

Wage Distributions by Bargaining Regime – Linked Employer-Employee Data Evidence for Germany

Karsten Kohn*, Alexander C. Lembcke**

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Abstract: Using linked employer-employee data from the German Structure of Earnings Survey 2001, this paper provides a comprehensive picture of wage structures in three wage-setting regimes prevalent in the German system of industrial relations. We analyze wage distributions for various labor market subgroups by means of kernel density estimation, variance decompositions, and individual and firm-level wage regressions. Unions' impact through collective and firm-level bargaining generally works towards a higher wage level and reduced overall and residual wage dispersion. Yet there is no clear evidence for wage floors formed by collectively bargained schedules of contract wages which operate as minimum wages for different groups of workers. Impacts are considerably heterogeneous across different labor market groups.

Keywords: Collective wage bargaining, firm-level wage bargaining, wage structure, kernel density estimation, wage equations, German Structure of Earnings Survey.

JEL-Classification: J31, J51, J52.

* Goethe University Frankfurt and IZA, kohn@wiwi.uni-frankfurt.de. Correspondence: Goethe University Frankfurt, Department of Economics, 60054 Frankfurt am Main, Germany.

** London School of Economics and Political Science, a.c.lembcke@lse.ac.uk.

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1 Introduction

Trade unions bargain for higher wages, equal pay, fair working conditions, or employment protection (Freeman and Medoff 1984). Classical models such as monopoly unions, right-to-manage models, or efficient bargaining predict a monotonic positive relationship between union power and the level of bargained wages; see the surveys of Farber (1986), Oswald (1985), and Naylor (2003). Some more recent studies emphasize effects on higher moments of the wage distribution. In line with an insurance motive for union representation of risk-averse workers (Agell and Lommerud 1992, Burda 1995), union impact compresses the wage distribution relative to the distribution of productivities. By enforcing “equal pay for equal work” unions further seek to limit favoritism and discrimination by superiors and colleagues, and to encourage solidarity among the work force (Freeman 1982). Union-bargained wages may serve as wage floors, thereby narrowing the distribution of wages from below.

Collective agreements reflecting unions’ bargaining objectives then have two effects on the structure of wages. First, differences between covered and non-covered segments would increase as the result of the unions’ strive for higher wages. Second, wage compression induced through the collective contract would reduce within-segment inequality. The question which effect would prevail has been discussed for some time in the Anglo-Saxon context; see the survey of Card, Lemieux, and Riddell (2003).

However, the Anglo-Saxon concept of union gaps or membership premia is inappropriate for Germany because collective agreements constituting discriminatory wage policies with disadvantages for non-members are forbidden by constitutional law (negative freedom of association, *negative Koalitionsfreiheit*, *Grundgesetz Art. 9*). The scope of collective agreements goes beyond the organized parties. Wages set at the firm level as well as individually bargained wages are adapted towards collective bargaining agreements, be it in order to reduce transaction costs or not to create incentives for employees to join a union. Collective bargaining coverage thus is considerably higher than union density. The decision whether to apply a collective contract or not is basically left to the firms. In the interpretation of Dustmann and Schönberg (2004), firms use collective agreements as a commitment device.

Employees are paid either according to individual contracts between the employee and the firm or according to a collective agreement. The collective agreement can be negotiated between a union and an employers’ association, a union and a firm, or a works council and a firm. Arrangements between firm and works council are only allowed to govern wages or salaries if the firm is not subject to a collective contract or if the collective

contract explicitly allows for this type of arrangement. Firm-level agreements involving a union are allowed to set wages even if a collective agreement exists, as long as the firm-level agreement is more specific than the collective agreement. No more than one collective wage agreement must apply at the same time, but not all employees working in a firm applying a collective agreement are automatically covered. Collective contracts may also contain an opening clause explicitly allowing deviations from the terms of the contract under particular circumstances (Heinbach 2005).

Collective bargaining coverage, as measured by the share of employment contracts following collective agreements, was relatively stable in West Germany until the end of the 1990's but has been declining since. By the year 2003, 70% (45%) of West German employees (firms) were covered by a collective agreement (Schnabel 2005). With respective shares of 47% and 26%, coverage in East Germany was markedly lower.¹ The “erosion” towards more decentralized wage setting is examined by a group of studies using firm-level data, and is reconfirmed by survey evidence from works councils.²

The literature on the effects of bargaining coverage on the German wage structure is still sparse. In this paper we use newly available linked employer-employee data for Germany, the German Structure of Earnings Survey (GSES, *Gehalts- und Lohnstruktur-erhebung*) 2001, in order to provide a first comprehensive picture of wage structures in the different bargaining regimes for various labor market subgroups. Broadening the scope of previous results at the Federal-State level, we compare individual, firm-level, and collective bargaining among male full-time employees, female full-time, and female part-time employees, and we distinguish between blue-collar and white-collar workers and between establishments in East and West Germany.

The thrust of our findings confirms a priori expectations. Union impact through collective bargaining results in a higher wage level as well as reduced overall and residual wage dispersion. Yet there is no clear evidence for disproportionate wage compression from below or a wage floor formed by collectively bargained low wage brackets. Moreover, we detect considerable heterogeneity of union impacts across different labor market groups as well as subtle differences between individual and firm-level evidence.

The course of the paper is organized as follows. Section 2 briefly reviews related studies in the literature. Section 3 introduces the GSES 2001 data. Framework and results of our empirical investigation are discussed in section 4. Section 5 concludes.

¹In contrast, aggregate gross union density—i. e., the ratio of the number of union members and the number of employees in the German labor market—was only 27% in the year 2004 (Fitzenberger, Kohn, and Wang 2006).

²Kohaut and Bellmann (1997), Bellmann, Kohaut, and Schnabel (1999), Kohaut and Schnabel (2003b, 2003a), Bispinck and Schulten (2003), Bosch (2004).

2 Related Literature

Empirical studies of the impact of the different bargaining regimes in Germany have become feasible with the growing availability of linked employer-employee data in recent years. Based on linked data of the IAB employment statistics and the IAB establishment panel, Dustmann and Schönberg (2004) find that under collective coverage, employee turnover is higher, wage cuts occur more often, and (conditional) wages have a lower variance.

A couple of studies analyze subsamples of the German Structure of Earnings Survey (GSES, *Gehalts- und Lohnstrukturerhebung*). Using different cross sections (1990, 1995, 2001) of the manufacturing subsample for the state of Lower-Saxony, Gerlach and Stephan (2002, 2005b, 2005a) report kernel density estimates of log wage distributions for labor market regimes with and without collective and firm-level wage agreements and estimate firm-level wage regressions. Average hourly wages paid in accordance with a collective or a firm-level agreement are higher than the average of individually negotiated wages. Yet unconditional as well as conditional wage dispersion is highest among individual contracts. Differences between regimes increased between the years 1990 and 2001. Similar results are obtained by Bechtel, Mödinger, and Strotmann (2004) based on the GSES subsample for the state of Baden-Württemberg. Multi-level regression models in Stephan and Gerlach (2003, 2005) reveal that differences in individual wages are consistent with a higher base wage in case of collective coverage. Returns to human capital—skill, experience, and tenure—as well as residual wage dispersion are lower under collective coverage. Gerlach and Stephan (2006) note that collective agreements compress within-firm compensation schemes across occupations.

Heinbach (2005) merges the GSES subsample for Baden-Württemberg with information on the existence of an opening clause in collective agreements. When distinguishing between collective agreements with and those without opening clauses in firm-level regressions, he finds that mean wages for blue-collar workers in manufacturing are lower under opening clauses, but no significant wage differences exist for white-collar workers. Moreover, no significant differences exist regarding wage dispersion as measured by the standard deviation of wages.

In a companion paper (Fitzenberger, Kohn, and Lembcke 2006) we augment the GSES 2001 by estimates of union membership taken from Fitzenberger, Kohn, and Wang (2006) in order to simultaneously study the impacts of both collective bargaining regimes and union bargaining power as measured by net union density at an aggregate level.³ Col-

³Net union density in homogeneously defined labor market segments (5,800 cells) is estimated by

lective bargaining as well as net union density significantly influence wages. Individual coverage as well as union density lower wages, while the firm-level share of covered employees raises them. The effect of union density is stronger at higher percentiles, thereby lowering wage dispersion especially from above.

A collective agreement does not constrain a firm’s right to pay premia above the wage set in the collective contract. So actual wages may differ substantially from the contractual wage. This aspect is examined by the wage-drift literature and studies related to nominal, notional, or real wage rigidity; see, e. g., Bauer, Bonin, and Sunde (2003) and Pfeiffer (2003). Cardoso and Portugal (2005) analyze the gap between contractual and actual wages for employees covered by different types of collective agreements in Portugal.⁴ They find that the positive effect of union strength—as measured by the share of covered employees—on the level of contractual wages is partly offset by a smaller wage cushion. So higher contractual wages in sectors with a high share of covered employees do not lead to higher actual wages by the same degree. Besides, firms covered by (multi- or single-) firm-level agreements pay higher wages than firms covered by sectoral agreements.

3 Data

Our study is based on the German Structure of Earnings Survey (GSES, *Gehalts- und Lohnstrukturerhebung*) 2001, a cross-sectional linked employer-employee data set containing about 850,000 employees in some 22,000 firms. Missing essentially the public sector, the GSES 2001 covers the major part of industry and private services. There are several advantages to using the GSES 2001. It is one of the largest mandatory surveys available for Germany. The sample not only includes workers in regular employment, but also employees in vocational training, marginal employment, or partial retirement schemes. In contrast to earlier GSES waves and to the IAB linked employer-employee data set (LIAB), wages are neither truncated nor censored so that lower and upper parts of the wage distribution can be analyzed precisely. Moreover, collective bargaining coverage is recorded for each of the individuals, and not only at the firm level as, e. g., in the LIAB. GSES data are gathered from firms’ official reporting obligations. Therefore, they are more reliable than information from individual-level surveys or data not covered by duties of disclosure (Jacobebbinghaus 2002).

The GSES 2001 has only recently been made available for research.⁵ So far, analyses average union membership propensities.

⁴Cardoso and Portugal (2005) refer to this gap as “wage cushion” (p. 877) in order to distinguish it from the notion of wage drift, which traditionally focusses on the change of the gap.

⁵In fact, the wave 2001 so far is the only one available in the Research Data Center. Preceding cross

with GSES data have been restricted to administrative use or to regional subsamples (cf. Fitzenberger and Reize (2002, 2003) and the studies cited in section 2). See Hafner (2005) and Statistisches Bundesamt (2000, 2004) for descriptions of the data set. Details on the on-site-use version employed in this study, our selection of data, and definitions of variables used are given in the additional appendix.

We consider male full-time, female full-time, and female part-time employees and distinguish between blue-collar and white-collar workers and between East and West Germany. Our analysis focusses on the distribution of log hourly wages in three regimes of bargaining coverage:

- CC: collective contract negotiated between an employers' association and a union.
- FC: firm-level contract negotiated between a firm and a union or a works council.
- IC: individual contracts negotiated between employer and employee.

Table 1 displays the shares of employees in the respective labor market groups covered by the different bargaining regimes. The numbers are broadly in line with those reported by other studies using different data sets, but—ranging between 28 and 61%—collective coverage rates differ considerably between different types of employees.⁶ Coverage is generally lower in East Germany than in the West.⁷ In comparison to females, male workers exhibit higher coverage rates among blue-collar, but lower rates among white-collar workers. Coverage among white-collar workers is usually higher than among blue-collar workers, with the notable exception of male full-time workers in the West Germany. For this traditional core group we observe the highest coverage rate of 61%. Firm-level agreements are not applied as often as collective agreements, but again the share of covered employees varies across types of employees between 4 and 13%.

4 Wage Distributions by Bargaining Regime

4.1 Unconditional Distributions

Table 2 reports means and standard deviations of log hourly wages by bargaining regimes for the different labor market groups. The overall picture meets a priori expectations.

sections are scheduled to be made available in the future.

⁶Kohaut and Schnabel (2003a) and Schnabel (2005) report differences by industries and establishment size, respectively. However, none of these studies differentiates by labor market subgroups.

⁷Only for the group of female part-time employees the East-West difference is basically negligible.

However, there are notable differences between groups regarding both wage levels and wage dispersion.

Average wages are in most cases highest under firm-level contracts, closely followed by collective contracts, and both FC and CC leaving individually negotiated wages behind. However, there is the notable exception of male full-time white-collar workers in West Germany, for whom the average of wages set in individual contracts is even highest. So even though we have excluded white-collar workers in the highest professional status category (*leitende Angestellte*), employees payed above the agreed scale rate (*außertarifliche Angestellte*) have a pronounced effect on the wage level. As expected, higher wages are paid in West Germany as compared to the East, for men as compared to women, and for full-time employees as compared to part-timers.

Overall wage dispersion is generally highest among individual contracts, but again we find diverse patterns. Considering white-collar workers, dispersion is higher among firm-level agreements than among collective contracts in West Germany, but the ranking is reversed in the East. In total though, differences between East and West Germany are small. Dispersion among blue-collar workers is generally lower than among white-collar workers. East German blue-collar workers even face lowest overall dispersion when being paid according to individual contracts.

Mean and standard deviation are only insufficient measures of the distributions if there are categorization effects leading to multiple peaks or if the different bargaining regimes have asymmetric impacts, such as predicted by a minimum-wage argument for collective wages. We therefore estimate the densities $f_r(y_r)$ of log wages $y_r \equiv \ln(w_r)$ in regimes r by means of nonparametric kernel density estimation:

$$\hat{f}_h(y) = \frac{1}{Nh} \sum_{i=1}^N K\left(\frac{y - y_i}{h}\right), \quad (1)$$

where $i = 1, \dots, N$ denotes individuals and the index r is omitted for notational simplicity. We employ an Epanechnikov kernel $K(\cdot)$ and choose the bandwidth h according to Silverman's (1986) rule of thumb.

By and large, our findings in figure 1 match those in the related literature, with densities of individual wages being located to the left of the densities of collective and firm-level agreements, and IC densities showing higher variances and more mass at the tails. For most groups, the shape of the FC density is more similar to that of CC than to the shape of the IC density. Evidence regarding the skewness of the distributions is mixed, however. We find no clear support for the hypothesis that lower wage brackets in collective and firm-level agreements form strong wage floors and compress the distribution from below. Moreover, there are important differences between labor market groups. For

example, there are notable categorization effects among part-time workers with collective or firm-level contracts, as well as for full-time blue-collar women in East Germany. For these groups, the distributions show very pronounced or even multiple peaks, indicating that employees are selected in certain wage brackets which are similar across firms and occupations.⁸ We also find that the high average of IC wages among the large group of male white-collar workers in West Germany is supported by a less clear-cut mode and relatively high mass in the upper half of the distribution, even though there is also a long left tail.

In order to approach the nature of wage dispersion underlying the observed distributions, we decompose the variance of log hourly wages for each regime into within and between-firms effects:

$$\sum_{j=1}^J \sum_{i=1}^{N_j} (y_{ij} - \bar{y})^2 = \sum_{j=1}^J \sum_{i=1}^{N_j} (y_{ij} - \bar{y}_j)^2 + \sum_{j=1}^J N_j (\bar{y}_j - \bar{y})^2, \quad (2)$$

where y_{ij} denotes the log hourly wage for individual i in firm j , \bar{y}_j the mean hourly wage in firm j , \bar{y} the overall mean hourly wage, and N_j the number of employees in firm j .

The height of the bars in figure 2 recalls the level of overall dispersion discussed above. With respect to the shares of within and between-dispersion, there are generally little differences between the bargaining regimes, but considerable ones across groups. Whereas variation within and between firms both contribute equally to the dispersion among white-collar workers, blue-collar workers—and in particular those in East Germany—exhibit a disproportionately large share of between-firm effects. While highlighting again the existence of heterogeneity across groups, these findings also show the necessity to control for differences between firms as well as differences between individuals within the same firm when judging pay differentials between bargaining regimes.

4.2 Individual-Level Wage Regressions

In order to control for different selections of workers and firms into the bargaining regimes in terms of observable characteristics, we estimate individual-level wage regressions separately for the different regimes. As to the focus of our analysis, this approach has two advantages. First, it allows not only the base level of wages to vary between regimes, but also the effects of all covariates. Second, we can subsequently analyze the distributions of

⁸Alternatively, the number of observations for these groups (coming down to about 500 for part-time blue-collar women in the East) might simply be too small for nonparametric estimation and the results would reflect a statistical artefact. However, the pronounced patterns rather suggest the existence of categorization effects.

the residuals in order to shed light on differences in residual wage dispersion between the regimes.

We exploit the nature of the linked employer-employee data set and include covariates X_{ij} at the individual level, such as human capital variables (educational attainment, age, tenure) and workplace-related characteristics (indicators for shift-work or work on Sundays, etc.), as well as firm-level covariates Z_j , such as size and industry of the firm or average characteristics of the firm's workforce:

$$y_{ij} = \alpha + X_{ij}\beta + Z_j\gamma + \epsilon_{ij}. \quad (3)$$

Table 3 summarizes the estimated intercepts of this specification.⁹ The numbers can be interpreted as base wages indicating mean differences between the regimes net of controlled impacts.¹⁰ In almost every case, base wages for firm-level agreements are notably higher than for both collective and individual contracts. *Ceteris paribus*, unions (or works councils) are more successful in raising wages in direct negotiation with the employer as compared to collective or individual bargaining.¹¹ CC and IC base wages are usually close to each other, but the ranking of the two is reversed between East and West Germany. Whereas employees with individual contracts earn a higher base wage in the West, the base is higher for collectively bargained wages in the East.¹² So collective agreements reached in East Germany have a positive impact on the observed overall wage level net of individual and firm-level influences. Yet in West Germany the observed differences are not reflected by individual base effects, but rather stem from differences associated with the included covariates.¹³

⁹Complete regression results as well as definitions of all employed variables are provided in the additional appendix. We also experimented with variants of equation (3) including only individual-level covariates X_{ij} . In contrast to the presented model using the rich set of covariates (labeled (iii) in the additional appendix), these variants could be estimated without (i) or with firm-fixed effects (ii). In most of the cases specifications (ii) and (iii) differ in the level of the base wage, but not in the ranking of wages by regime.

¹⁰Note that the base categories are identical between regimes, but not necessarily between labor market groups. So the base wages should not be compared across groups.

¹¹Using data for Spain, Card and de la Rica (2006) also report significantly higher wages for employees covered by firm-level contracts as compared to sectoral wage agreements. They hypothesize about rent-sharing explanations for this finding.

¹²The regression evidence for female part-time employees is mainly inconclusive and more sensitive to the chosen specification. It therefore can not fully explain the pronounced unconditional picture.

¹³Effects of this kind would include different selections of firms and compositions of their workforce as well as differences in the remuneration of characteristics. The interpretation of differences in the estimated coefficients of the various covariates is beyond the scope of this paper, but left for future research.

4.3 Residual Wage Dispersion

The residuals from the individual wage regressions provide insights into unions' impact on residual wage dispersion, i. e., on variation remaining after individual and firm characteristics have been controlled for. In figure 3 we compare residual variances between regimes and across groups and provide decompositions into within and between-firm effects.¹⁴ As expected, residual wage dispersion is considerably lower than overall dispersion and the share of between-firm variation net of observable influences is considerably smaller. There is a clear ranking between regimes, with individual contracts showing the highest residual dispersion. In contrast to the case of overall dispersion, this finding now holds for all groups, as the regressions capture the categorization effects detected above. Unions' impact on reducing wage dispersion shows in both collective and firm-level bargaining.

In general, the level of residual dispersion is lower among blue-collar workers as compared to white-collars, and fairly similar in East and West Germany. Yet the difference between IC dispersion on the one hand and CC and FC dispersion on the other is more pronounced in the East. Unions therefore have a larger impact in East Germany.

4.4 Firm-Level Wage Regressions

Finally, we compare the regimes with respect to firm-average wage levels and to wage dispersion within firms in a firm-level regression framework. We regress the average wage \bar{y}_j and the standard deviation of wages σ_j , respectively, on a set of firm-level control variables.¹⁵ This approach offers two advantages: First, we explicitly consider both wage level and wage dispersion within firms. Second, we compare the three regimes in one regression framework and thus are able to explicitly test for significance of differences.

We specify

$$\bar{y}_j = \alpha_0 + \text{SHARE_CC}_j \alpha_1 + \text{SHARE_FC}_j \alpha_2 + Z_j \kappa + \varepsilon_j \quad (4)$$

and

$$\sigma_j = \delta_0 + \text{SHARE_CC}_j \delta_1 + \text{SHARE_FC}_j \delta_2 + Z_j \lambda + \nu_j, \quad (5)$$

where SHARE_CC_j and SHARE_FC_j denote the share of workers in firm j covered by collective and firm-level agreements, respectively.

¹⁴Note that the asymptotic distribution of residuals does not reveal any skewness or kurtosis effects by construction. Residual kernel density figures reported in the additional appendix corroborate this notion.

¹⁵We include shares for variables which are discrete at the individual level, and mean values for continuous ones. See the additional appendix for definitions of the covariates.

The results in table 4 reveal significant mark-ups for both collective and firm-level bargaining coverage.¹⁶ Differences between collective and firm-level agreements are of minor importance, but again there is notable heterogeneity across groups. For example, a change from zero to full CC (FC) coverage would increase wages by 2% (3%) for male blue-collar workers in West Germany, but by 24% (22%) for part-time working white-collar women in the East. The effects are considerably larger in East Germany than in West Germany, for women as compared to men, and for white-collar workers compared to blue-collar workers.

The impacts measured at the firm level thus coincide with the impacts on individual-level base wages in East Germany. However, this does not hold to the same extent in West Germany. As not only firms take the decision whether to generally apply collective contracts, but also individuals within firms select themselves based on individual characteristics, it makes in fact sense to look at both firm-level and individual-level evidence.

Regarding firm-level wage dispersion, both collective and firm-level coverage show negative signs, even though only the effects for the core groups of male blue-collar workers turn out significant. Being in line with the patterns revealed above, these results meet a priori expectations also at the firm level.

5 Concluding Remarks

This paper studies wage distributions in three wage-setting regimes prevalent in the German system of industrial relations. Using newly available linked employer-employee data from the German Structure of Earnings Survey (GSES) 2001 we look at various groups in the labor market in order to analyze unions' impact through collective and firm-level bargaining on the structure of wages.

By and large, our findings meet a priori expectations. The impact of wage bargaining works towards a higher wage level and reduced overall, firm-level, and residual wage dispersion. Yet there is no clear evidence for disproportionate wage compression from below or a wage floor formed by collectively bargained schedules of contract wages which operate as minimum wages for different groups of workers. Moreover, we detect considerable heterogeneity in the impacts across different labor market groups as well as subtle differences between individual and firm-level evidence. As a robust result, the effects of wage bargaining are stronger in East Germany as compared to the West.

There is a number of interesting issues for future research arising from our analysis. First of all, differences regarding the returns to human capital and other individual and

¹⁶Note that the comparability of the base effects is limited, again. Compare footnote 10.

firm-level characteristics should be analyzed in order to answer the question who gains most from collective bargaining. Second, the choice of a bargaining regime is clearly endogenous. Selection of individuals driven by observable characteristics would contribute to explaining the revealed differences between individual and firm-level evidence. However, it is not possible to control for selection based on unobservable individual or match-specific effects, and therefore the results should be taken as descriptive rather than causal. As finding valid instruments for collective coverage generally proves intricate, using a matching technique as in Card and de la Rica (2006) would be a promising approach.

Third, as the GSES wave 1995 is scheduled to be made available for research, future studies might take account of variations over time. Fourth, applying quantile regressions as in Fitzenberger, Kohn, and Lembcke (2006) analyzes distributional effects of union impacts at the individual level. This approach would in particular promise additional insights regarding the differences between East and West Germany. Fifth, and finally, unions' impacts on the structure of wages and on employment should be analyzed simultaneously.

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Table 1: Wage-Setting Regimes: Coverage Shares and Sample Sizes

regime	White-Collar					
	Male Full-T. West	Male Full-T. East	Female Full-T. West	Female Full-T. East	Female Part-T. West	Female Part-T. East
CC	0.505	0.363	0.557	0.437	0.518	0.506
FC	0.062	0.092	0.056	0.084	0.041	0.065
IC	0.433	0.545	0.387	0.479	0.441	0.429
N	148.909	21.515	80.361	20.364	41.704	7.175
regime	Blue-Collar					
	Male Full-T. West	Male Full-T. East	Female Full-T. West	Female Full-T. East	Female Part-T. West	Female Part-T. East
CC	0.605	0.324	0.524	0.282	0.409	0.386
FC	0.081	0.066	0.103	0.130	0.074	0.073
IC	0.314	0.610	0.373	0.588	0.517	0.541
N	214.988	54.342	34.385	13.057	35.827	6.990

Shares of employees covered by different regimes, accounting for sampling weights. Numbers of observations by labor market groups. Data source: GSES 2001.

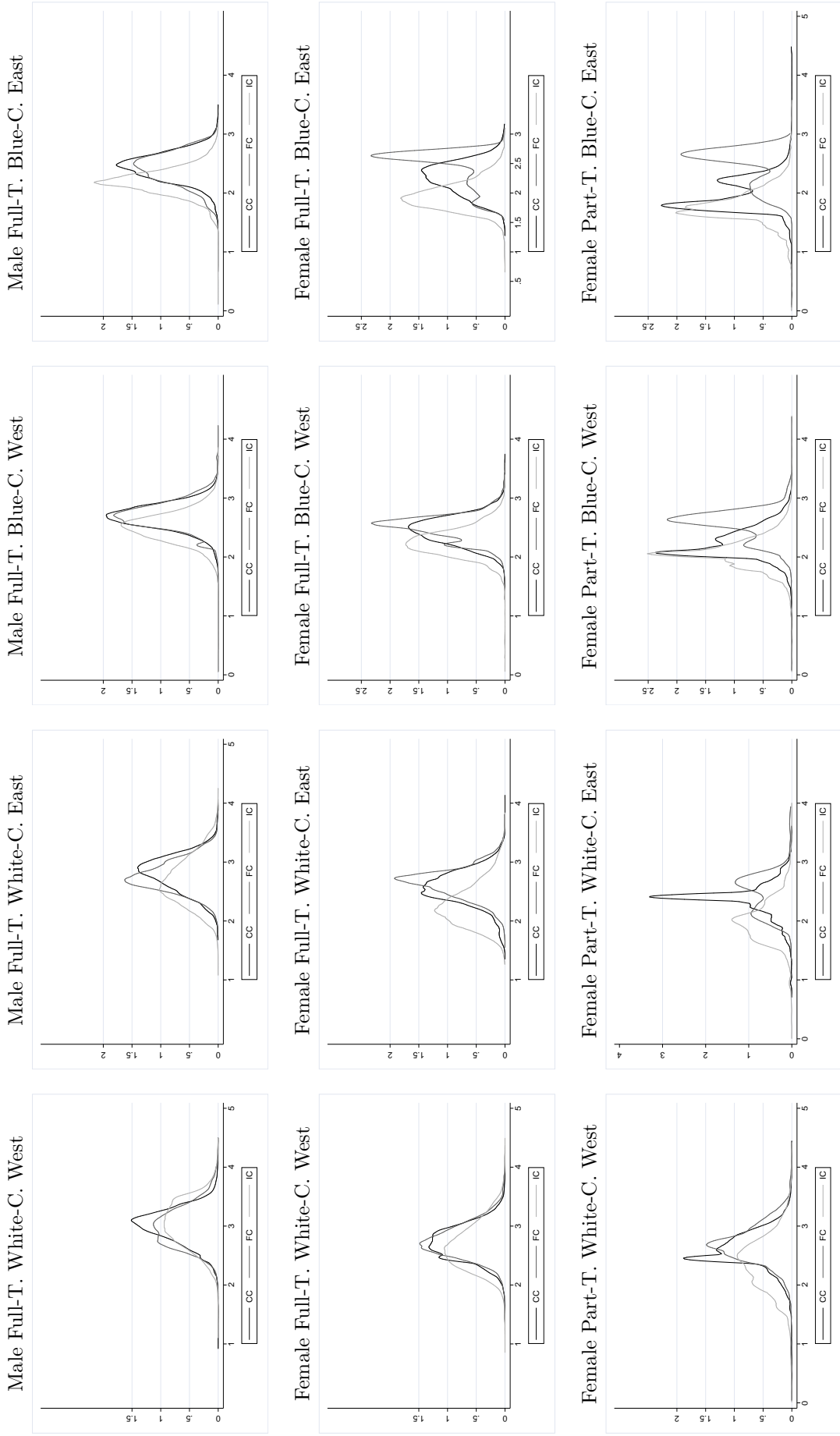
Table 2: Wage Level and Dispersion by Wage-Setting Regimes

regime	White-Collar											
	Male Full-T. West mean	Male Full-T. West std. dev.	Male Full-T. East mean	Male Full-T. East std. dev.	Female Full-T. West mean	Female Full-T. West std. dev.	Female Full-T. East mean	Female Full-T. East std. dev.	Female Part-T. West mean	Female Part-T. West std. dev.	Female Part-T. East mean	Female Part-T. East std. dev.
CC	3.001	0.296	2.808	0.297	2.722	0.289	2.567	0.300	2.601	0.347	2.365	0.326
FC	2.990	0.341	2.764	0.270	2.756	0.298	2.656	0.261	2.704	0.365	2.463	0.374
IC	3.045	0.391	2.675	0.398	2.660	0.383	2.284	0.361	2.363	0.496	1.992	0.388
total	3.019	0.345	2.734	0.355	2.700	0.332	2.453	0.359	2.505	0.438	2.209	0.409

regime	Blue-Collar											
	Male Full-T. West mean	Male Full-T. West std. dev.	Male Full-T. East mean	Male Full-T. East std. dev.	Female Full-T. West mean	Female Full-T. West std. dev.	Female Full-T. East mean	Female Full-T. East std. dev.	Female Part-T. West mean	Female Part-T. West std. dev.	Female Part-T. East mean	Female Part-T. East std. dev.
CC	2.686	0.222	2.443	0.241	2.451	0.238	2.250	0.268	2.229	0.273	1.987	0.349
FC	2.704	0.247	2.407	0.278	2.497	0.225	2.392	0.316	2.539	0.268	2.420	0.337
IC	2.505	0.264	2.187	0.239	2.253	0.247	1.951	0.248	2.063	0.295	1.766	0.314
total	2.632	0.253	2.298	0.273	2.385	0.260	2.104	0.321	2.178	0.319	1.925	0.393

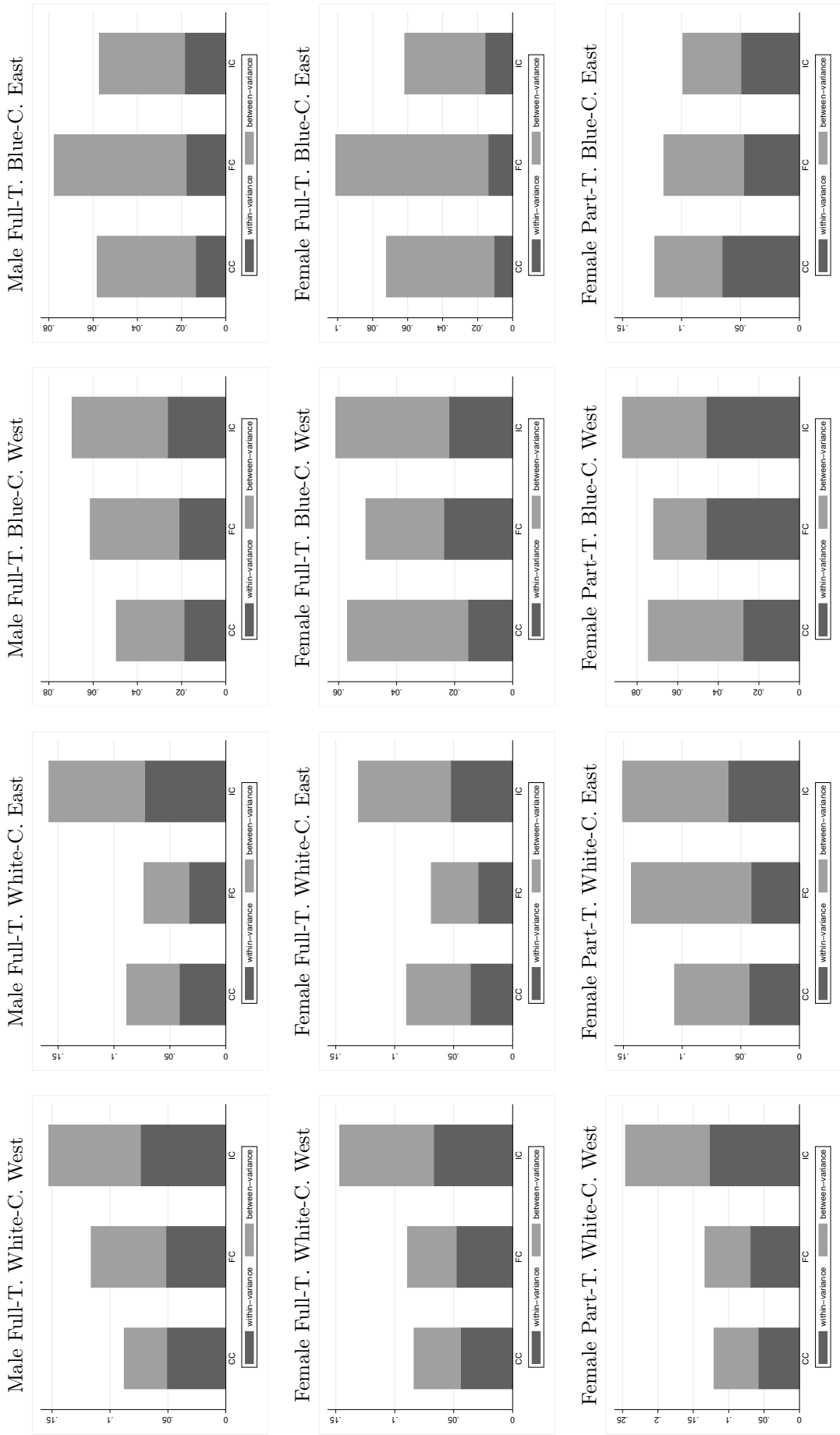
Log gross hourly wages (Euro) and corresponding standard deviations. Data source: GSES 2001.

Figure 1: Unconditional Wage Distributions



Kernel density estimates: log gross hourly wages. Data source: GSES 2001.

Figure 2: Unconditional Variance Decompositions



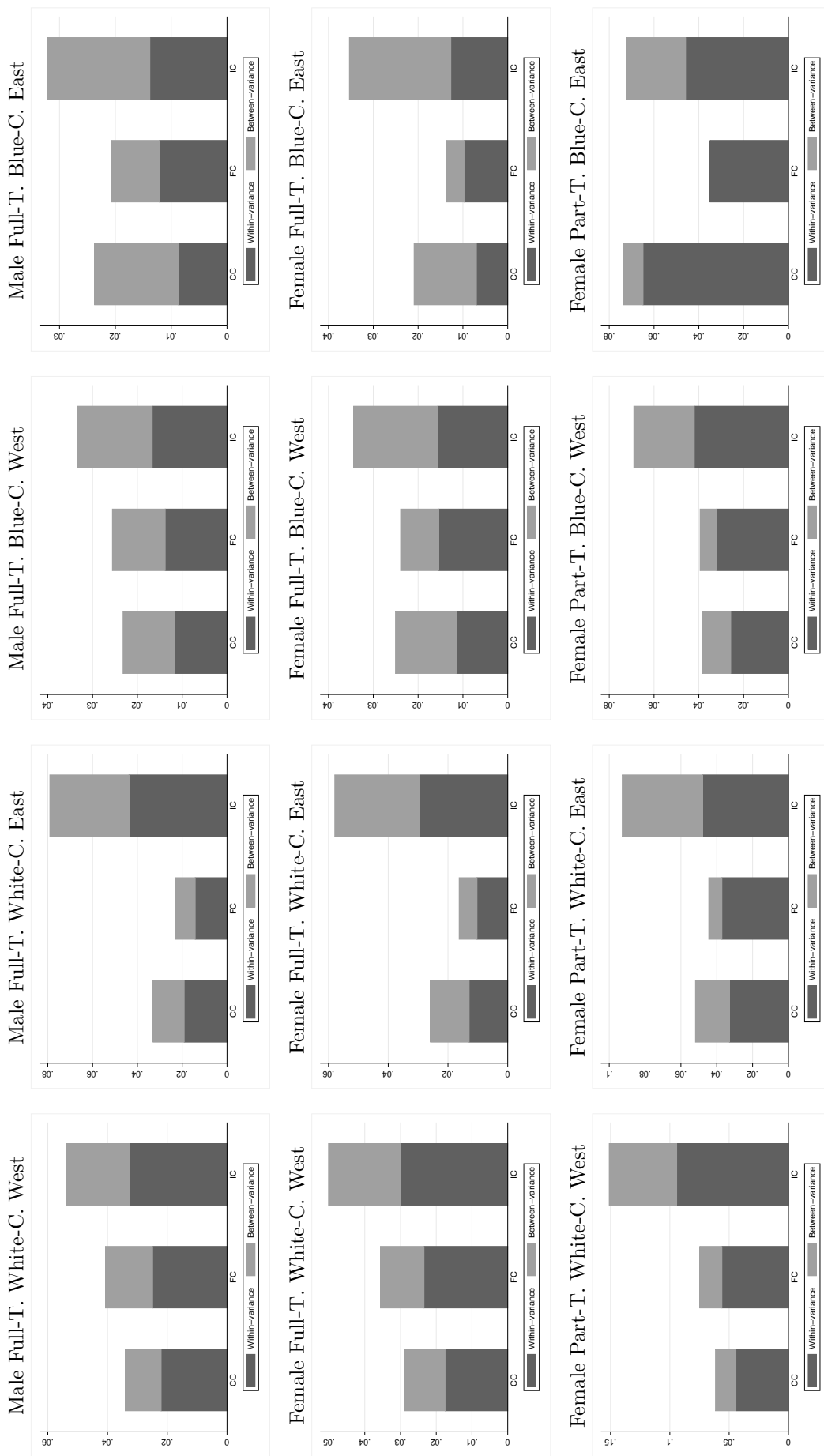
Variance decomposition: log gross hourly wages. Data source: GSES 2001.

Table 3: Individual-Level Wage Regressions: Base Wages by Wage-Setting Regimes

regime	White-Collar						Blue-Collar					
	Male Full-T. West coef. std.err.	Male Full-T. East coef. std.err.	Female Full-T. West coef. std.err.	Female Full-T. East coef. std.err.	Female Part-T. West coef. std.err.	Female Part-T. East coef. std.err.	Male Full-T. West coef. std.err.	Male Full-T. East coef. std.err.	Female Full-T. West coef. std.err.	Female Full-T. East coef. std.err.	Female Part-T. West coef. std.err.	Female Part-T. East coef. std.err.
CC	2.434 (0.077)	2.770 (0.147)	2.326 (0.083)	2.820 (0.144)	1.831 (0.134)	2.472 (0.222)	2.770 (0.147)	2.770 (0.147)	2.493 (0.107)	2.995 (0.208)	2.318 (0.117)	1.927 (0.283)
FC	2.913 (0.198)	3.552 (0.329)	2.717 (0.187)	2.826 (0.266)	3.355 (0.278)	4.857 (0.748)	3.552 (0.329)	3.552 (0.329)	2.750 (0.274)	2.360 (0.295)	2.517 (0.191)	1.339 (0.421)
IC	2.450 (0.076)	2.468 (0.183)	2.348 (0.078)	2.492 (0.176)	2.251 (0.247)	1.772 (0.286)	2.468 (0.183)	2.468 (0.183)	2.669 (0.148)	2.447 (0.145)	2.388 (0.121)	2.171 (0.239)

Log gross hourly wages. Intercepts from separate OLS regressions including full sets of individual- and firm-level covariates, accounting for sampling weights. (Firm-level) clustered standard errors in parentheses. Data source: GSES 2001.

Figure 3: Residual Variances



Variance Decomposition: residuals from individual-level wage regressions (table 3). Data source: GSES 2001.

Table 4: Firm-Level Regressions

Mean Log Hourly Wage												
		Male Full-T. West		Male Full-T. East		Female Full-T. West		Female Full-T. East		Female Part-T. East		
White-Collar	coef.	std. err.	coef.	std. err.	coef.	std. err.	coef.	std. err.	coef.	std. err.	coef.	std. err.
Intercept	2.348**	(0.083)	2.489**	(0.183)	2.278**	(0.065)	2.379**	(0.132)	1.703**	(0.126)	1.473**	(0.297)
CC	0.066**	(0.005)	0.198**	(0.011)	0.099**	(0.005)	0.216**	(0.011)	0.113**	(0.008)	0.241**	(0.021)
FC	0.061**	(0.007)	0.154**	(0.018)	0.102**	(0.008)	0.187**	(0.018)	0.115**	(0.015)	0.217**	(0.041)
Blue-Collar												
Intercept	2.402**	(0.075)	2.333**	(0.167)	2.386**	(0.091)	2.717**	(0.183)	1.926**	(0.110)	1.914**	(0.215)
CC	0.021**	(0.004)	0.100**	(0.009)	0.079**	(0.007)	0.152**	(0.013)	0.092**	(0.008)	0.191**	(0.022)
FC	0.037**	(0.007)	0.080**	(0.016)	0.078**	(0.012)	0.113**	(0.024)	0.108**	(0.015)	0.159**	(0.035)
Std. Dev. Log Hourly Wage												
		Male Full-T. West		Male Full-T. East		Female Full-T. West		Female Full-T. East		Female Part-T. East		
White-Collar	coef.	std. err.	coef.	std. err.	coef.	std. err.	coef.	std. err.	coef.	std. err.	coef.	std. err.
Intercept	0.545**	(0.073)	0.565**	(0.168)	0.374**	(0.062)	0.372**	(0.116)	0.959**	(0.142)	1.048*	(0.430)
CC	-0.004	(0.003)	0.001	(0.007)	-0.003	(0.004)	-0.010	(0.008)	-0.005	(0.008)	-0.006	(0.022)
FC	-0.008	(0.005)	0.001	(0.011)	-0.020**	(0.006)	-0.019	(0.011)	-0.014	(0.012)	-0.040	(0.030)
Blue-Collar												
Intercept	0.224**	(0.050)	0.338**	(0.089)	0.092	(0.070)	0.207*	(0.090)	0.294*	(0.128)	0.012	(0.233)
CC	-0.014**	(0.002)	-0.011**	(0.003)	-0.010*	(0.004)	-0.009	(0.006)	-0.005	(0.006)	-0.013	(0.015)
FC	-0.006	(0.003)	-0.009	(0.005)	-0.004	(0.007)	-0.008	(0.009)	0.024	(0.012)	0.000	(0.027)

OLS regressions including full sets of firm-level covariates, accounting for sampling weights. Robust standard errors in parentheses. * / ** indicate significance at 5% / 1% level. Data source: GSES 2001.