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Abstract

We define the wage incentive to management as the wage premium the manager earns because of his/her supervising role. We adopt an approach based on what if questions and estimate the premium at different quantiles of the distribution of wages for 26 European economies. To ease comparisons we make use of the European Union Statistics on Income and Living Conditions inquiry released in 2009. The premium is found to be higher at the right tail of the distribution of wages, suggesting that the incentive to management differs across individuals at different quantiles of the distribution within each economy. Results also suggest that the premium differs across individuals located at the same quantiles of the distribution of different economies.

Keywords: Distribution of wages, incentives to management, semiparametric methods.

JEL Classification: C14, J31, J41.

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1 Introduction

Since Calvo and Wellisz (1979) the analysis of wage incentives to management and supervision is a crucial question in the economic debate. Once recognized that they are important for economic growth (Beaudry and Francois, 2010), that they are endogenously determined (De Fraja, 2004), and that they are likely to shape the income distribution (Acemoglu and Newman, 2002), the question on how to measure the incentives to acquire management skills still remains to be answered. Indeed, despite its theoretical and policy relevance, from the empirical viewpoint the question has largely been left unexplored (Baker and Holmström, 1995). We believe that this is mainly due to the lack of available datasets allowing for comparisons across economies and to the absence of a commonly accepted definition for the managerial role (Acemoglu and Newman, 2002; Vilhuber, 2009; Beaudry and Francois 2010).

To provide an answer to the question and ease both problems, we take advantage of the European Union Statistics on Income and Living Conditions inquiry (EU-SILC hereafter) released in 2009, which reports information on managerial positions and a set of individual characteristics for 26 European economies collected using the same questionnaire and exploiting common guidelines, definitions and procedures. In addition, this dataset allows for the analysis of the so-called new entrant economies where the evidence on the managerial labor market is virtually absent (Shleifer and Vishny, 1997). Closely following Acemoglu and Newman (2002) and Beaudry and Francois (2010) we define as manager the employee whose job description is associated to the responsibility of organizing and monitoring other employees. We define the wage incentive to management as the wage premium the manager earns thanks to his/her supervising role and, in the spirit of Di Nardo, Fortin and Lemieux (1996) we ask what distribution of wages would prevail if, other things being equal, none of the employees were in a managerial position.

The above provides an estimate of the counterfactual distribution of wages to be compared with the actual distribution to compute a measure of the wage premium at the mean and at different quantiles for all of the analyzed economies. We believe that in the estimation of the wage premium this approach is appealing as it is based on the generalization of the hypothesis that the premium is equal across employees in different positions of the distribution. Our analysis therefore provides an answer to the question raised by scholars interested in models of incentives to management and supervision and, to the best of our knowledge, it is the first attempt to estimate and compare premia for managerial positions in such a large and heterogeneous sample of economies.

The paper is organized as follow. Section II deals with the dataset and methodology. Section III presents empirical results; section IV concludes.

2 Data and methodology

2.1 Data

We use the EU-SILC database released in March 2009. The dataset is built using the same questionnaire and provides information regarding 440,400 individuals living in 26 European countries: Austria, Belgium, Cyprus, Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, Greece, Hungary, Ireland, Italy, Lithuania, Luxembourg, Latvia, Netherlands, Norway, Poland, Portugal, Sweden, Slovenia, Slovakia and the United Kingdom. Students, people compulsorily serving in the army, self-employed workers, and individuals younger than 25 and older than 65 are excluded from the database. Finally, we drop individuals for which values for any of the variables we use in our exercise are missing. These criteria leave us with 126,435 individuals of which 31,689 are managers. Table 1 reports the average (log) wages and dispersion for managers and non managers, and sample sizes across economies.

< insert Table I here>

The unconditional mean difference in wages goes from 34% in Slovenia to 71% in Portugal. However, these differences are not controlled for the individual characteristics; hence, they cannot be taken as an appropriate measure of the wage premium to management. This is why an appropriate methodology is called for.

2.2 Methodology

Each individual is taken as the vector (w, x) where w is the (log) wage and x is a vector of K individual characteristics that may influence w. We assume that the distribution of wages, f(w), the distribution of the x characteristics, l(x), and the conditional distribution of wages, $g(w \mid x)$, exist and are sufficiently smooth. The individual $i \in N$ is in the managerial position (m = 1) or not (m = 0), where $m \in x$ and N is the sample size. In order to measure the premium for managers, we compare the actual density of wage:

$$f(w) = \int g(w \mid x)l(x)dx,\tag{1}$$

with the distribution that would prevail if none of the employees were in the managerial position:

$$f^{m}(w) = \int g(w \mid x, m = 0)l(x)dx, \qquad (2)$$

the distance between (1) and (2) giving a measure of the impact of m on f(w).

Di Nardo, Fortin and Lemieux (1996) show that the counterfactual density in (2) may be estimated by applying a kernel density estimation to appropriately re-weighted samples. Indeed, by using the Bayes' Law:

$$l(x) = \frac{l(x, m=0)prob(m=0)}{prob(m=0 \mid x)},$$
(3)

in (2) it follows:

$$f^{m}(w) = \theta f(w \mid m = 0), \tag{4}$$

where:

$$\theta = \frac{prob(m=0)}{prob(m=0\mid x)}. (5)$$

Eq. (4) shows that the density $f^m(w)$ can be constructed using the vector θ and the density for the sub-sample where m = 0, $f(w \mid m = 0)$. The estimate for θ , $\hat{\theta}$, is obtained as the ratio between the unconditional proportion of non-manager employees, prob(w = 0) and the estimate (via a probit model) of the conditional probability of not being in the managerial position, $prob(w = 0 \mid x)$. The vector $\hat{\theta}$ is then used in:

$$\hat{f}_{N,h}(w) = \frac{1}{Nh} \sum_{i=1}^{N} \hat{\theta} K\left(\frac{w - w_i}{h}\right),\tag{6}$$

that leads to a semi-parametric approach in the otherwise fully nonparametric estimator Rosenblatt-Parzen kernel density estimator.

In Eq. (6) h is the bandwidth, i.e., the smoothing parameter, and K(.) is the kernel density estimator, defined as:

$$\int_{-\infty}^{\infty} K(p)dp = 1. \tag{7}$$

Many kernel functions can be used to the scope; we make use of the Gaussian kernel, the height of the standard normal distribution evaluated at $(w - w_i)$, given the bandwidth magnitude, h. Our choice is due to its property of monotonicity of peaks and valleys with respect to changes in the smoothing parameter, which proves to be useful when comparing distributions (Sheather, 2004). Given the size of our samples this choice is unlikely to impact results appreciably.

Actually, the bandwidth magnitude is the crucial parameter when estimating distributions by means of the non-parametric approach. Again, there is a number of

bandwidth selectors available; in what follows we report results based on the Sheather and Jones (1991) plug-in method. For comparison purposes we take the simple average of the smoothing parameters, as suggested by Marron and Schimtz (1992), which in our case gives h=0.081967. To take this decision we have studied the empirical behavior of the most common bandwidth selectors when applied to our samples, namely the plug-in smoothing parameter by Sheather and Jones (1991), the cross validation bandwidth, the parameter coming from the simple rule of thumb by Silverman (1986), and that coming from the hypothesis the data are normally distributed, to be used as a superior limit.

Our decision is based on two reasons. First, this bandwidth selector has been found to perform significantly better than other selectors in a number of studies (Jones, Marron and Sheather, 1996). Second, the question we want to answer entails comparisons across distributions, and this helps in deciding the bandwidth selector. Indeed, these comparisons should be performed under the condition that the similar amount of smoothing is applied to the samples. This makes clear that, independently from the particular bandwidth selector chosen, the need of comparisons forces the smoothing parameter to be "suboptimal" for each of the sample. In turn, this suggests the heuristic criterion of minimizing the distance between the estimate obtained *via* the (individual) optimal and the (common) suboptimal smoothing parameter, and hence to opt for the bandwidth selector that reveals to have the smallest variance across subsamples. The Sheather and Jones (1991) selector is found to have the smallest variance (0.000725) against the variance associated to the cross validation selector (0.010349), that associated to the rule of thumb (0.005277) and, finally, that coming from the hypothesis of normality (0.000751).

3 Empirical results

3.1 Results

Closely following Di Nardo, Fortin and Lemieux (1996) the vector of individual attributes is a set of covariates associated to personal characteristics (dummy variables for sex, marital status and for citizenship: national, European and extra-European), human capital (work experience, its squared, cubic, quartic, experience interacted with education, in turn measured *via* three dummy variables: at most lower secondary school, upper secondary and post-secondary education, at least tertiary education) and, finally, job type (dummy variables for part or full time positions and temporary or permanent contracts, three dummy variables for the firm size and thirteen for the

sectors of economic activity). To save space, Figure 1 only reports the estimate of the actual and counterfactual distribution for the UK (panel A, with their smoothed difference, panel B) and Poland (panel C and D, respectively).

< insert Figure I here>

Results show that the counterfactual distribution of wages in the UK is shifted to the left of the actual. This suggests that managerial jobs have a positive impact on the distribution of wages. Moreover, the smoothed difference between the two distributions shows that the impact is higher on the right tail of the distribution, in line with the hypothesis that the wage incentives to management differs across individuals located at different quantiles of the wage distribution. Both the actual and counterfactual distributions of wages in Poland are shifted to the left of those for the UK, consistent with the hypothesis that wages are higher in the latter economy. Finally, the impact of management jobs in the former economy is still positive but much smaller than in the latter.

< insert Table II here>

The first column in Table II reports results from using the Kolmogorov-Smirnov procedure to test the null hypothesis that the counterfactual and the actual distribution are not different. The null hypothesis is rejected for all economies with the exceptions of Slovenia and Portugal. The test for difference in means, reported in the second column of Table II, consistently rejects the null hypothesis for the same economies. Cyprus is likely to pay the highest average wage premium (10.1%), followed by Iceland (9.3%) and the UK (9.2%).

The smoothing differences suggest that that the wage incentive to management is likely to differ at different quantiles of the wage distribution. The approach we are using allows for the measurement of the premium at any quantile of the distribution; for this reason it helps studying the cross-country impacts in both the location and the shape of the distribution. The remainder of Table II reports the impacts for all of the deciles of the distribution. Results show that on the first 5 deciles of the distributions the null hypothesis of the premium not being statistically significant is often not rejected, contrary to the last five. This suggests that economies may be roughly divided into two groups. The first set counts economies where the premium is flat or increasing over deciles and the second where instead it follows a *J*-shape. Germany is an example

of the latter, having a wage premium equal to 9.3% at the 10th percentile; the UK is an example of the former as its wage premium is monotonically increasing. In this economy the highest wage premium among those we consider is paid. The premium is statistically significant beginning from the 50% to the 90% of the wage distribution, reaching its maximum at the 90th percentile (16.7%). On the other hand, Portugal (not significantly), Slovakia, Germany and Spain pay the lowest wage premia at the highest quantiles. For this reason we have tested the hypothesis that wage premia differ between countries, using the UK as the reference economy. Results, suggesting that 10 economies out of 26 are statistically significant at both the 70th and the 90th deciles, are reported in Table III.

< insert Table III here>

3.2 Robustness

We have checked our results for robustness in a number of directions. First, we have performed the entire exercise by using all of the alternative bandwidth selectors individually, both adopting the optimal for each sample and using the simple, geometric and weighted averages. The second robustness check entails the specification of the vector of individual attributes we adopt when estimating weights. Being the dependent variable different from that Di Nardo, Fortin and Lemieux (1996) modeled, we have added a number of variables to the set of controls they propose, namely citizenship, permanent/temporary contract and firm size. The first variable substitutes for race, as in the EU there is a prevalence of white employees, while the type of contract and especially the size of the firm control for the demand of management positions. However, we have performed the exercise again by using their specification. The final question is whether the decisions about the rejection of the null hypothesis of statistical significance of the premia is robust to the assumption of normality we made in calculating the confidence bands, as suggested by Bowman and Azzalini (1997). We have therefore calculated confidence bands both using the approach suggested by Albrecth, Van Vuuren and Vroman (2009), and using those associated to the Kolgomorov and Smirnov test as in Rao, Shuster and Littell (1975).

Results are reasonably robust to all the exercises above. The wage premium is found to be higher at the right tail of the distribution of wages and the ordering of economies at different quantiles does not change appreciably. If anything, the results we report should be taken as conservative, both because under the alternative bandwidth

selectors (and averages) the smoothing parameters are smaller by 8% to 10% than the one we have used, and the confidence bands calculated through the other methods are significantly tighter than those we have used for hypothesis testing. For the sake of space these results are not reported and are available upon request from the authors.

4 Conclusions

Making use of the EU-SILC dataset, we estimate the wage incentive to management for 26 European economies. Results show that the wage premium is higher at the right tail of those distributions, in line with the hypothesis that it differs across individuals at different quantiles of the distribution within economies, and that it grows with the wage. Results also suggest that the premium differs across individuals located at the same quantiles of the distribution of different economies. There exists a group of economies where the premium is higher and it grows faster as one moves to the right of the wage distributions.

References

- [1] Acemoglu, D. and Newman, A.F., "The labor market and corporate structure," European Economic Review 46:10 (2002), 1733-1756.
- [2] Albrecht, J., Björklund, A. and Vroman, S., "Is There a Glass Ceiling in Sweden," Journal of Labor Economics 21 (2003),145-177.
- [3] Baker, G. and Holmström, B., "Internal Labor Markets: Too Many Theories, Too Few Facts," *American Economic Review* 85 (1995), 255-259.
- [4] Beaudry, P. and Francois, P., "Managerial Skills Acquisition and the Theory of Economic Development," *Review of Economic Studies* 77:1 (2010), 90-126.
- [5] Bowman, A.W. and Azzalini, A., Applied Smoothing Techniques for Data Analysis, (Oxford University Press, 1997).
- [6] Calvo, G., Wellisz, S., "Hierarchy, ability and income distribution," *Journal of Political Economy*, 87 (1979), 991-1010.
- [7] De Fraja, G., "Hierarchies in organisations and labour market competition," *Labour Economics* 11:6 (2004), 669-686.

- [8] Di Nardo, J., Fortin, N.M., Lemieux, T., "Labor market institutions and the distribution of wages 1973–1992: a semiparametric approach," *Econometrica* 64 (1996), 1001–1024.
- [9] Jones, M.C., Marron, J.S., and Sheather, S.J., "A Brief Survey of Bandwidth Selection for Density Estimation," *Journal of the American Statistical Association*, Vol. 91:433 (1996), 401-407.
- [10] Marron, J.S. and Schmitz, H.P., "Simultaneous Density Estimation of Several Income Distributions," *Econometric Theory*, 8:4 (1992), 476-488.
- [11] Rao, P.V., Schuster, E.F. and Ramon C., "Estimation of Shift and Center of Symmetry Based on Kolmogorov-Smirnov Statistics," The Annals of Statistics 3:4 (1975), 862-873.
- [12] Sheather, S., "Density Estimation," Statistical Science 19 (2004), 588–597.
- [13] Sheather S.J. and Jones M.C, "A Reliable Data-Based Bandwidth Selection Method for Kernel Density Estimation," *Journal of the Royal Statistical Society* 53 (1991), 683-690.
- [14] Shleifer A. and Vishny R., "A Survey of Corporate Governance," Journal of Finance 52 (1997), 737-783.
- [15] Silverman, B.W., Density Estimation for Statistics and Data Analysis, (Chapman and Hall, 1986).
- [16] Vilhuber, L., "Adjusting Imperfect Data: Overview and Case Studies," in Lazaer, E.P. and Shaw, K.L. (Eds), The Structure of Wages: An International Comparison, (University of Chicago Press, 2009).

Table I Summary statistics

The table reports average (log) wage and its standard error for managers and others employees; their percentage difference; the percentage of managers and the total number of observations for each country.

		Wage	e (log)	Difference	M		
Country	Managers		Oth	Others		Managers (%)	Obs (#)
	Mean	Mean SE Mean SE		_ (%)	(70)		
Austria	7.847	0.764	7.390	0.758	0.457	0.395	5,146
Belgium	8.075	0.524	7.601	0.611	0.474	0.289	$4,\!524$
Cyprus	7.734	0.570	7.039	0.723	0.695	0.291	$3,\!412$
Czech Republic	6.717	0.521	6.241	0.532	0.476	0.198	7,244
Denmark	8.388	0.525	8.033	0.485	0.355	0.210	2,796
Estonia	6.486	0.629	6.029	0.630	0.457	0.153	$4,\!563$
Finland	8.142	0.564	7.577	0.665	0.564	0.237	3,716
France	7.786	0.601	7.355	0.675	0.431	0.333	6,796
Germany	7.981	0.701	7.395	0.893	0.586	0.253	8,588
Greece	7.760	0.626	7.079	0.682	0.681	0.159	2,818
Hungary	6.472	0.661	5.926	0.623	0.546	0.190	6,015
Iceland	8.256	0.725	7.880	0.734	0.376	0.488	$1,\!329$
Ireland	8.196	0.664	7.548	0.810	0.648	0.361	3,120
Italy	7.813	0.584	7.355	0.602	0.459	0.246	$12,\!310$
Latvia	6.360	0.698	5.799	0.736	0.561	0.114	3,341
Lithuania	6.417	0.672	5.842	1.602	0.575	0.172	3,969
Luxembourg	8.454	0.637	7.780	0.739	0.674	0.285	$3,\!564$
Netherlands	8.125	0.551	7.696	0.638	0.429	0.291	4,001
Norway	8.323	0.585	7.894	0.712	0.430	0.320	2,929
Poland	6.536	0.674	5.989	0.685	0.547	0.200	$9,\!385$
Portugal	7.342	0.757	6.632	0.682	0.710	0.206	2,631
Slovakia	6.305	0.498	5.887	0.540	0.418	0.146	5,040
Slovenia	7.264	0.628	6.924	0.583	0.340	0.281	221
Spain	7.547	0.596	7.063	0.704	0.484	0.258	9,035
Sweden	7.912	0.689	7.528	0.754	0.384	0.194	3,333
United Kingdom	8.153	0.615	7.560	0.737	0.593	0.387	6,609
Average	7.554	0.625	7.040	0.713	0.514	0.256	$4,\!863$
Total						31,689	126,435

Figure I
Management premium and the distribution of wages in UK and Poland

The Figure reports the actual and counterfactual distribution of wages for UK with smoothed difference (panels A and B, respectively) and for Poland (panels C and D, respectively).

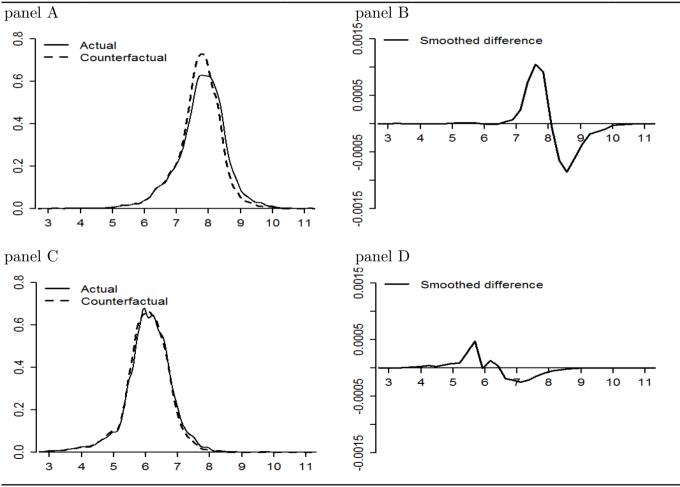


Table II

Management premium and the distribution of wages across EU economies

The table reports the Kolgomorov and Smirnov statistic for equality of distributions, and the premium measured at the mean and at the deciles of the distribution. p-values are associated to the null hypothesis of equality of distributions, means and deciles, respectively.

Country	KS test	Average premium	Pemium at percentile								
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
Austria	0.063 (0.000)	0.057 (0.019)	-0.028 (0.242)	-0.007 (0.763)	0.012 (0.633)	0.035 (0.149)	0.057 (0.018)	0.074 (0.002)	0.087 (0.000)	0.112 (0.000)	0.148 (0.000)
Belgium	0.054 (0.000)	$0.056 \\ (0.005)$	$0.016 \\ (0.410)$	0.017 (0.401)	$0.025 \\ (0.208)$	$0.030 \\ (0.134)$	$0.037 \\ (0.063)$	0.047 (0.018)	0.061 (0.002)	$0.080 \\ (0.000)$	0.118 (0.000)
Cyprus	0.068 (0.000)	$0.101 \\ (0.000)$	0.081 (0.003)	$0.063 \\ (0.021)$	$0.066 \\ (0.016)$	$0.077 \\ (0.005)$	$0.086 \\ (0.002)$	0.097 (0.000)	$0.108 \\ (0.000)$	0.132 (0.000)	$0.166 \\ (0.000)$
Czech Republic	0.049 (0.000)	$0.058 \\ (0.000)$	$0.041 \\ (0.003)$	$0.042 \\ (0.002)$	$0.045 \\ (0.001)$	$0.045 \\ (0.001)$	$0.044 \\ (0.001)$	$0.047 \\ (0.001)$	$0.052 \\ (0.000)$	$0.066 \\ (0.000)$	$0.086 \\ (0.000)$
Denmark	$0.052 \\ (0.001)$	$0.049 \\ (0.018)$	$0.026 \\ (0.205)$	$0.024 \\ (0.251)$	$0.024 \\ (0.234)$	0.027 (0.193)	0.031 (0.133)	$0.036 \\ (0.077)$	$0.043 \\ (0.038)$	$0.055 \\ (0.008)$	0.084 (0.000)
Estonia	$0.040 \\ (0.001)$	$0.056 \\ (0.005)$	$0.026 \\ (0.200)$	$0.036 \\ (0.069)$	$0.043 \\ (0.030)$	$0.046 \\ (0.021)$	$0.049 \\ (0.014)$	$0.053 \\ (0.007)$	$0.063 \\ (0.002)$	$0.075 \\ (0.000)$	$0.096 \\ (0.000)$
Finland	$0.058 \\ (0.000)$	$0.075 \\ (0.002)$	$0.056 \\ (0.020)$	0.037 (0.119)	$0.033 \\ (0.171)$	$0.035 \\ (0.146)$	$0.044 \\ (0.065)$	$0.056 \\ (0.018)$	$0.076 \\ (0.001)$	$0.104 \\ (0.000)$	0.132 (0.000)
France	$0.045 \\ (0.000)$	$0.060 \\ (0.001)$	0.028 (0.118)	0.021 (0.239)	0.023 (0.204)	0.031 (0.084)	$0.040 \\ (0.027)$	$0.046 \\ (0.011)$	$0.058 \\ (0.002)$	0.094 (0.000)	0.113 (0.000)
Germany	$0.030 \\ (0.001)$	$0.055 \\ (0.007)$	0.093 (0.000)	$0.045 \\ (0.030)$	$0.046 \\ (0.027)$	$0.048 \\ (0.019)$	$0.047 \\ (0.024)$	$0.042 \\ (0.040)$	$0.044 \\ (0.034)$	$0.050 \\ (0.014)$	$0.069 \\ (0.001)$
Greece	$0.050 \\ (0.002)$	$0.070 \\ (0.012)$	$0.059 \\ (0.033)$	0.032 (0.247)	0.027 (0.332)	$0.044 \\ (0.115)$	$0.069 \\ (0.013)$	$0.072 \\ (0.010)$	$0.076 \\ (0.006)$	0.082 (0.003)	$0.122 \\ (0.000)$
Hungary	0.027 (0.019)	$0.050 \\ (0.005)$	0.023 (0.199)	0.018 (0.313)	0.036 (0.047)	0.036 (0.042)	0.034 (0.057)	$0.036 \\ (0.047)$	0.043 (0.018)	0.052 (0.004)	0.078 (0.000)
Iceland	0.080 (0.003)	0.093 (0.048)	0.098 (0.039)	0.074 (0.116)	$0.062 \\ (0.192)$	0.071 (0.132)	0.081 (0.088)	0.091 (0.054)	$0.105 \\ (0.026)$	0.131 (0.005)	0.164 (0.001)

Table II - Continued

				Table	e II - Cont	inued					
Ireland	0.046	0.079	0.050	0.058	0.039	0.046	0.052	0.062	0.083	0.096	0.120
	(0.006)	(0.017)	(0.130)	(0.078)	(0.236)	(0.159)	(0.116)	(0.057)	(0.012)	(0.003)	(0.000)
Italy	0.035	0.047	0.021	0.021	0.018	0.022	0.026	0.031	0.039	0.052	0.091
	(0.000)	(0.000)	(0.087)	(0.089)	(0.131)	(0.073)	(0.033)	(0.010)	(0.001)	(0.000)	(0.000)
Latvia	0.034	0.057	0.030	0.038	0.040	0.043	0.050	0.054	0.054	0.060	0.087
	(0.027)	(0.033)	(0.267)	(0.151)	(0.138)	(0.108)	(0.059)	(0.043)	(0.044)	(0.024)	(0.001)
Lithuania	0.042	0.060	0.016	0.028	0.036	0.048	0.060	0.068	0.072	0.084	0.100
	(0.002)	(0.012)	(0.507)	(0.236)	(0.128)	(0.046)	(0.012)	(0.004)	(0.002)	(0.000)	(0.000)
Luxembourg	0.035	0.050	0.022	0.019	0.025	0.038	0.030	0.037	0.060	0.073	0.108
	(0.026)	(0.073)	(0.431)	(0.493)	(0.364)	(0.169)	(0.282)	(0.186)	(0.031)	(0.009)	(0.000)
Netherlands	0.029	0.041	0.023	0.020	0.020	0.018	0.020	0.026	0.038	0.047	0.074
	(0.064)	(0.064)	(0.312)	(0.370)	(0.358)	(0.414)	(0.378)	(0.237)	(0.086)	(0.034)	(0.001)
Norway	0.049	0.064	0.065	0.035	0.031	0.031	0.035	0.041	0.052	0.068	0.116
	(0.003)	(0.026)	(0.023)	(0.225)	(0.283)	(0.274)	(0.217)	(0.151)	(0.069)	(0.018)	(0.000)
Poland	0.031	0.056	0.042	0.037	0.045	0.041	0.043	0.046	0.054	0.057	0.086
	(0.000)	(0.000)	(0.007)	(0.017)	(0.004)	(0.009)	(0.006)	(0.003)	(0.001)	(0.000)	(0.000)
Portugal	0.030	0.041	0.021	0.021	0.025	0.031	0.042	0.052	0.059	0.070	0.003
	(0.117)	(0.194)	(0.499)	(0.496)	(0.428)	(0.314)	(0.184)	(0.095)	(0.059)	(0.025)	(0.921)
Slovakia	0.034	0.037	0.016	0.024	0.013	0.016	0.025	0.030	0.035	0.048	0.065
	(0.004)	(0.021)	(0.309)	(0.136)	(0.438)	(0.322)	(0.117)	(0.064)	(0.029)	(0.003)	(0.000)
Slovenia	0.051	0.051	-0.035	-0.011	-0.008	-0.003	0.009	0.034	0.064	0.088	0.064
	(0.615)	(0.553)	(0.684)	(0.896)	(0.926)	(0.975)	(0.917)	(0.690)	(0.458)	(0.308)	(0.460)
Spain	0.034	0.046	0.029	0.030	0.027	0.029	0.034	0.042	0.052	0.062	0.069
	(0.000)	(0.004)	(0.071)	(0.061)	(0.092)	(0.066)	(0.034)	(0.009)	(0.001)	(0.000)	(0.000)
Sweden	0.042	0.051	0.042	0.037	0.032	0.029	0.032	0.037	0.044	0.056	0.087
	(0.006)	(0.070)	(0.132)	(0.189)	(0.251)	(0.296)	(0.255)	(0.188)	(0.115)	(0.045)	(0.002)
United Kingdom	0.077	0.092	0.013	0.025	0.049	0.069	0.088	0.111	0.126	0.133	0.167
	(0.000)	(0.000)	(0.509)	(0.221)	(0.016)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

 ${\bf Table~III}$ Management premium and the distribution of wages: difference from UK

Country				Difference from UK at			
Country	Mean	θ =.70	θ=.90		Mean	θ =.70	θ=.90
Austria	-0.035	-0.040	-0.019	Italy	-0.045	-0.087	-0.077
	(0.425)	(0.371)	(0.663)		(0.162)	(0.007)	(0.018)
Belgium	-0.036	-0.065	-0.050	Latvia	-0.035	-0.073	-0.080
	(0.369)	(0.105)	(0.217)		(0.454)	(0.123)	(0.088)
Cyprus	0.009	-0.018	-0.001	Lithuania	-0.033	-0.054	-0.068
	(0.849)	(0.702)	(0.978)		(0.462)	(0.222)	(0.125)
Czech Republic	-0.034	-0.074	-0.082	Luxembourg	-0.042	-0.066	-0.060
	(0.322)	(0.031)	(0.017)		(0.384)	(0.171)	(0.217)
Denmark	-0.044	-0.084	-0.084	Netherlands	-0.051	-0.088	-0.094
	(0.287)	(0.041)	(0.041)		(0.231)	(0.039)	(0.028)
Estonia	-0.037	-0.063	-0.071	Norway	-0.028	-0.074	-0.051
	(0.362)	(0.117)	(0.078)		(0.563)	(0.131)	(0.294)
Finland	-0.018	-0.051	-0.036	Poland	-0.036	-0.073	-0.082
	(0.692)	(0.252)	(0.416)		(0.310)	(0.043)	(0.023)
France	-0.033	-0.069	-0.055	Portugal	-0.052	-0.067	-0.164
	(0.398)	(0.075)	(0.156)		(0.317)	(0.192)	(0.001)
Germany	-0.037	-0.083	-0.098	Slovakia	-0.055	-0.091	-0.102
	(0.365)	(0.043)	(0.016)		(0.133)	(0.013)	(0.005)
Greece	-0.022	-0.050	-0.045	Slovenia	-0.041	-0.062	-0.104
	(0.645)	(0.299)	(0.350)		(0.700)	(0.559)	(0.331)
Hungary	-0.042	-0.084	-0.090	Spain	-0.046	-0.074	-0.098
	(0.270)	(0.029)	(0.019)		(0.205)	(0.042)	(0.007)
Iceland	0.001	-0.021	-0.003	Sweden	-0.042	-0.082	-0.080
	(0.986)	(0.754)	(0.960)		(0.387)	(0.088)	(0.097)
Ireland	-0.014	-0.043	-0.047	United Kingdom	_	_	-
	(0.796)	(0.414)	(0.375)				



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