spain	351
Switzerland	172
United Kingdom	394
<b>Total</b>	<b>2,846</b>

Source: Remuneration in Europe. Supplied by the European Independents Remuneration Network (1997). The data refers to 1996.

Table A2. The classification of European economies to Type I and Type II board structures

Country	Governance type	Personal income tax
Austria	Type II	
Belgium	Type I	0.59
Denmark	Type II	
Germany	Type II	0.53
Ireland	Type I	
Italy	Type I	0.51
Netherlands	Type II	0.60
Spain	Type I	0.53
Switzerland	Type II	0.50
United Kingdom	Type I	0.40

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1. Governance types: Korn Ferry International.
2. Personal income tax: Abowd and Bognanno (1993) table 2.6 page 91.

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