The Own-Wage Elasticity of Labor Demand: A Meta-Regression Analysis*

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Abstract

The own-wage elasticity of labor demand is one of the key parameters in empirical research and policy analysis, crucially affecting the efficiency of many policy reforms. However, despite extensive research, estimates of labor demand elasticities are subject to considerable heterogeneity. In this paper, we explore various dimensions of this heterogeneity by means of a comprehensive meta-regression analysis, building on information from 151 different studies and 1,334 estimates in total. Our results show that heterogeneity in the estimates of the elasticity is natural to a considerable extent: the magnitude of the elasticity depends on the theoretical model applied and features of the workforce. Moreover, we find that labor demand has become more elastic over time, and is particularly elastic in countries with low levels of employment protection legislation. However, we also find heterogeneity to be due to the empirical specification of the labor demand model, characteristics of the dataset and publication bias.

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1 Introduction

The own-wage elasticity of labor demand is one of the key parameters of interest in labor economics, crucially influencing the effectiveness of many labor market policies (Hamermesh, 1993), as well as identifying structural changes in production due to skill-biased technological or organizational change. The elasticity yet also plays a key role in many other fields besides labor economics. Firms' labor demand responses to wage rate changes have gained increasing attention in public finance, with own-wage elasticities of labor demand serving as an important input in optimal tax models of individuals and firms (Jacquet et al., 2012; Riedel, 2011), as well as determining the deadweight loss due to taxation. In international economics, the wage elasticity of labor demand serves as an important parameter in theoretical models of international trade (Rauch and Trindade, 2003), as well as when assessing the effects of globalization on the volatility of employment and wages (Rodrik, 1997). Moreover, estimates of the wage elasticity of labor demand are used to calibrate macro and computable general equilibrium (CGE) models in various fields, typically using "guestimated" elasticities (Boeters and Savard, 2013).

The importance of this parameter is reflected by the enormous number of studies devoted to the estimation of firms' labor demand responses to wage changes. Nonetheless, despite extensive research, heterogeneity in the estimates of the own-wage elasticity of labor demand is apparent, with most estimates ranging between zero and minus one. Correspondingly, Fuchs et al. (1998) show that beliefs about the size of the own-wage elasticity are widely dispersed among economists. In this paper, we explore different sources of heterogeneity in the estimates of this key parameter by conducting a comprehensive meta-regression analysis of the relevant literature, using information from a total of 151 micro-level studies and 1,334 estimates.

Specifically, we test whether empirical findings back up theory: given different theoretical concepts of the elasticity, heterogeneity in the estimates is expected to some extent. We also investigate whether heterogeneity is due to the empirical specification of the labor demand model or characteristics of the dataset applied. Moreover, we analyze whether the elasticity of labor demand differs for various types of workers, industries or countries and whether the elasticity of labor demand has increased over time: for example, due to technological change or increasing globalization. In addition to identifying sources of heterogeneity, we further explicitly test for publication selection (or reporting) bias given that journals' preference to publish statistically significant results (DeLong and Lang, 1992) and economists' strong beliefs in particular economic relationships might prompt researchers to select and referees as well as editors to publish expected empirical results (Card and Krueger, 1995; Franco et al., 2014). With respect to the own-wage elasticity of labor demand, there is unanimous belief in a negative relationship between real wages and labor demand and thus in a negative own-wage elasticity. With his seminal contribution, Hamermesh (1993) has further shaped this belief by providing an interval, ranging from -0.15 to -0.75, of likely values for the constant-output elasticity of labor demand. In our study, we hence explicitly test whether there is evidence of publication bias in this strand of the literature.

Our meta-regression analysis offers six key results. First, a considerable share of the variation in the estimates can be explained by different concepts of elasticities applied: according to labor demand theory, we find that the elasticity of labor demand is smaller in the short than the intermediate and long run and that the total elasticity of demand – obtained from a structural model – exceeds the constant-output elasticity. Second, firms' responses to wage changes are dependent on worker characteristics, with the elasticity of labor demand being higher for low-skilled and atypical workers compared to the average worker. Third, we find sizeable differences in the elasticity estimates across industries and countries, with labor demand being particularly elastic in countries with low levels of employment protection legislation. Fourth, labor demand has become more elastic over time, possibly due to technical progress and increased globalization. Thus, variation in the estimates of the labor demand elasticity is natural to a considerable extent. There is no central elasticity of labor demand; rather, researchers need to carefully assess which type of elasticity to estimate in a given context or to adapt when calibrating a model.

However, differences in the estimates are, fifth, also due to differences regarding the empirical specification of the labor demand model and the type of data used: structural-form models better correspond to theory, while estimates based on industry-level data understate firms' labor demand responses to changes in the wage rate. Sixth, and even more worryingly, the results of our analysis also point to substantial upward publication (or reporting) bias, especially in reduced-form models.

The remainder of this paper is structured as follows. In Section 2, we explore various dimensions of heterogeneity in the estimates of the elasticity and provide descriptive statistics for our meta data. In Section 3.1, we introduce our meta-regression model and the underlying estimation strategy. We present and discuss our results in Section 3.2, while investigating the presence of publication (or reporting) bias in Section 3.3. Section 4 concludes.

2 The meta sample and sources of heterogeneity

The data for our meta-analysis are collected by thoroughly examining the literature on labor demand and related topics.[1] In addition, we rely on the excellent survey of earlier empirical labor demand studies by Hamermesh (1993) to identify relevant studies published prior to 1993. Overall, we identify 151 studies that provide micro-level estimates of the own-wage elasticity of labor demand. As most studies supply more than one elasticity estimate, the sample comprises those estimates that differ in an important source of heterogeneity only. Thus, we include all estimates from a particular study in case of being derived from different specifications of the theoretical and empirical model, estimation procedures applied, or when being worker-, industry-, time-, or country-specific. In contrast, if estimates only differ due to minor variations in the specification[2], the authors' preferred estimate is used. If there is no preferred estimate, we rely on the most comprehensive specification. Overall, this leaves us with 1,334 estimates of the own-wage elasticity. Tables B.1 and B.2 in the Appendix list the dimensions of heterogeneity and the particular source, i.e. the corresponding table or passage, for each estimate included in our meta-regression analysis.

[1] In detail, all studies included in our data are either listed in google scholar or given in the reference list of previously identified papers.

[2] For example, due to the inclusion or exclusion of a control variable.

Figure 1: Distribution of labor demand elasticities

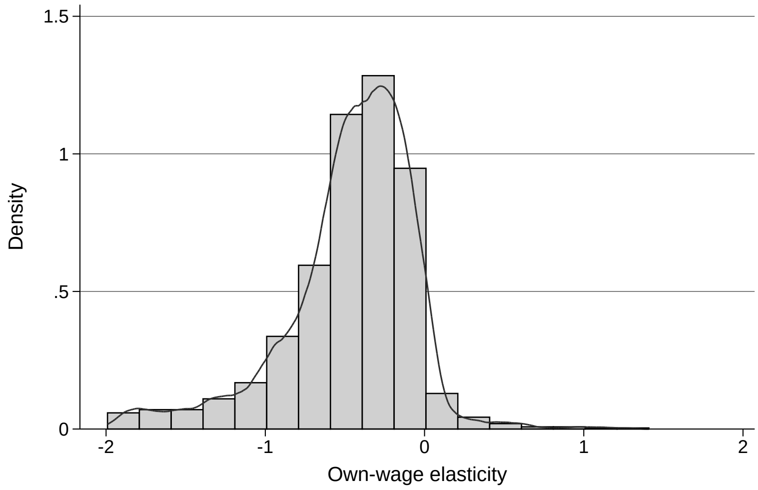


Figure (1) shows the distribution of labor demand elasticities in our data.[3] The mean (median) own-wage elasticity is -0.551 (-0.420), the standard deviation 0.747 and the majority of estimates lies within the interval of minus one and zero (82.76%).

2.1 Sources of heterogeneity

Given the widespread estimates, we identify likely sources of heterogeneity in the own-wage elasticity of labor demand: (i) labor demand theory, (ii) the empirical specification, (iii) the underlying data, (iv) characteristics of the workforce, and (v) variation across industries and countries as well as over time.

Labor demand theory. Heterogeneity in the elasticity estimates is implied by theory. Firms' labor demand responses are more limited in the *short run* than in the *intermediate* and *long run*. In the short run, firms are assumed not to fully adjust the stock of labor employed when facing changes in the wage rate. Among others, adjustment costs due to institutional regulations such as employment protection legislation limit firms' responses. In turn, firms are assumed to adjust the stock of labor and materials to the optimal level in the intermediate run, whereas the stock of capital remains fixed. Adjustments of the capital stock only occur in the

[3] For the sake of clarity, this graph does not include estimates of the own-wage elasticity of labor demand that exceed the value of two in absolute terms (N=55).

long run. Limited flexibility in the adjustment of production inputs should thus translate into a lower own-wage elasticity of labor demand in the short run compared to the intermediate and long run.[4] Moreover, the *total* (unconditional) elasticity of labor demand should further exceed the *constant-output* (conditional) elasticity of labor demand. The conditional elasticity indicates the substitution effect between labor and other inputs of production at a given level of output and is determined by minimizing the costs of production conditional on output. The unconditional elasticity in turn reflects labor demand responses to wage rate changes in case firms maximize profits and covers both the substitution and scale effect.

The empirical specification. Differences regarding the empirical specification and identification of the labor demand model constitute another likely source of heterogeneity in the estimates of the labor demand elasticity.

Structural-form models usually apply the dual approach, minimizing costs conditional on output to derive labor demand functions.[5] Costs are specified by means of a linear second-order approximation to an arbitrary cost function of the following general form

$$C = C(\mathbf{w}, X, Z),$$

with $\mathbf{w}$ denoting a vector of input prices of the production factors, Y denoting output, and Z capturing other variables affecting production, such as technological change over time or capital in case being specified as a quasi-fixed input factor reflecting an intermediate- rather than a long-run perspective, in which capital is a flexible input factor.[6] By minimizing costs and applying Shephard's Lemma, fully

[4] For the purpose of our empirical analysis, we thus classify each estimate by means of the (dis)equilibrium state of labor and capital. Note that labor demand adjusts to the optimal level in a static labor demand model by definition, such that short-run labor demand can be only modeled in a dynamic model of labor demand.

[5] Less frequently, researchers also model complex production functions to obtain fully specified models of unconditional factor demand. See, for example, Kim (1988).

[6] Generalized Leontief, Translog and Box-Cox cost functions constitute the most common specifications in the literature, although many other specifications exist. See Diewert and Wales (1987) or Koebel et al. (2003) for details.

specified estimable factor demand equations are obtained

$$\mathbf{X} = f(\mathbf{w}, Y, Z).$$

Demand for input factor i thus depends on input prices, output, Z and the parameters of the cost function assumed. Own-wage elasticities can be calculated by using parameter estimates of the factor demand equations. Structural-form models thus provide an explicit framework to infer parameters of production that eventually determine the relevant elasticities of demand (Hamermesh, 1993, p.38).

Reduced-form models in turn lack a specific theoretical structure. Given firms' cost of production absent any specific functional form, $C(\mathbf{w}, Y)$, conditional factor demand equations can be derived by minimizing costs and applying Shephard's Lemma:

$$\mathbf{X} = \mathbf{X^d}(\mathbf{w}, Y).$$

Taking logarithms yields estimable log-linear specifications of factor demand, with the estimated coefficients of the factor prices representing the respective elasticities. Estimates of the total elasticity of labor demand are obtained when estimating the same factor demand specifications, but with the output variable dropped (Hamermesh, 1993, p.74). Due to lacking theoretical structure, reduced-form specifications of labor demand thus allow researchers considerable discretion regarding additional control variables to be included in the empirical model.

Identification of both types of labor demand models often hinges on the assumption that wages are unaffected by demand and hence exogenously given to the individual firm. When relying on structural modeling, this problem is oftentimes assumed away, given that the theoretical model should stipulate the correct relationship between wages and employment.[7] In reduced-form models, endogeneity due to reverse causality/simultaneity is yet a first-order concern. Given the positive relationship between labor supply and wages, endogeneity would result in upward

[7] Note that this assumption may be justified on theoretical grounds, but may still lead to biased estimates when bringing the model to the data.

biased estimates of the own-wage elasticity of labor demand. In practice, many studies assume that wages are exogenous from the perspective of the individual employer (Hamermesh, 1993). While this assumption already seems to be quite strong, it is even less likely to hold when estimating labor demand at the industry level. Consequently, the validity of the wage exogeneity assumption is widely discussed in most current papers and many attempts have been made to find instruments for the wage rate. However, credible instruments are still scarce. Often, researchers deal with endogeneity concerns in labor demand models by using lagged values of the wage rate as instruments. However, serious concerns about the validity of lagged endogenous variables as instruments have been addressed (Angrist and Krueger, 2001, p.76f.). Due to the importance of addressing endogeneity concerns when estimating labor demand functions, we pay special attention to the wage treatment and the exogeneity assumption when running our meta analysis.

The dataset. Precise information on wages (and employment) is essential when estimating the elasticity of labor demand. In contrast to survey data, measurement error in wages is minimized when using information from *administrative* sources. Different sources of data may thus add to the heterogeneity in the estimates of the own-wage elasticity. Heterogeneity may likewise arise from differences in the level of observation. In his seminal work, Hamermesh (1993) reasons that *industry-level data* estimates of the own-wage elasticity cannot account for employment shifts within a given sector/industry and hence understate firms' employment responses to changes in wages. Studies using industry-level data are hence expected to provide downward biased estimates. Lastly, unobservable heterogeneity across firms (such as productivity differences) may affect employment, wages and hence the elasticity of labor demand. By relying on *panel* rather than *time-series* or *cross-sectional* data, researchers can easily account for unobservable firm- or industry-fixed effects and thus a potential form of bias in the estimates of the parameter of interest.

Workforce characteristics. Labor is not a homogenous production factor and we expect labor demand elasticities to vary by worker types. For example, it is generally believed that firms' demand for low-skilled labor is more responsive to changes in the wage rate than the demand for medium- or high-skilled workers, given that low-skilled tasks may be more easily executed by machines or outsourced to low-income countries. In our meta-regression, we thus differentiate among *low-skilled*, *high-skilled* and *overall labor demand*.[8] We also distinguish the average worker from workers in *blue- or white-collar occupations*. Likewise, we test whether firms' demand for *female* labor and workers on *atypical contracts* is more elastic than for the average worker.

Variation across industries, countries and over time. Sectoral differences in labor demand are likely to contribute to the heterogeneity of own-wage elasticity estimates, given that some sectors are more dependent on domestic labor than others, e.g. due to differences in the capital to labor ratio or divergent opportunities to outsource parts of the production process. We therefore account for *sectoral differences* in the elasticity up to the 2-digit level.[9] *Cross-country differences* in institutional regulations regarding employment protection and dismissal may further crucially affect firms' labor demand behavior in response to changes in the wage rate. Moreover, accelerating international production sharing, global competition and technological advances may have rendered firms' demand for labor more elastic over time. Controlling for the *study's year of publication* to account for methodological advances in the literature, we analyze whether the magnitude of the elasticity of labor demand increases with the *mean year of observation* covered in the respective dataset.

Additional sources of heterogeneity. We stress that there are more dimensions of heterogeneity worth exploring: the presence of collective bargaining agreements at the firm or industry level may limit firms' employment responses, yet may also lead to wage moderation. Accordingly, multinational firms may respond differently to changes in the wage rate compared to domestic firms, as these firms are assumed

[8] We use overall demand as a category given that many studies do not account for heterogeneous types of labor and obtain elasticities for the overall workforce. Differences in the own-wage elasticity for low- and high-skilled labor are thus relative to the overall workforce, which represent medium-skilled workers on average.

[9] Note that many studies focus on one-digit sectors or do not account for sectoral differences at all. Thus, we control for sectoral differences with respect to the overall economy.

to relocate production processes at lower costs. However, due to a limited number of studies explicitly distinguishing unionized from non-unionized and multinational from domestic firms, we have to discard these likely source of heterogeneity from our analysis. In addition, we do not explicitly control for firm size in this analysis. As the assignment mechanism of firms into different size classes is study-specific and the number of studies accounting for firm size is small, creation of non-overlapping and sizeable groups in our meta-analysis is unfeasible.

2.2 Descriptive Statistics

Table 1 provides descriptive statistics of the explanatory variables used in the meta-regression.[10] We differentiate between two samples: the full sample covers all estimates obtained from the literature (N=1,334), whereas the baseline sample is restricted to those estimates with a given or calculable standard error (N=890).[11]

With respect to theory, we first note that around 80% of the estimates refer to the intermediate or long run. Moreover, estimates of the constant-output elasticity of labor demand outnumber those of the total demand elasticity, indicating the literature's focus on the identification of long-run patterns of factor substitutability. Turning to the empirical specification applied, the majority of estimates come from reduced-form models of labor demand. Given that structural-form models account for the conceptual differences between the conditional and unconditional elasticity more explicitly, we yet allow for interdependencies between the empirical and theoretical specifications in our meta-regression analysis by interacting the latter variables. In terms of identification, most studies rely on the assumption that wages are exogenous to the firm or industry, with less than one-fifth of the estimated elasticities stemming from specifications where the wage variable has been instrumented.

Regarding the data applied, we further note that more elasticities are estimated

[10] Tables B.3 and B.4 provide the characteristics of the explanatory variables for each paper included in the meta-regressions.

[11] For the meta-analysis conducted below standard errors are necessary to account for heteroscedasticity by applying Weighted Least Squares (WLS), using the inverse of the error term variances.

Table 1: Explanatory variables for heterogeneity in labor demand elasticities

	Baseline Sample		Full Sample	
Explanatory variable	Mean	Std. Deviation	Mean	Std. Deviation
Specification				
Time period				
Short-run elasticity	0.197	0.398	0.163	0.369
Intermediate-run elasticity	0.454	0.498	0.372	0.484
Long-run elasticity	0.349	0.477	0.465	0.499
Total demand elasticity (opposed to: constant-output elasticity)	0.211	0.408	0.156	0.363
Structural-form model (opposed to: reduced-form model)	0.372	0.484	0.475	0.500
Instrumenting wages (opposed to: exogenous wage)	0.161	0.367	0.177	0.382
Dataset				
Administrative data (opposed to: survey data)	0.784	0.412	0.812	0.391
Industry-level data (opposed to: firm-level data)	0.626	0.484	0.695	0.461
Panel data specification				
No panel data	0.165	0.372	0.275	0.447
Panel data/No fixed effects	0.116	0.320	0.113	0.317
Panel data/Fixed effects	0.719	0.450	0.612	0.488
Workforce characteristics				
Skill level				
All workers	0.837	0.370	0.854	0.353
High-skilled workers	0.061	0.239	0.055	0.228
Low-skilled workers	0.102	0.303	0.091	0.288
Female worker	0.033	0.178	0.022	0.146
Atypical employment	0.065	0.247	0.044	0.206
Worker type				
All workers	0.899	0.302	0.921	0.269
Blue-collar workers	0.062	0.241	0.047	0.212
White-collar workers	0.039	0.194	0.032	0.175
Industry (One-digit level)				
All	0.341	0.474	0.311	0.463
Manufacturing	0.544	0.498	0.596	0.491
Service	0.045	0.207	0.035	0.184
Construction	0.058	0.235	0.039	0.194
Other (Mining, Wholesale, Transportation, Electricity & Water)	0.012	0.136	0.019	0.135
Country (Aggregated)				
Continental European countries	0.299	0.458	0.253	0.435
Northern European countries	0.030	0.172	0.062	0.240
United Kingdom/Ireland	0.070	0.255	0.053	0.223
Southern European countries	0.023	0.148	0.030	0.171
USA/Canada	0.175	0.380	0.245	0.430
Asia	0.027	0.162	0.029	0.166
Latin America	0.070	0.255	0.062	0.242
Eastern European countries	0.101	0.302	0.070	0.256
Africa	0.029	0.168	0.021	0.143
Aggregate data	0.176	0.381	0.175	0.380
Mean year of observation	1989	9.7	1985	12.8
Mean year of publication	2002	7.6	2000	9.8

Note: The baseline sample covers 890 observations and includes all point estimates with a given or calculable standard error. The full sample (N = 1,334) further includes all point estimates without a given or computable standard error.

using administrative rather than survey data and use variation at the industry rather than the firm level. Indeed, industry-level estimates are very rarely based on survey data. In our analysis, we account for this fact by including an interaction term of the data source and the unit of observation. Furthermore, panel data estimates constitute more than three-quarters of all elasticities in our analysis, with the majority of those stemming from specifications that account for unit-fixed effects.

The studies covered in our meta sample also account for a variety of worker characteristics: in terms of skills, 6.1% and 10.2% of the elasticity estimates in our baseline sample explicitly refer to high- and low-skilled labor, respectively. Likewise, explicit elasticities are given for blue- and white-collar workers, females and employees on atypical contracts. Moreover, it is apparent that the majority of studies has focused on the manufacturing sector, while rather few estimates refer to the service and construction sectors. Around one-third of the estimates apply to the overall economy.

Our meta data includes estimates of the wage elasticity of labor demand for 37 different countries, as well as estimates based on aggregate OECD or European data.[12] To simplify representation, mean values and standard deviations are given at an aggregate level in Table 1, with countries being clustered by geographical location.[13] We note that a large share of estimates relate to Continental European countries[14] as well as the US and Canada, amounting to about 50% of the total estimates. By contrast, only few elasticities estimates are given for Southern European, African or Asian countries. Lastly, we emphasize that the meta data cover studies published between 1971 and 2012 and thus more than four decades.[15] The mean year of data in the respective studies is 1989 in the baseline and 1985 in the full sample.

[12] Table A.2 provides the number of estimates obtained for each country.

[13] Precisely, we group elasticities for Germany, France as well as Belgium, the Netherlands and Luxembourg (BeNeLux) to Continental Europe, whereas Denmark, Norway, Finland and Sweden constitute the Nordic European countries. We further combine the estimates from Italy, Spain, Portugal to Southern Europe and group elasticities from Turkey, Macedonia and the former CIS states to Eastern Europe.

[14] Here, the share of elasticities based on German data is particularly high.

[15] Table A.2 provides the year of publication for the studies covered in the meta data.

3 Meta-regression analysis

Having classified likely sources of heterogeneity, we next turn to our meta-regression analysis. In Section 3.1, we briefly present the meta-regression model and estimation techniques. Section 3.2 presents the results, discusses the identified dimensions of heterogeneity and checks the sensitivity of our results. We subsequently test for the presence of publication selection bias in Section 3.3.

3.1 The regression model

In line with standard meta-regression analysis techniques (e.g., Card et al., 2010; Feld and Heckemeyer, 2011), we assume that the i^{th} estimate of the own-wage elasticity collected from study s (η_{is}) is obtained by means of an econometric procedure such that the estimate of the elasticity varies around its true value (η_0) due to sampling error (ϵ_{is}) and is driven by study- ($\mathbf{X}'$) and estimate-specific ($\mathbf{Z}'$) effects, as introduced in the previous section. The regression model thus reads as follows:

$$\eta_{is} = \eta_0 + \boldsymbol{\beta}\mathbf{X}'_i + \boldsymbol{\delta}\mathbf{Z}'_{is} + \epsilon_{is}. \tag{1}$$

Given that the variance of the individual estimate of the elasticity (η_{is}) decreases with the size of the underlying sample, differing between studies and/or within a single study in our sample ($V(\epsilon_{is}|\mathbf{X}'_i, \mathbf{Z}'_{is}) = \sigma^2_{\epsilon_{is}}$), we account for heterogeneity in the meta-regression model in the estimation. With the specific form of heteroscedasticity being known in a meta-regression setting, we estimate equation (1) by WLS using the inverse of the error term variances, i.e. the inverse of the squared standard error of the parameter estimate.[16] To control for study dependence in the estimates, standard errors are clustered at the study-level. In order to provide evidence for the robustness of our results, we also estimate our model for the full sample (including those elasticities without a standard error) by simple OLS, using the inverse of the number of observations taken per study as the corresponding weight.[17]

[16] Stanley and Doucouliagos (2013) show that this estimator is preferable to other standard meta-regression estimators. We show the robustness of our results when applying different estimators.

[17] See Tables B.1 and B.2 for the number of estimates taken per study.

3.2 Results

The baseline results of our meta-regression analysis are presented in Table 2. We begin by separately analyzing the effects of different dimensions of heterogeneity on the own-wage elasticity of labor demand: namely (i) the theoretical and empirical specification, (ii) characteristics of the dataset applied, and (iii) features of the workforce (columns (1) to (3)). Subsequently, we simultaneously account for all dimensions of heterogeneity in one model (column (4)) and additionally control for variation across industries and countries as well as over time in our most comprehensive specification (column (5)).

Column (1) shows that the empirical evidence backs theory: firms' labor demand responses to changes in the wage rate are more elastic in the intermediate and long run than in the short run, since costs prevent firms from immediate adjustments to the optimal level of employment. However, intermediate- and long-run elasticities are quite similar in magnitude. Our results further show that the total elasticity of labor demand exceeds the constant-output elasticity in absolute terms, in case of being derived from a structural-form model of labor demand. In turn, estimates of the total and constant-output elasticity of labor demand do not differ when being obtained from reduced-form models. Estimates from structural-form models thus tend to better comply with theory. As detailed in Section 2.1, a possible explanation for this finding lies in the empirical specifications of both models. Whereas structural-form estimates for unconditional and conditional elasticities are based on differing functional forms, reduced-form specifications of labor demand merely incorporate an additional control variable to capture firms' output in case conditional rather than unconditional elasticities shall be obtained. As concerns heterogeneity due to differing assumptions regarding the identification of the labor demand model, we find no statistically significant differences in the estimates with respect to the two polar assumptions about wage exogeneity. The results yet suggest that estimates from specifications with instrumented wage variables exceed those estimates in which wages are assumed to be exogenous.

We next investigate whether heterogeneity in the estimates of the elasticity of labor demand is data driven. The results displayed in column (2) suggest that

Table 2: Meta-regression analysis for own-wage labor demand elasticities

Dependent variable: Labor Demand Elasticity (η)	(1)	(2)	(3)	(4)	(5)
Specification					
Time period (omitted: Short-run)					
Intermediate-run	-0.243***			-0.139***	-0.114**
	(0.084)			(0.052)	(0.045)
Long-run	-0.302***			-0.150***	-0.151***
	(0.058)			(0.041)	(0.046)
Labor demand model (omitted: Conditional/Reduced-form)					
Conditional/Structural-form	0.203***			0.022	-0.049
	(0.075)			(0.055)	(0.070)
Unconditional/Reduced-form	0.009			-0.028	-0.009
	(0.054)			(0.052)	(0.027)
Unconditional/Structural-form	-0.123**			-0.389***	-0.150
	(0.053)			(0.078)	(0.103)
Instrumenting wages	-0.113			-0.117*	0.008
	(0.077)			(0.064)	(0.013)
Dataset					
Panel data specification (omitted: No panel data)					
Panel data/No unit-fixed effects		0.083		-0.060	-0.266**
		(0.086)		(0.064)	(0.123)
Panel data/Unit-fixed effects		-0.012		-0.144**	-0.249**
		(0.042)		(0.058)	(0.121)
Industry-level data		0.037		-0.075	-0.067
		(0.088)		(0.074)	(0.081)
Administrative data		0.267***		0.113***	-0.116
		(0.065)		(0.039)	(0.114)
Industry-level, admin data		-0.128		-0.020	0.255*
		(0.092)		(0.074)	(0.148)
Workforce characteristics					
Skill level (omitted: All workers)					
High-skilled workers			0.320***	0.162**	0.044
			(0.080)	(0.070)	(0.079)
Low-skilled workers			-0.409***	-0.271***	-0.213***
			(0.032)	(0.041)	(0.035)
Demand for female workers			-0.118***	-0.118***	-0.174***
			(0.042)	(0.045)	(0.031)
Atypical employment			-0.745***	-0.614***	-0.539***
			(0.038)	(0.055)	(0.046)
Worker characteristics (omitted: All workers)					
Blue-collar workers			-0.420***	-0.333***	-0.075
			(0.035)	(0.068)	(0.054)
White-collar workers			-0.314***	-0.238***	-0.062
			(0.076)	(0.051)	(0.056)
Estimates' mean year of observation (centralized)					-0.008*
					(0.004)
Constant	-0.077***	-0.287***	-0.094***	0.019	-0.354*
	(0.028)	(0.072)	(0.023)	(0.065)	(0.193)
Industry dummy variables	No	No	No	No	Yes
Year of publication dummy variables	No	No	No	No	Yes
Country dummy variables	No	No	No	No	Yes
No. of observations	890	890	890	890	890
Adjusted R-Squared	0.366	0.227	0.455	0.636	0.850

Note: Columns (1) - (5) estimated using WLS. Standard errors (in parentheses) are clustered at the study level. Significance levels are 0.1 (*), 0.05 (**) and 0.01 (***).

the characteristics of the dataset add little to the heterogeneity in the estimates. However, data-driven heterogeneity becomes more important when controlling for the year of publication (see column (5)), since detailed firm-level data from administrative sources have only become available in recent years.

In line with our expectations, characteristics of the workforce are important determinants for the heterogeneity in the estimates. The results given in column (3) show that demand for high-skilled (low-skilled) workers is less (more) elastic than for the overall workforce. For low-skilled workers, more elastic demand may, for example, reflect higher substitutability of low-skilled tasks by capital, as well as increasing possibilities to offshore these tasks. In addition, demand for females and workers on atypical contracts is also more price elastic. For the latter group, one potential explanation is found in lower firing costs for the marginal and temporary employed. When controlling for worker characteristics only, we further note that estimates of the elasticity for both blue- and white-collar workers exceed the estimates for the overall workforce.[18]

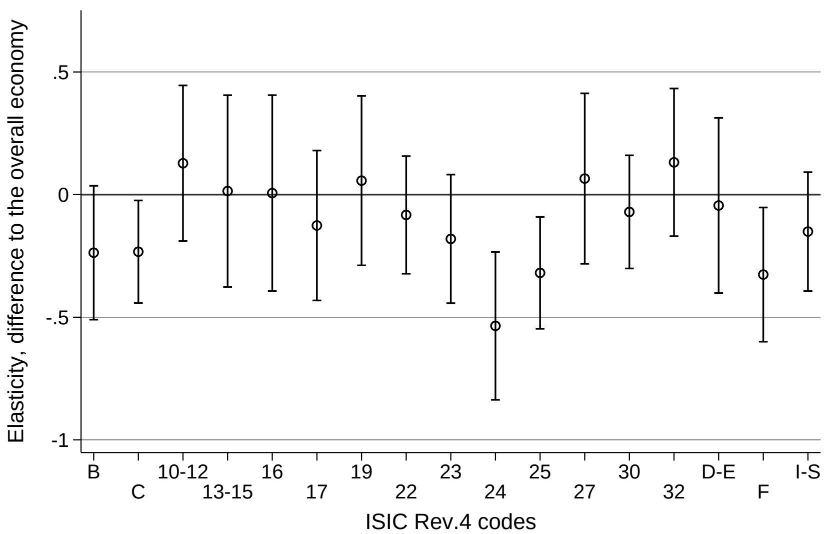
We next include all three dimensions of heterogeneity in one regression. The results given in column (4) show that most of the previous findings prevail. Thus, we further add industry and country dummy variables to our regression in column (5), given that industries differ in terms of labor intensity and cross-national differences in labor market institutions are likely to affect firms' labor demand behavior. Moreover, we analyze whether labor demand has become more elastic over time. To identify potential shifts in the own-wage elasticity of labor demand over recent decades, we control for the mean year of observation underlying the particular point estimate, as well as for the study's year of publication to capture methodological advances. Again, the results only slightly change: empirical evidence backs theory as firms' labor demand responses to changes in the wage rate are more limited in the short run compared to the intermediate or long run. Moreover, we offer clear evidence that demand for low-skilled and atypical workers is more elastic than for the overall workforce. However, our results also point to data-driven heterogeneity, given that industry-level estimates from administrative data sources are particularly

[18]While this finding is rather unexpected, we stress that the difference in the elasticity for white-collar workers and the average worker vanishes when controlling for the study's year of publication.

small in absolute terms. This finding is in line with Hamermesh (1993), who argues that industry-level estimates understate firms' employment responses to changes in wages since intra-industry shifts in employment are not accounted for.

The regression estimates further show that labor demand elasticities vary considerably by industry.[19] Figure 2 plots differences in the industry-specific own-wage elasticity with respect to the elasticity for all sectors.[20] The graph shows that the elasticity of labor demand is significantly larger in the construction sector (F), overall manufacturing (C), and for manufactures of basic metals (ISIC 24) and metal products (ISIC 25), two industries that are particularly labor intensive and where production has shifted to low-wage countries in recent decades.

Figure 2: Industry-specific own-wage elasticities



Note: Industry codes refer to Mining (B); Manufacturing (C); Manufacture of food, beverages, tobacco (10-12); Manufacture of textiles, apparel, leather (13-15); Manufacture of wood & wood products (16); Manufacture of paper & paper products (17); Manufacture of chemicals & chemical products (20); Manufacture of rubber & plastic products (22); Manufacture of non-metallic mineral products (23); Manufacture of basic metals (24); Manufacture of metal products (25); Manufacture of electrical equipment (27); Manufacture of transport equipment (30); Other manufacturing (32); Electricity, gas and water supply (D-E); Construction (F); Service (I-S).

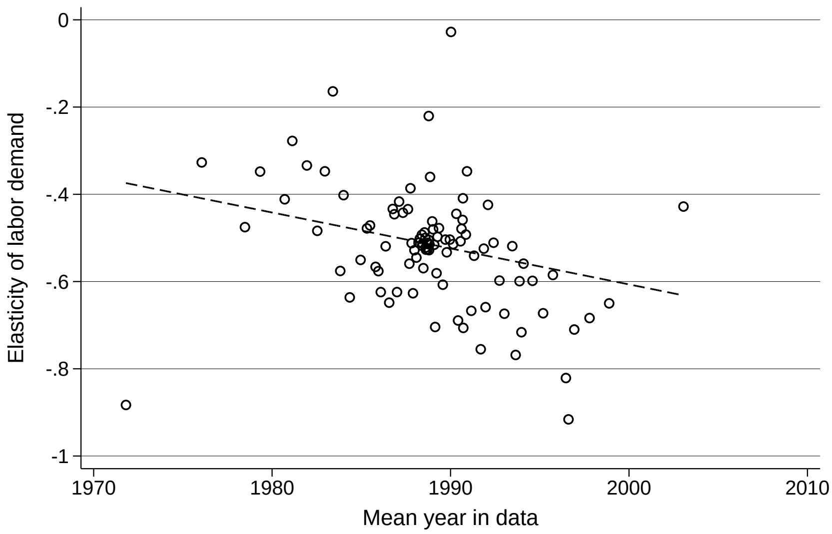
Due to advances in technology and increasing globalization, it is further widely believed that labor demand has become more elastic over time. Our meta-regression analysis provides support for this view, with column (5) showing that – controlling for all other dimensions of heterogeneity – the elasticity of labor demand has in-

[19] The corresponding results are given in column (1) of Table B.5 in the Appendix.

[20] For the sake of clarity, this graph only displays the difference in the own-wage elasticity only for those industries in which more than two estimates were given from at least two different studies.

creased in absolute terms over recent decades. Figure (3) illustrates this development, grouping observations according to the mean year of the underlying data and controlling for other sources of heterogeneity.

Figure 3: The elasticity of labor demand over time



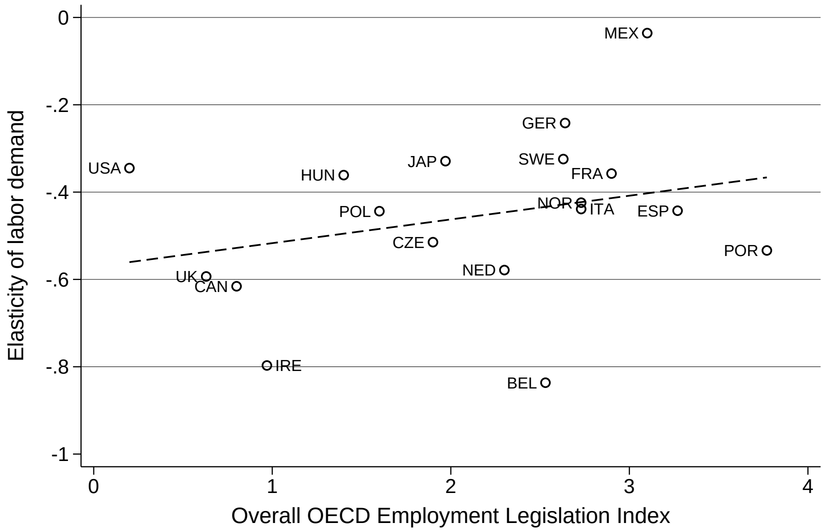
Note: The mean year of observation in the data is grouped into 100 equal-sized groups. The set of controls corresponds to the full set of controls, excluding the mean year of observation in the corresponding data.

We further find substantial differences in the labor demand elasticity across countries.[21] To illustrate these differences, Figure (4) plots the predicted labor demand elasticities against the country-specific OECD Employment Legislation Index. The graph shows a positive relationship between overall employment protection and the wage elasticity, with labor demand being less elastic in countries that have rather strict rules of employment protection legislation (for example, Spain and Mexico). In contrast, labor demand is more elastic in those countries that have weak rules on employment protection (for example, the UK and Canada). Differences in employment protection legislation among countries may thus contribute to the country-specific estimates of the labor demand elasticity.

Overall, our analysis shows that heterogeneity in the estimates of the own-wage labor demand elasticity is natural to a considerable extent: heterogeneity is implied by different theoretical concepts of the elasticity and responsiveness crucially depends on worker characteristics, with elasticities being larger for low-skilled

[21] The corresponding full regression results are given in column (1) of Table B.5 in the Appendix.

Figure 4: The elasticity of labor demand and employment protection legislation



Note: The measure of employment protection is calculated as the average of the OECD Employment Legislation Index for the late-1980s, late-1990s and 2003. Figures are taken from Table 2.A2.4 of the OECD Employment Outlook 2004.

and atypical workers. Moreover, estimates vary across industries and countries and have increased over time, supporting hypotheses concerning the effects of technical progress and globalization on labor demand. Thus, researchers need to carefully assess which elasticity to estimate in a given context or to adapt when calibrating a model. Yet, heterogeneity is also due to researchers' choices regarding the empirical specification of the labor demand model and the dataset applied. Our analysis highlights that structural-form models better correspond to theory and estimates based on industry-level data are downward biased to some extent.

Sensitivity analysis In the preceding analysis, we have identified various factors causing heterogeneity in the estimates of the wage elasticity of labor demand. Next, we test the sensitivity of our results when (i) restricting the sample along various dimensions and (ii) using different estimators.

Recall that our sample includes all estimates of the wage elasticity of labor demand from a particular study when being derived from different specifications of the theoretical and empirical model, estimation procedures applied or in case being worker-, industry-, time- or country-specific, leading to 890 observations. However, some studies excessively contribute to the number of observations by providing, for example, estimates of the elasticity of labor demand for each single year in the underlying dataset.[22] In order to test the robustness of our results, we thus limit the number of estimates included in our meta-regression analysis along three dimensions. We begin by limiting the number of estimates by applying stricter selection rules. For example, in case the estimate of labor demand is given for many different years, only the estimate of the mean year is taken, reducing the number of observations in our meta data to 612.[23] We further drop estimates that are statistically insignificant, as well as randomly take two estimates from each study.[24] From columns (1) to (3) of Table 3 we infer that restricting the data along these three dimensions does not significantly affect the conclusions of our analysis.

The sensitivity of our results is further tested by applying simple OLS and 'random effects' meta-regression techniques. When OLS is used, observations are weighted by the inverse of the study's number of elasticities included. In turn, 'random effects' meta-regressions estimate an additional between-study variance term to cover differences in the estimates beyond pure sampling error and those captured by the control variables (Feld and Heckemeyer, 2011). Columns (4) and (5) present the OLS results for the baseline and the full sample, including all 1,334 observations. In line with previous results, the results do not significantly differ. Notably, the results in column (4) and (5) yet provide evidence for higher elasticities of labor demand when instrumenting the wage rate. Column (6) further shows that our findings remain unaffected when applying 'random effects' meta-regression techniques, thus underlining the robustness of our results.[25]

[22] For example, Hijzen and Swaim (2010) provide estimates of the conditional and unconditional elasticity of labor demand for each single year from 1983 to 2002.

[23] Additional examples are studies that show the robustness of their results by obtaining estimates of the elasticity of labor demand by using cost and employment shares in structural-form models, or applying various lags when differencing the data.

[24] For the latter approach, we limit the control variables according to the specification provided in Column (4) of Table 2, given that the number of observations drops to 195. All other regressions in this section are based on our most comprehensive model.

[25] The full regression results are given in Tables B.5 and B.6 in the Appendix.

Table 3: Sensitivity Analysis - Reduced Samples and Different Estimators

Dependent variable: Labor Demand Elasticity (η)	WLS N=612 (1)	WLS T-value> 2 (2)	WLS N=197 (3)	OLS N=890 (4)	OLS N=1334 (5)	RE Meta (6)
Specification						
Time period (omitted: Short-run)						
Intermediate-run wage elasticity	-0.110**	-0.181***	-0.099*	-0.210**	-0.296***	-0.170***
	(0.048)	(0.054)	(0.059)	(0.085)	(0.113)	(0.041)
Long-run wage elasticity	-0.147***	-0.251***	-0.131***	-0.275***	-0.424***	-0.239***
	(0.043)	(0.074)	(0.041)	(0.062)	(0.094)	(0.033)
Labor demand model (omitted: Condit./Reduced-form)						
Conditional/Structural-form	-0.067	-0.038	-0.175*	0.117	0.049	-0.012
	(0.076)	(0.085)	(0.095)	(0.071)	(0.073)	(0.046)
Unconditional/Reduced-form	0.015	-0.042**	-0.066	-0.038	-0.192**	-0.029
	(0.038)	(0.016)	(0.066)	(0.054)	(0.090)	(0.035)
Unconditional/Structural-form	-0.184	-0.110	-0.526***	0.003	0.386*	-0.090
	(0.113)	(0.128)	(0.105)	(0.125)	(0.228)	(0.188)
Instrumenting wages	0.000	0.037	-0.152**	-0.244***	-0.239***	-0.056
	(0.012)	(0.037)	(0.069)	(0.075)	(0.074)	(0.036)
Data						
Panel data specification (omitted: No panel data)						
Panel data/No unit-fixed effects	-0.300***	-0.371***	-0.190**	0.028	0.138*	-0.165**
	(0.108)	(0.088)	(0.085)	(0.110)	(0.075)	(0.083)
Panel data/Unit-fixed effects	-0.313***	-0.340***	-0.194***	-0.015	0.046	-0.217***
	(0.100)	(0.085)	(0.071)	(0.094)	(0.084)	(0.080)
Industry-level data	-0.071	-0.100	-0.092	-0.195**	-0.147	-0.003
	(0.075)	(0.065)	(0.092)	(0.088)	(0.109)	(0.070)
Administrative data	-0.136	-0.154	0.006	-0.211***	-0.404***	-0.159***
	(0.100)	(0.108)	(0.087)	(0.071)	(0.094)	(0.055)
Industry-level admin data	0.334**	0.326**	0.121	0.372***	0.476***	0.168**
	(0.136)	(0.134)	(0.130)	(0.128)	(0.134)	(0.079)
Workforce characteristics						
Skill level (omitted: All workers)						
High-skilled workers	0.047	-0.012	0.344***	-0.056	-0.017	0.005
	(0.086)	(0.100)	(0.079)	(0.089)	(0.096)	(0.045)
Low-skilled workers	-0.270***	-0.226***	-0.330***	-0.162**	-0.286***	-0.139***
	(0.095)	(0.040)	(0.084)	(0.080)	(0.098)	(0.035)
Demand for female workers	-0.174***	-0.167***	-0.041	-1.430	-1.324	-0.285***
	(0.030)	(0.024)	(0.035)	(0.867)	(0.849)	(0.079)
Atypical employment	-0.539***	-0.548***	-0.391	-0.319	-0.450*	-0.403***
	(0.047)	(0.037)	(0.384)	(0.306)	(0.261)	(0.048)
Worker characteristics (omitted: All workers)						
Blue-collar workers	-0.054	-0.010	-0.320***	-0.365***	-0.161	-0.115*
	(0.066)	(0.071)	(0.055)	(0.106)	(0.140)	(0.066)
White-collar workers	-0.012	0.003	-0.225***	-0.021	0.106	-0.078
	(0.068)	(0.073)	(0.069)	(0.105)	(0.114)	(0.073)
Estimates' mean year of observation (centralized)	-0.008	-0.009*	–	-0.015***	-0.008**	-0.016***
	(0.005)	(0.005)		(0.006)	(0.004)	(0.003)
Constant	-0.150	-1.183***	0.121	-0.199	0.723***	0.564
	(0.172)	(0.231)	(0.086)	(0.146)	(0.258)	(0.445)
Industry dummy variables	Yes	Yes	No	Yes	Yes	Yes
Year of publication dummy variables	Yes	Yes	No	Yes	Yes	Yes
Country dummy variables	Yes	Yes	No	Yes	Yes	Yes
No. of observations	612	634	197	890	1,334	890
Adjusted R-Squared	0.827	0.832	0.589	0.281	0.288	–

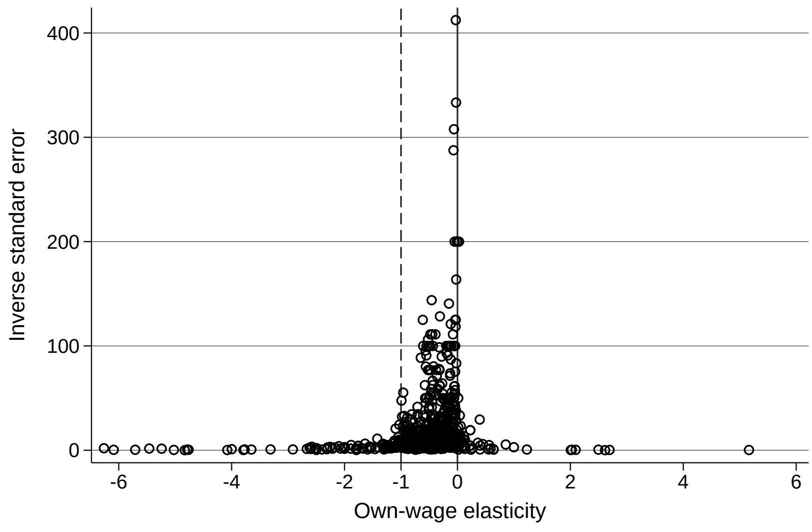
Note: Standard errors (in parentheses) are clustered at the study level. Significance levels are 0.1 (*), 0.05 (**) and 0.01 (***).

3.3 Publication selection bias

In the second part of our analysis, we evaluate whether publication selection bias is present in the empirical literature on labor demand. Journals' tendency to publish statistically significant results as well as researchers' strong beliefs in particular economic relationships and distaste to publish null findings might induce a selection process of empirical findings that biases the true population parameter and hence limits knowledge about a particular economic relationship (DeLong and Lang, 1992; Franco et al., 2014).

One common method for detecting publication selection bias is to analyze the relationship between the estimated coefficient and its standard error (Card and Krueger, 1995; Stanley and Doucouliagos, 2013). In the absence of publication bias, there should be no systematic relationship between estimates and standard errors. However, if authors (journals) tend to only report (publish) results that are at least significant at the 10% level, implying a t-value (t) of about 1.6, a tendency to report significant results will induce a correlation between the elasticity estimate (b) and its standard error (SE), given that $t = b/SE$ (Card and Krueger, 1995). As the elasticity of labor demand is generally believed to be negative ($b < 0$), we expect to find a negative relationship between the standard error and the elasticity estimate in case of publication bias.

Figure 5: Funnel plot for publication bias



"Funnel plots" are a first approach to visualize publication bias by plotting point estimates against the inverse of the standard error (Sutton et al., 2000). Without publication bias, the graph is expected to be funnel-shaped, i.e. low-precision estimates should be widely dispersed. However, when plotting the elasticity estimates against the inverse of their standard errors, the distribution is asymmetric and skewed to the left (Figure 5). As this asymmetry reflects publication (or reporting) bias, researchers seem to be inclined to frame their empirical specification in such a way that they obtain negative wage elasticities that are in line with theory (see Card and Krueger, 1995).

Despite the visual evidence, we also test for publication bias within our most comprehensive meta-regression specification, given by column (5) of Table 2. According to random sampling theory, point estimates and respective standard errors should be independent. However, column (1) of Table 4 shows that the standard error has a particularly strong and statistically significant effect on the own-wage elasticity of labor demand in our model.[26] As expected, the sign is negative, reflecting the assumed negative elasticity and suggesting significant publication bias in the estimates towards more negative elasticities.

Table 4: Testing for publication selection bias

Dependent variable: Labor Demand Elasticity (η)	WLS (1)	WLS (2)	WLS (3)	WLS (4)	WLS (5)
Standard error	-1.053***	-1.111**	-0.985***	-1.449***	-1.417***
	(0.274)	(0.427)	(0.296)	(0.313)	(0.346)
Normalized impact factor		-0.164			
		(0.156)			
Std. error*Normalized impact factor		0.287			
		(0.895)			
Std. error*Short-run elasticity			-0.462		-0.119
			(0.640)		(0.636)
Std. error*Structural-form model				0.913*	0.882*
				(0.513)	(0.521)
Constant	-0.374**	-0.327*	-0.372**	-0.390**	-0.389**
	(0.175)	(0.178)	(0.174)	(0.181)	(0.182)
No. of observations	890	890	890	890	890
Adjusted R-Squared	0.855	0.856	0.855	0.856	0.856

Note: Standard errors (in parentheses) are clustered at the study level. Significance levels are 0.1 (*), 0.05 (**) and 0.01 (***).

[26] As the empirical results concerning the sources of heterogeneity prevail, we limit our presentation to those variables indicating publication bias only. The full regression results are provided in Table B.7 in Appendix B.

Given this evidence, we analyze whether publication bias is less prevalent in peer-reviewed journals and differs with the quality of the journal. We thus control for the impact factor of the respective journal within which the own-wage elasticity estimate was published and interact the standard error with the impact factor variable.[27] The results in column (2) show that the journal's impact factor has no statistically significant effect on the extent of publication bias.

We further evaluate whether reporting bias is driven by the theoretical or empirical specification of the labor demand model. Precisely, we analyze whether publication bias is stronger for estimates of the short-run rather than the intermediate- and long-run elasticity of labor demand and less pronounced in case the elasticity estimate is obtained from a structural-form model. We expect that it is more likely to estimate a non-negative or insignificant elasticity in the short run because these estimates should be lower in theory. In addition, publication bias should be less present in structural-form models where modeling choices are constrained by theory. Column (3) shows that publication bias is stronger, albeit not statistically significant, for estimates of the short-run rather than intermediate- and long-run elasticity. However, column (4) reports evidence that publication bias is much weaker in case the elasticity is derived from a structural-form rather than a reduced-form model. Column (5) shows that the latter effect remains statistically significant when including both interaction terms in one regression.

4 Conclusion

The own-wage elasticity of labor demand serves as a key parameter in economic research and policy analysis, determining the effectiveness of policy reforms and the outcomes of many economic models. This importance is reflected by a large number of empirical studies devoted to the estimation of labor demand elasticities. Nonetheless, heterogeneity in the estimates of the own-wage labor demand elasticity has been apparent. Building on detailed information from 151 different micro-level studies, this paper uses meta-regression techniques to identify sources of

[27] In detail, we use the IDEAS/RePEc Simple Impact Factor as of October 23, 2013. The impact factor is normalized to a range between zero and one.

heterogeneity affecting the estimates of the elasticity of labor demand.

Our analysis provides six key findings. First, heterogeneity in the estimates of labor demand can be explained by different concepts of elasticities applied. Second, labor demand responses to wage changes depend on worker characteristics, with elasticities being higher for low-skilled and atypical workers. Third, labor demand elasticities are industry- and country-specific, with low levels of employment protection legislation implying more elastic demand for labor. Fourth, firms' labor demand has become more elastic over time, supporting hypotheses concerning the effects of technical progress and globalization on labor demand. Hence, heterogeneity in the estimates of the elasticity of labor demand is natural to a considerable extent.

Our analysis yet also reveals that, fifth, differences in the estimates are due to the estimation procedure applied and the type of data used. More precisely, the results show that estimates from structural labor demand models better correspond to theory and suggest that instrumenting the wage variable leads to higher estimates of the own-wage elasticity. Moreover, industry-level estimates are lower in absolute terms compared to firm-level estimates. Sixth, and even more worryingly, our analysis also points to substantial publication (or reporting) bias, especially in reduced-form models.

Several important conclusions can be drawn from this analysis. Our findings highlight that prevalent heterogeneity in the labor demand elasticity has to be taken into account. There is no such thing as a central elasticity of labor demand; rather, researchers need to precisely determine the type of elasticity and worker type of interest. Moreover, our analysis points to potential dangers in reporting biased elasticities. The choice of data and empirical specification applied seems to influence the estimated elasticities, which implies some arbitrariness and unwanted discretion for researchers to produce estimates that are in line with the priors. In particular, we find that industry-level elasticity estimates are downward biased and estimates obtained from structural-form models better correspond with theory. This potential problem is corroborated by our finding of substantial publication bias, being particularly present in reduced-form studies, where there is much more discretion in terms of the empirical specifications.

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A Appendix

Table A.1: Distribution of labor demand elasticities by sector/industry

	No. of estimates	
	Baseline Sample	**Full Sample**
All sectors	303	415
Mining (B)	3	9
Manufacturing (C)	378	557
Manufacture of food,beverages,tobacco (10-12)	6	20
Manufacture of textiles,apparel,leather (13-15)	6	23
Manufacture of wood & wood products (16)	3	11
Manufacture of paper & paper products (17)	7	17
Printing (18)	1	5
Manufacture of coke & petroleum (19)	2	2
Manufacture of chemicals & chemical products (20)	16	22
Manufacture of rubber & plastic products (22)	2	7
Manufacture of non-metallic mineral products (23)	11	21
Manufacture of basic metals (24)	8	32
Manufacture of metal products (25)	6	10
Manufacture of electrical equipment (27)	5	9
Manufacture of machinery (28)	10	21
Manufacture of transport equipment (30)	8	14
Other manufacturing (32)	15	24
Electricity, gas and water supply (D-E)	5	9
Construction (F)	52	52
Wholesale (G)	3	3
Transportation (H)	0	4
Service (I-S)	36	43
Information and communication (J)	1	1
Financial & insurance services (K)	3	3

Note: The baseline sample covers 890 observations and includes all estimates of the own-wage elasticity with a given or calculable standard error. The full sample (N=1,334) further includes all point estimates without a given or computable standard error. Industrial classification according to ISIC Rev.4 of the United Nations Statistics Division. Due to changes in the ISIC classification over time, industries $10-12$, $13-15$, $D-E$ had to be pooled.

Table A.2: Distribution of estimates by year of publication and country of interest

	No. of estimates			No. of estimates	
	Baseline Sample	Full Sample		Baseline Sample	Full Sample
Year					
1971	0	4	1995	6	7
1974	0	4	1996	19	19
1975	0	5	1997	28	28
1977	0	2	1998	57	70
1979	0	9	1999	16	34
1980	10	12	2000	8	22
1981	5	95	2001	77	79
1983	0	2	2002	13	33
1984	18	22	2003	65	96
1985	2	17	2004	33	52
1986	38	44	2005	71	73
1987	1	17	2006	46	47
1988	12	20	2007	47	50
1989	0	2	2008	78	91
1990	1	16	2009	6	6
1991	8	9	2010	167	237
1992	16	51	2011	7	7
1993	19	19	2012	14	31
1994	2	2			
Country					
Aggregate Data	138	202	Lithuania	2	2
Aggregate European Data	19	32	Macedonia	2	4
Argentina	4	6	Mauritius	2	2
Belgium	6	10	Mexico	7	7
Bulgaria	2	2	Netherlands	5	10
Canada	4	40	Norway	3	4
Chile	2	2	Peru	13	13
China	1	1	Poland	7	7
Colombia	31	50	Portugal	3	3
Czech Republic	9	9	Romania	1	2
Denmark	1	2	Slovak Republic	6	6
Finland	1	2	Slovenia	1	2
France	12	16	South Korea	4	4
Germany	243	302	Spain	6	23
Ghana	0	2	Sweden	22	74
Hungary	9	9	Tunisia	24	24
India	3	3	Turkey	51	51
Ireland	5	5	United Kingdom	57	65
Italy	11	14	United States	152	287
Japan	16	30	Uruguay	5	5

Note: The baseline sample covers 890 observations and includes all estimates of the own-wage elasticity with a given or calculable standard error. The full sample (N=1,334) further includes all point estimates without a given or computable standard error.

B Appendix (For Online Publication)

Table B.1: Dimensions of heterogeneity and source (baseline sample)

		Specification heterogeneity in								
Study	**Year**	**Theory**	**Empirics**	**Data**	**Worker Type**	**Sector**	**Country**	**Time period**	**Estimates**	**Source**
Field and Grebenstein (1980)	1980					10			10	Tab. 2, Col. (3)
Denny et al. (1981)	1981								1	Tab. 4, Col. (2)
Grant and Hamermesh (1981)	1981				4				4	Tab. 3, Col. (1,2,3,4)
Atkinson and Halvorsen (1984)	1984								1	Tab. 3, Col. (2)
Nissim (1984)	1984	2			3				6	Tab. 3
Symmons and Layard (1984)	1984		1				6			Tab. 1
			1				5		11	Tab. 2
Mairesse and Dormont (1985)	1985							2	2	Tab. 6, Col. (1,2)
Allen (1986)	1986			6						Tab. 4, Col. (1,2,3,5,6,7)
				6	3					Tab. 7, Col. (1,2,3,5,6,7)
				6	2				36	Tab. A1, Col. (1,2,3,5,6,7)
Halvorsen and Smith (1986)	1986								1	Tab. 2, Col. (2)
Kokkelenberg and Choi (1986)	1986								1	Tab. 3
Wadhwani (1987)	1987								1	Tab. 2
Kim (1988)	1988	2							2	Tab. 2 & 3, Col. (2)
Morrison (1988)	1988	2	1				2			Tab. 2, Col. (1-4)
		2	1				2		8	Tab. 2,Col. s (9-12)
Pencavel and Holmlund (1988)	1988	2							2	Tab. 1, Col. (2,4)
Wadhwani and Wall (1990)	1990								1	Tab. 2, Col. (1)
Arellano and Bond (1991)	1991	1	7							Tab. 4, Col. (1,2,4)
										Tab. 5
		1							8	Text, p. 291
Griffin (1992)	1992		2		4	2			16	Tab. 2 & 4, Col. (2,4)
Dunne and Roberts (1993)	1993		3		2			2		Tab. A2 & A3
			2		2				16	Tab. A2 & A3
Wolfson (1993)	1993					3			3	Tab. 6, Col. (1,3,5)
Fitzroy and Funke (1994)	1994		2						2	Tab. 3, Col. (1,2)
Konings and Vandenbussche (1995)	1995					2			2	Tab. 4 & 6, Col. (2)

Table B.1: continued

Study	Year	Specification heterogeneity in: Theory	Empirics	Data	Worker Type	Sector	Country	Time period	Estimates	Source
Lindquist (1995)	1995		2						2	Tab. 3.8, Col. (1,5)
Draper and Manders (1997)	1996				2	2			4	Tab. 2, Col. (1,2)
Griffin (1996)	1996			2	6				12	Tab.1 & 2, Col. (2)
Terrell (1996)	1996		3						3	Tab. 3, Col. (1,4,7)
Cahuc and Dormont (1997)	1997	1	3							Tab. 4, Col. (1,2,3)
		1							4	Tab. 4, Col. (6)
Falk and Koebel (1997)	1997				3	5			15	Tab. 4
Konings and Roodhooft (1997)	1997	2							2	Tab. 5 & 6 , Col. (1)
Revenga (1997)	1997		2	1						Tab. 4, Col. (5,6)
		2	1							Tab. 7, Col. (1,2)
			1						5	Tab. 7, Col. (6)
VanReenen (1997)	1997		3							Tab. 3, Col. (3,4,5)
			1						4	Tab. 4, Col. (2)
Blechinger et al. (1998)	1998						2		2	Tab. A13, Col. (1,2)
FitzRoy and Funke (1998)	1998				3		2		6	Tab. 2,3
Hatzius (1998)	1998		2				2		4	Tab.6 & 7, Col. (2,6)
Hine and Wright (1998)	1998								1	Tab. 2, Col. (1)
Koebel (1998)	1998					23			23	Tab. 3, Col. (2)
Milner and Wright (1998)	1998							2		Tab. 2, Col. (2)
									2	Tab. 2, Col. (6)
Roberts and Skoufias (1998)	1998		2		2					Tab. 1, Col. (1,2)
			7		2				18	Tab. 2
Rottmann and Ruschinski (1998)	1998								1	Tab. 1, Col. (1)
Abraham and Konings (1999)	1999								1	Tab. 7, Col. (3)
Allen and Urga (1999)	1999	2							2	Tab. 5, Col. (1,2)
Bellmann et al. (1999)	1999				6				6	Tab. A1
Blechinger and Pfeiffer (1999)	1999					2			2	Tab. 2, Col. (6)
Falk and Koebel (1999)	1999				3				3	Tab. 4, Col. (2)
Funke et al. (1999)	1999								1	Tab. 3, Col. (5)
Greenaway et al. (1999)	1999								1	Tab. 2, Col. (5)
Bellmann and Schank (2000)	2000				6				6	Tab. 3

Table B.1: continued

Study	Year	Specification heterogeneity in: Theory	Empirics	Data	Worker Type	Sector	Country	Time period	Estimates	Source
Braconier and Ekholm (2000)	2000					2			2	Tab. 2, Col. (2,3)
Addison and Teixeira (2001)	2001						4		4	Tab. 4
Falk (2001)	2001								1	Tab. 7
Falk and Koebel (2001)	2001		2		3					Tab. 3
					3				9	Tab. B2
Krishna et al. (2001)	2001		2			10				Tab. 2, Col. (1,3)
					3	10				Tab. 4, Col. (1,3,5)
			1						51	Tab. 5, Reg(B)
Slaughter (2001)	2001	2	3		2				12	Tab. 2
Bellmann et al. (2002)	2002				3		2		6	Tab. A3 & A4
Falk and Koebel (2002)	2002				3				3	Tab. 5
Koebel (2002)	2002				4				4	Tab. 7, Col. (1)
Bruno et al. (2003)	2003	2	2				8		32	Tab. 1b-8b
Koebel et al. (2003)	2003		3	2	3				18	Tab. 4 & 5
Barba Navaretti et al. (2003)	2003						11		11	Tab. 2
Ogawa (2003)	2003					4			4	Tab. 3
Bernal and Cardenas (2004)	2004		2	1						Tab. 4.7, Col. (3,5)
			3	1					5	Tab. 4.8, Col. (4,5,6)
Cassoni et al. (2004)	2004			1						Tab. 8.3, Col. (5)
		2		1				2		Tab. 5, Col. (3,6)
									5	Tab. 8.6
Falk and Koebel (2004)	2004				3	2			6	Tab. 4 & 5
Konings and Murphy (2004)	2004	2				3			6	Tab. 5,6
Mondino and Montoya (2004)	2004		2	2					4	Tab. 6.7, Col. (2,3,4,5)
Saavedra and Torero (2004)	2004			1						Tab. 2.4, Col. (1)
				2				3	7	Tab. 2.5
Addison and Teixeira (2005)	2005			2			2		4	Tab. 1 & 2
Amiti and Wei (2005)	2005	4	1			2				Tab. 9b & 10b
		2	1			2			12	Tab. 9a & 10a
Arnone et al. (2005)	2005	2							2	Tab. 2, Col. (1,2)
Basu et al. (2005)	2005	1					2	4		Tab. 4

Table B.1: continued

Study	Year	Specification heterogeneity in: Theory	Empirics	Data	Worker Type	Sector	Country	Time period	Estimates	Source
		1					2	3		Tab. 4
		1					2	3		Tab. 4
		1					1	2		Tab. 4
		1					1	1	23	Tab. 4
Becker et al. (2005)	2005						2		2	Tab. 4 & 5
Bruno and Falzoni (2005)	2005	2	3						6	Tab. 4
Fajnzylber and Maloney (2005)	2005				2		3		6	Tab. 1
Falk and Wolfmayr (2005)	2005		4						4	Tab. 5, Col. (1)
Fu and Balasubramanyam (2005)	2005								1	Tab. 3, Col. (7)
Görg and Hanley (2005)	2005		2						2	Tab. 2, Col. (1,2)
Hijzen et al. (2005)	2005		3		3					Tab. 5, Col. (1,2,3,5,6,7)
									9	Tab. 6, Col. (4,5,6)
Amiti and Wei (2006)	2006	2	2			1				Tab. 11, Col. (1,3,4,6)
		2				1				Tab. 12, Col. (2,3)
		2				1				Tab. 12, Col. (5,6)
		2	2			1				Tab. 13, Col. (1,2,4,5)
		2				1				Tab. 14, Col. (1,2)
		2				1			16	Tab. 14, Col. (5,6)
Bellmann and Pahnke (2006)	2006		2		3		2			Tab. 1 & 2 & 3, Col. (3,6)
									12	Tab. 4-9,Col. (5)
Blien et al. (2006)	2006	1								Tab. 3a
		1				3			4	Tab. 5, Col. (1,3,5)
Ekholm and Hakkala (2006)	2006		2		3				6	Tab. 3A & A2c
Harrison and McMillan (2006)	2006			2					2	Tab. 5,6, Col(1)
Koebel (2006)	2006		2		3				6	Tab. 1,3
Crino (2007)	2007		2		3					Tab. 6, Model(2)
									6	Tab. 8, Model(3)
Haouas and Yagoubi (2007)	2007		2			6				Tab. 2, Col. (1,5)
					2	6			24	Tab4, Col. (1,5)
Hasan et al. (2007)	2007		3						3	Tab. 3 & 5 & 6, Col. (1)

Table B.1: continued

Study	Year	Specification heterogeneity in: Theory	Empirics	Data	Worker Type	Sector	Country	Time period	Estimates	Source
Lachenmaier and Rottmann (2007)	2007					1				Tab. 2, Col. (1)
								1		Tab. 5, Col. (1)
							2		4	Tab. 5, Col. (2,3)
Molnar and Taglioni (2007)	2007		2				3			Tab. 4
		2	2				1		10	Tab. 6 & 7, Col. (1)
Aguilar and Rendon (2008)	2008		2						2	Tab. 2, Col. (5,6)
Jacobi and Schaffner (2008)	2008		3		5		2	2	60	Tab. 2 & 3
Micevska (2008)	2008		2						2	Tab. 5, Col. (2,4)
Onaran (2008)	2008	1			1		2			Tab. 3a, Col. (3,6)
		1			1		4			Tab. 3a, Col. (1,2,5,8)
		1			1		4			Tab. 3 & Cont., Col. (2,3,6,7)
					1		4		14	Tab. 3 & Cont., Col. (1,2,5,8)
Godart et al. (2009)	2009		3						3	Tab. 3, Col. (5)
										Tab. 8, Col. (5,6)
Görg et al. (2009)	2009		1							Tab. 2, Col. (3)
			2			1			3	Tab. A1, Col. (5,6)
Aguilar and Rendon (2010)	2010		2		2				4	Tab. 2, Col. (5,6)
Brixy and Fuchs (2010)	2010	2							2	Tab. 8, Col(2,3)
Buch and Lipponer (2010)	2010					3			3	Tab. 5, Col. (1,2,3)
Freier and Steiner (2010)	2010				8		2		16	Tab. Appendix
Hakkala et al. (2010)	2010				4					Tab. 2, Col. (2)
									4	Tab. 3, Col. (1,2,3)
Hijzen and Swaim (2010)	2010	2	1					20		Tab. 3, Col. (1,7)
		2	1					18		Tab. 3, Col. (4,10)
			1			2		20		Tab. 4, Col. (4,7)
			1					16	132	Tab. 4, Col. (10)
Senses (2010)	2010	2	2	1						Tab. 1, Col. (1)
		2		1					6	Tab. 1, Col. (1)
Bohachova et al. (2011)	2011		3						3	Tab. 2, Col. (1,2,3)
Mitra and Shin (2011)	2011	2	2						4	Tab. 5, Col. (1,2,5,6)

Table B.1: continued

Study	Year	Specification heterogeneity in: Theory	Empirics	Data	Worker Type	Sector	Country	Time period	Estimates	Source
Ayala (2012)	2012	2	3						6	Tab. 7
Crino (2012)	2012				3				3	Tab. 5, Col. (10,11,12)
Kölling (2012)	2012					5			5	Tab. 5, Col. (1)

Table B.2: Dimensions of heterogeneity and source (estimates without std. error)

		Specification heterogeneity in								
Study	**Year**	**Theory**	**Empirics**	**Data**	**Worker Type**	**Sector**	**Country**	**Time period**	**Estimates**	**Source**
Tinsley (1971)	1971	2						2	4	Tab. 3.5
Nadiri and Rosen (1974)	1974				2	2			4	Tab. 3
Berndt and Wood (1975)	1975							5	5	Tab. 5
Kesselman et al. (1977)	1977				2				2	Text, p. 344
Berndt and Khaled (1979)	1979		5						5	Tab. 5, Col. (1,3,4,5,6)
Magnus (1979)	1979		4						4	Tab. 4
Clark and Freeman (1980)	1980		2						2	Tab. 2, Equations (1,2)
Anderson (1981)	1981							3	3	Tab. 7.4
Denny et al. (1981)	1981	2				18	2		72	Tab. 11.1 & 11.3
Morrison and Berndt (1981)	1981	2			1					Tab. 2, Col. (1,3)
		2			2				6	Tab. 4, Col. (1,3)
Norsworthy and Harper (1981)	1981							3		Calc. from Tab. 9.2
		2						3	9	& 9.4, Col. (A,E,F)
Pindyck and Rotemberg (1983)	1983	2							2	Tab. 2
Nelson (1984)	1984							3	3	Text, p. 63
Nickell (1984)	1984								1	Text, p. 548
Carruth and Oswald (1985)	1985	3	1							Tab. 2
		2	1						5	Tab. 5
Faini and Schiantarelli (1985)	1985	2							2	Tab. 3, Col. (4)
Segerson and Mount (1985)	1985		2					4	8	Tab. 4,6
Morrison (1986)	1986	2	3						6	Tab. 2
Chung (1987)	1987		4						4	Tab. 5
Diewert and Wales (1987)	1987		5					2	10	Tab. 2 & 4
McElroy (1987)	1987		2						2	Calc. from Tab. 2
Baltagi and Griffin (1988)	1988								1	Hamermesh (1993, Tab.3.2)
Burgess (1988)	1988								1	Text, p. 90
Daughety and Nelson (1988)	1988							4	4	Tab. 2, Col. (2)
Deno (1988)	1988								1	Tab. 3, Col. (2)
Pencavel and Holmlund (1988)	1988								1	Text, p. 1113
Flaig and Steiner (1989)	1989								1	Text, p. 404
Kokkelenberg and Nguyen (1989)	1989								1	Tab. 4, Col. (2)

Table B.2: continued

Study	Year	Specification heterogeneity in: Theory	Empirics	Data	Worker Type	Sector	Country	Time period	Source	Estimates
Nakamura (1990)	1990					7		2	14	Tab. 3, Col. (5)
Nickell and Symmons (1990)	1990								1	Hamermesh (1993, Tab.3.2)
Blanchflower et al. (1991)	1991								1	Text, p. 825
Bergström and Panas (1992)	1992					8		4	32	Tab. 4
Bresson et al. (1992)	1992				1					Tab. 2, Col. (2)
					2				3	Tab. 4
Konings and Roodhooft (1997)	1995								1	Text, p. 11
FitzRoy and Funke (1998)	1998				3		2		6	Tab. 4
Koebel (1998)	1998					6			6	Tab. 3
Rottmann and Ruschinski (1998)	1998								1	Tab. 2
Mellander (1999)	1999	2			3			1		Tab.7a & b
		2			3			1		Tab. 8a & b
		2			3			1	18	Tab. 9a & b
Ryan and Wales (2000)	2000		6					2	12	Tab. 2 & 3
Teal (2000)	2000				2			2	2	Tab. 6
Flaig and Rottmann (2001)	2001	2							2	Tab. 3
Bauer and Riphahn (2002)	2002								1	Tab. 1, Col. (1)
Cuyvers et al. (2005)	2002	2		1		6				Tab. 4
				1					13	Tab. 6, Col (3)
Kölling and Schank (2002)	2002				3	2			6	Tab. 4 & 5
Bruno and Falzoni (2003)	2003	2							2	Tab. 4
Koebel et al. (2003)	2003		3	2	3				18	Tab. 3
Barba Navaretti et al. (2003)	2003						11		11	Tab. 3
Bernal and Cardenas (2004)	2004	2			2			4		Tab. 4.4 & 4.5
		1							17	Tab. 4.9
Mondino and Montoya (2004)	2004		2						2	Tab. 6.12, Col. (1)
Arnone et al. (2005)	2012	2							2	Text, pp. 735;738
Harrison and McMillan (2006)	2006								1	Tab. A6
Benito and Hernando (2007)	2007				3				3	Text, p.300
Addison et al. (2008)	2008				4	2			8	Tab. 6 & 7
Benito and Hernando (2008)	2008								1	Text, pp. 291

Table B.2: continued

Study	Year	Specification heterogeneity in: Theory	Empirics	Data	Worker Type	Sector	Country	Time period	Source	Estimates
Micevska (2008)	2008		2						2	Tab. 6
Onaran (2008)	2008						2		2	Tab. 3
Brixy and Fuchs (2010)	2010		2							Tab. 4,Col (5,6)
							2		4	Tab. 5,Col (5,6)
Buch and Lipponer (2010)	2010								1	Tab. 4
Hijzen and Swaim (2010)	2010	2	2					16	64	Tab. 5
Muendler and Becker (2010)	2010								1	Tab. 7, Col. (1)
Ayala (2012)	2012		2						2	Tab. 8, Col. (3,5)
Peichl and Siegloch (2012)	2012				3				3	Tab. 1
Sala and Trivin (2012)	2012	2	2					2		Tab. 5 & 7
		2						2	12	Tab. 5&7

Table B.3: Empirical studies with given or calculable standard errors

Study	**Model specifics**		**Data**	
	Theoretical model	**Empirical specification**	**Characteristics**	**Period**
Field and Grebenstein (1980)	long-run, conditional	structural, exogenous wage, no FE	industry-level, cross-section, admin	1971
Denny et al. (1981)	long-run, conditional	structural, exogenous wage, no FE	firm-level, time-series, admin	1952-1976
Grant and Hamermesh (1981)	long-run, conditional	structural, exogenous wage, no FE	industry-level, cross-section, admin	1969
Atkinson and Halvorsen (1984)	long-run, conditional	structural, exogenous wage, no FE	firm-level, cross-section, survey	1970
Nissim (1984)	short-/intermediate-run, conditional	structural-form, endogenous wage, no FE	industry-level, time-series, admin	1963-1978
Symmons and Layard (1984)	long-run, unconditional	reduced-form, en-/exogenous, no FE	industry-level, time-series, admin	1956-1980
Mairesse and Dormont (1985)	short-run, unconditional	reduced-form, exogenous wage, FE	firm-level, panel, survey	1970-1979
Allen (1986)	long-run, conditional	structural-form, exogenous wage, no FE	firm-level, cross-section, survey	1972/1974
Halvorsen and Smith (1986)	long-run, conditional	structural-form, exogenous wage, no FE	industry-level, time-series, admin	1954-1974
Kokkelenberg and Choi (1986)	long-run, conditional	structural-form, exogenous wage, no FE	firm-level, cross-section, admin	1970
Wadhwani (1987)	long-run, unconditional	reduced-form, exogenous wage, no FE	industry-level, time-series, admin	1962-1981
Kim (1988)	long-run, (un)conditional	structural-form, exogenous wage, no FE	industry-level, time-series, admin	1948-1971

Table B.3: continued

Study	Model specifics		Data	
	Theoretical model	**Empirical specification**	**Characteristics**	**Period**
Morrison (1988)	short-/intermediate-/long-run, conditional	structural, endogenous wage, no FE	industry-level, time-series, admin	1955-1981
Pencavel and Holmlund (1988)	short-/intermediate-run, unconditional	reduced-form, endogenous wage, no FE	industry-level, time-series, admin	1951-1983
Wadhwani and Wall (1990)	short-run, unconditional	reduced-form, endogenous wage, FE	industry-level, panel, survey	1974-1982
Arellano and Bond (1991)	short-/long-run, unconditional	reduced-form, ex/endogenous wage, (no) FE	firm-level, panel, survey	1979-1984
Griffin (1992)	long-run, conditional	structural-form, exogenous wage, no FE	firm-level, cross-section, admin	1980
Dunne and Roberts (1993)	long-run, conditional	reduced-form, exogenous wage, (no) FE	firm-level, panel, survey	1975-1981
Wolfson (1993)	short-run, conditional	structural-form, endogenous wage, FE	firm-level, panel, survey	1976-1984
Fitzroy and Funke (1994)	short-run, conditional	reduced-form, endogenous wage, FE	industry-level, panel, admin	1979-1990
Konings and Vandenbussche (1995)	long-run, conditional	reduced-form, endogenous wage, FE	firm-level, panel, survey	1982-1989
Lindquist (1995)	intermediate, conditional	structural-form, exogenous wage, FE	firm-level, panel, admin	1972-1990
Draper and Manders (1997)	long-run, conditional	structural-form, endogenous wage, no FE	industry-level, time-series, admin	1972-1993
Griffin (1996)	long-run, conditional	structural-form, exogenous wage, no FE	firm-/industry-level, cross-section, admin	1980
Terrell (1996)	long-run, conditional	structural-form, exogenous wage, no FE	industry-level, time-series, admin	1947-1971
Cahuc and Dormont (1997)	short-/intermediate-run, conditional	reduced-form, exogenous wage, (no) FE	firm-level, panel, survey	1986-1989

Table B.3: continued

Study	**Model specifics**		**Data**	
	Theoretical model	**Empirical specification**	**Characteristics**	**Period**
Falk and Koebel (1997)	long-run, conditional	structural-form, exogenous wage, no FE	industry-level, panel, admin	1977-1994
Konings and Roodhooft (1997)	short-/intermediate-run, conditional	reduced-form, endogenous wage, FE	firm-level, panel, admin	1989-1994
Revenga (1997)	intermediate-run, (un)conditional	reduced-form, exogenous wage, (no) FE	firm-/industry-level, panel, survey	1984-1990
VanReenen (1997)	short-run, unconditional	reduced form, ex/endogenous wage, FE	firm-level, panel, survey	1976-1982
Blechinger et al. (1998)	long-run, conditional	structural-form, exogenous wage, FE	firm-level, panel, survey	1993-1995
FitzRoy and Funke (1998)	short-run, conditional	reduced form, endogenous wage, FE	industry-level, panel, admin	1991-1993
Hatzius (1998)	long-run, conditional	reduced-form, ex/endogenous wage, FE	firm-level, panel, survey	1974-1994
Hine and Wright (1998)	short-run, conditional	reduced-form, exogenous wage, FE	industry-level, panel, admin	1979-1992
Koebel (1998)	long-run, conditional	structural-form, exogenous wage, no FE	industry-level, panel, admin	1960-1992
Milner and Wright (1998)	short-run, conditional	reduced-form, exogenous wage, FE	industry-level, panel, admin	1972-1992
Roberts and Skoufias (1998)	long-run, conditional	reduced-form, exogenous wage, (no) FE	firm-level, panel, survey	1981-1987
Rottmann and Ruschinski (1998)	short-run, conditional	reduced-form, exogenous wage, FE	firm-level, panel, survey	1980-1992
Abraham and Konings (1999)	intermediate-run, conditional	reduced-form, exogenous wage, no FE	firm-level, panel, survey	1990-1995
Allen and Urga (1999)	short-/long-run, conditional	structural-form, exogenous wage, no FE	industry-level, time-series, admin	1965-1992
Bellmann et al. (1999)	intermediate-run, conditional	structural-form, exogenous wage, no FE	firm-level, cross-section, admin	1995

Table B.3: continued

Study	Model specifics		Data	
	Theoretical model	**Empirical specification**	**Characteristics**	**Period**
Blechinger and Pfeiffer (1999)	long-run, conditional	reduced-form, exogenous wage, FE	firm-level, panel, survey	1992-1995
Falk and Koebel (1999)	long-run, conditional	structural-form, exogenous wage, FE	industry-level, panel, admin	1978-1999
Funke et al. (1999)	short-run, conditional	reduced-form, endogenous wage, FE	firm-level, panel, admin	1987-1994
Greenaway et al. (1999)	short-run, conditional	reduced-form, exogenous wage, FE	industry-level, panel, admin	1979-1991
Bellmann and Schank (2000)	intermediate-run, conditional	structural-form, exogenous wage, no FE	firm-level, cross-section, admin	1995
Braconier and Ekholm (2000)	long-run, conditional	reduced-form, exogenous wage, FE	firm-level, panel, survey	1970-1994
Addison and Teixeira (2001)	long-run, conditional	reduced-form, exogenous wage, no FE	industry-level, time-series, admin	1977-1997
Falk (2001)	intermediate-run, conditional	reduced-form, exogenous wage, FE	firm-level, panel, survey	1995-1997
Falk and Koebel (2001)	short-/intermediate-run, conditional	structural-form, exogenous wage, FE	industry-level, panel, admin	1976-1995
Krishna et al. (2001)	intermediate-run, unconditional	reduced-form, ex/endogenous wage, FE	firm-level, panel, admin	1983-1986
Slaughter (2001)	intermediate-run, unconditional	reduced-form, exogenous wage, FE	industry-level, panel, admin	1961-1991
Bellmann et al. (2002)	intermediate-run, conditional	structural-form, exogenous wage, no FE	firm-level, panel, admin	1993-1998
Falk and Koebel (2002)	intermediate-run, conditional	structural-form, exogenous wage, FE	industry-level, panel, admin	1978-1990
Koebel (2002)	long-run, conditional	structural-form, exogenous wage, FE	industry-level, panel, admin	1978-1990
Bruno et al. (2003)	short-/long-run, conditional	reduced-form, exogenous wage, FE	industry-level, panel, admin	1970-1996

Table B.3: continued

Study	Model specifics		Data	
	Theoretical model	**Empirical specification**	**Characteristics**	**Period**
Koebel et al. (2003)	long-run, conditional	structural-form, exogenous wage, FE	industry-level, panel, admin	1978-1990
Barba Navaretti et al. (2003)	short-run, conditional	reduced-form, exogenous wage, FE	firm-level, panel, admin	1993-2000
Ogawa (2003)	short-run, conditional	reduced-form, endogenous wage, FE	firm-level, panel, survey	1993-1998
Bernal and Cardenas (2004)	short-run, conditional	reduced-form, ex/endogenous, (no) FE	firm-/industry-level, panel, survey	1978-1991
Cassoni et al. (2004)	short-/long-run, conditional	structural-/reduced-form, ex/endogenous, FE	industry-level, panel, admin	1975-1997
Falk and Koebel (2004)	intermediate-run, conditional	structural-form, exogenous wage, FE	industry-level, panel, admin	1978-1994
Konings and Murphy (2004)	short-/long-run, conditional	reduced-form, exogenous wage, FE	firm-level, panel, admin	1993-1998
Mondino and Montoya (2004)	short-run, conditional	reduced-form, ex/endogenous wage, FE	firm-level, panel, survey	1990-1996
Saavedra and Torero (2004)	short-/long-run, conditional	reduced-form, exogenous wage, (no) FE	firm-/industry-level, panel, survey	1987-1997
Addison and Teixeira (2005)	short-/long-run, (un)conditional	reduced-form, endogenous wage, (no) FE	firm-/industry-level, panel/time-series, admin/survey	1977-2001
Amiti and Wei (2005)	short-/long-run, (un)conditional	reduced-form, exogenous wage, FE	industry-level, panel, admin	1995-2001
Arnone et al. (2005)	short-run, (un)conditional	reduced-form, endogenous wage, FE	firm-level, panel, survey	1998-2002
Basu et al. (2005)	short-/long-run, conditional	reduced-form, endogenous wage, FE	firm-level, panel, admin	1989-1993
Becker et al. (2005)	intermediate-run, conditional	structural-form, exogenous wage, no FE	firm-level, cross-section, admin/survey	1998/2000

Table B.3: continued

Study	Model specifics		Data	
	Theoretical model	Empirical specification	Characteristics	Period
Bruno and Falzoni (2005)	short-/long-run, conditional	reduced-form , ex/endogenous wage, FE	industry-level, panel, admin	1970-1997
Fajnzylber and Maloney (2005)	long-run, unconditional	reduced-form, endogenous wage, FE	firm-level, panel, survey	1977-1995
Falk and Wolfmayr (2005)	long-run, conditional	reduced-form, exogenous wage, FE	industry-level, panel, admin	1995-2000
Fu and Balasubramanyam (2005)	short-run, conditional	reduced-form, exogenous wage, FE	industry-level, panel, survey	1987-1998
Görg and Hanley (2005)	short-run, conditional	reduced-form, ex/endogenous, FE	firm-level, panel, survey	1990-1995
Hijzen et al. (2005)	intermediate-run, conditional	structural-form, exogenous wage, (no) FE	industry-level, panel, survey	1982-1996
Amiti and Wei (2006)	short-/intermediate-run, (un)conditional	reduced-form, exogenous wage, FE	industry-level, panel, admin	1992-2000
Bellmann and Pahnke (2006)	short-run, conditional	reduced-form, exogenous wage, FE	firm-level, panel, admin	1996-2004
Blien et al. (2006)	short-/intermediate-run, conditional	reduced-form, exogenous wage, FE	firm-level, panel, admin	1993-2002
Ekholm and Hakkala (2006)	intermediate, conditional	structural-form, exogenous wage, no FE	industry-level, panel, admin	1995-2000
Harrison and McMillan (2006)	intermediate-run, unconditional	reduced-form, exogenous wage, FE	firm-level, panel, survey	1982-1999
Koebel (2006)	long-run, conditional	structural-form, exogenous wage, FE	industry-level, panel, admin	1976-1995
Crino (2007)	intermediate-run, conditional	structural-form, ex/endogenous wage, FE	industry-level, panel, admin	1990-2004
Haouas and Yagoubi (2007)	intermediate-run, unconditional	reduced-form, exogenous wage, (no) FE	industry-level, panel, admin	1971-1996
Hasan et al. (2007)	intermediate-run, conditional	reduced-form, exogenous wage, FE	industry-level, panel, survey	1980-1997
Lachenmaier and Rottmann (2007)	long-run, conditional	exogenous wage, FE	firm-level, panel, survey	1982-2003

Table B.3: continued

Study	Model specifics		Data	
	Theoretical model	**Empirical specification**	**Characteristics**	**Period**
Molnar and Taglioni (2007)	short-/long-run, conditional	reduced-form, ex/endogenous, FE	industry-level, panel, admin	1993-2003
Aguilar and Rendon (2008)	long-run, unconditional	reduced-form, ex/endogenous wage, no FE	firm-level, cross-section, survey	2004
Jacobi and Schaffner (2008)	intermediate-run, conditional	structural-form, exogenous wage, FE	industry-level, panel, admin	1999-2005
Micevska (2008)	short-run, conditional	reduced-form, exogenous wage, FE	firm-level, panel, admin	1994-1999
Onaran (2008)	short-/long-run, conditional	reduced-form, ex/endogenous wage, FE	industry-level, panel, admin	1999-2004
Godart et al. (2009)	short-run, conditional	reduced-form, exogenous wage, (no) FE	firm-level, panel, admin	1997-2005
Görg et al. (2009)	short-run, conditional	reduced-form, ex/endogenous wage, (no) FE	firm-level, panel, survey	1983-1998
Aguilar and Rendon (2010)	long-run, unconditional	reduced-form, ex/endogenous wage, no FE	firm-level, cross-section, survey	2004
Brixy and Fuchs (2010)	short-run, conditional	reduced-form, exogenous wage, FE	firm-level, panel, survey	2001-2006
Buch and Lipponer (2010)	short-run, conditional	reduced-form, endogenous wage, FE	firm-level, panel, admin	1997-2004
Freier and Steiner (2010)	intermediate-run, conditional	structural-form, exogenous wage, FE	industry-level, panel, admin	1999-2003
Hakkala et al. (2010)	short-run, conditional	reduced-form, endogenous wage, FE	firm-level, panel, admin	1990-2002
Hijzen and Swaim (2010)	intermediate-run, (un)conditional	reduced-form, ex/endogenous wage, FE	industry-level, panel, admin	1980-2002
Senses (2010)	intermediate-run, conditional	structural-form, exogenous wage, FE	firm-level, panel, survey	1972-2001
Bohachova et al. (2011)	short-run, conditional	reduced-form, ex/endogenous wage, (no) FE	firm-level, panel, survey	2000-2008

Table B.3: continued

Study	Model specifics		Data	
	Theoretical model	Empirical specification	Characteristics	Period
Mitra and Shin (2011)	intermediate-run, (un)conditional	reduced-form, exogenous wage, (no) FE	firm-level, panel survey	2002-2008
Ayala (2012)	short-run, (un)conditional	reduced-form, ex/endogenous wage, FE	industry-level, panel, admin	1974-2009
Crino (2012)	intermediate-run, conditional	structural-form, exogenous wage, FE	industry-level, panel, admin	1990-2004
Kölling (2012)	intermediate-run, conditional	structural-form, exogenous wage, FE	firm-level, panel, survey	2000-2007

Table B.4: Empirical studies without given or calculable standard errors

Study	Model specifics		Data	
	Theoretical model	Empirical specification	Characteristics	Period
Tinsley (1971)	short-/long-run, conditional	reduced-form, exogenous wage, no FE	industry-level, time-series, admin	1954-1965
Nadiri and Rosen (1974)	long-run, conditional	reduced-form, exogenous wage, no FE	industry-level, time-series, admin	1948-1974
Berndt and Wood (1975)	long-run, conditional	structural-form, endogenous wage, no FE	industry-level, time-series, admin	1947-1971
Kesselman et al. (1977)	long-run, conditional	structural-form, exogenous wage, no FE	industry-level, time-series, admin	1962-1971
Berndt and Khaled (1979)	long-run, conditional	structural-form, exogenous wage, no FE	industry-level, time-series, admin	1947-1971
Magnus (1979)	long-run, conditional	structural-form, exogenous wage, no FE	industry-level, time-series, admin	1950-1976
Clark and Freeman (1980)	long-run, conditional	reduced-form, exogenous wage, no FE	industry-level, time-series, admin	1950-1976
Anderson (1981)	long-run, conditional	structural-form, exogenous wage, no FE	industry-level, time-series, admin	1948-1971
Denny et al. (1981)	intermediate-/long-run, conditional	structural-form, exogenous wage, no FE	industry-level, time-series, admin	1949-1975
Morrison and Berndt (1981)	intermediate-/long-run, conditional	structural-form, exogenous wage, no FE	industry-level, time-series, admin	1952-1971
Norsworthy and Harper (1981)	short-/long-run, conditional	structural-form, exogenous wage, no FE	industry-level, time-series, admin	1958-1977

Table B.4: continued

Study	Model specifics		Data	
	Theoretical model	Empirical specification	Characteristics	Period
Pindyck and Rotemberg (1983)	intermediate-/long-run, conditional	structural-form, exogenous wage, no FE	industry-level, time-series, admin	1948-1971
Nelson (1984)	long-run, conditional	structural-form, exogenous wage, no FE	firm-level, panel, survey	1953-1982
Nickell (1984)	long-run, conditional	reduced-form, exogenous wage, no FE	industry-level, time-series, admin	1958-1974
Carruth and Oswald (1985)	short-/long-run, unconditional	reduced-form, endogenous wage, no FE	industry-level, time-series, admin	1950-1980
Faini and Schiantarelli (1985)	long-run, (un)conditional	reduced-form, exogenous wage, FE	industry-level, panel, admin	1970-1979
Segerson and Mount (1985)	intermediate-run, unconditional	structural-form, exogenous wage, no FE	industry-level, time-series, admin	1961-1977
Morrison (1986)	intermediate/long-run, conditional	structural-form, exogenous wage, no FE	industry-level, time-series, admin	1949-1980
Chung (1987)	long-run, conditional	structural-form, exogenous wage, no FE	industry-level, time-series, admin	1947-1971
Diewert and Wales (1987)	long-run, conditional	structural-form, exogenous wage, no FE	industry-level, time-series, admin	1947-1971
McElroy (1987)	long-run, conditional	structural-form, exogenous wage, no FE	industry-level, time-series, admin	1947-1971
Baltagi and Griffin (1988)	long-run, conditional	structural-form, exogenous wage, FE	firm-level, panel, survey	1951-1978
Burgess (1988)	long-run, unconditional	reduced-form, endogenous wage, no FE	industry-level, time-series, admin	1963-1982

Table B.4: continued

Study	Model specifics		Data	
	Theoretical model	Empirical specification	Characteristics	Period
Daughety and Nelson (1988)	long-run, conditional	structural-form, exogenous wage, no FE	firm-level, panel, survey	1953-1982
Deno (1988)	long-run, unconditional	structural-form, exogenous wage, no FE	industry-level, panel, admin	1970-1978
Pencavel and Holmlund (1988)	long-run, unconditional	reduced-form, endogenous, no FE	industry-level, time-series, admin	1951-1983
Flaig and Steiner (1989)	long-run, conditional	reduced-form, exogenous wage, no FE	industry-level, time-series, admin	1963-1986
Kokkelenberg and Nguyen (1989)	long-run, conditional	structural-form, exogenous wage, no FE	firm-level, panel, survey	1972-1981
Nakamura (1990)	long-run, conditional	structural-form, exogenous wage, no FE	industry-level, panel, admin	1964-1982
Nickell and Symmons (1990)	long-run, unconditional	reduced-form, exogenous wage, no FE	industry-level, time-series, admin	1962-1984
Blanchflower et al. (1991)	long-run, unconditional	reduced-form, exogenous wage, no FE	firm-level, cross-section, survey	1984
Bergström and Panas (1992)	long-run, conditional	structural-form, exogenous wage, no FE	industry-level, panel, admin	1963-1980
Bresson et al. (1992)	long-run, conditional	reduced-form, endogenous wage, FE	firm-level, panel, survey	1980-1983
Konings and Roodhooft (1997)	long-run, conditional	reduced-form, endogenous wage, FE	firm-level, panel, admin	1989-1994
FitzRoy and Funke (1998)	long-run, conditional	reduced-form, endogenous wage, FE	industry-level, panel, admin	1991-1993
Koebel (1998)	long-run, conditional	structural-form, exogenous wage, no FE	industry-level, panel, admin	1960-1992
Rottmann and Ruschinski (1998)	long-run, conditional	reduced-form, exogenous wage, FE	firm-level, panel, survey	1980-1992
Mellander (1999)	intermediate-/long-run, conditional	structural-form, endogenous wage, FE	industry-level, panel, admin	1985-1995

Table B.4: continued

Study	Model specifics		Data	
	Theoretical model	Empirical specification	Characteristics	Period
Ryan and Wales (2000)	long-run, conditional	structural-form, exogenous wage, no FE	industry-level, time-series, admin	1947-1971
Teal (2000)	long-run, conditional	structural-form, exogenous wage, FE	firm-level, panel, survey	1991-1995
Flaig and Rottmann (2001)	intermediate-/long-run, conditional	structural-form, endogenous wage, no FE	industry-level, panel, admin	1968-1995
Bauer and Riphahn (2002)	long-run, conditional	reduced-form, endogenous wage, FE	industry-level, panel, admin	1977-1994
Cuyvers et al. (2005)	intermediate-/long-run, conditional	structural-form, endogenous wage, no FE	firm-level, panel, survey	1994-1998
Kölling and Schank (2002)	intermediate-run, conditional	structural-form, exogenous wage, FE	firm-level, panel, admin	1994-1997
Bruno and Falzoni (2003)	short-/intermediate-run, conditional	structural-form, endogenous wage, FE	industry-level, panel, survey	1982-1994
Barba Navaretti et al. (2003)	long-run, conditional	reduced-form, exogenous wage, FE	firm-level, panel, admin	1993-2000
Bernal and Cardenas (2004)	intermediate-/long-run, conditional	structural-/reduced-form, exogenous wage, no FE	industry-level, time-series, survey	1976-1991
Mondino and Montoya (2004)	long-run, conditional	reduced-form, ex/endogenous wage, FE	firm-level, panel, survey	1990-1996
Arnone et al. (2005)	long-run, (un)conditional	reduced-form, endogenous wage, FE	firm-level, panel, survey	1998-2002
Harrison and McMillan (2006)	intermediate-run, conditional	structural-form, exogenous wage, FE	firm-level, panel, survey	1982-1999
Benito and Hernando (2007)	long-run, conditional	reduced-form, endogenous wage, FE	firm-level, panel, survey	1985-2000
Addison et al. (2008)	intermediate-run, conditional	structural-form, exogenous wage, FE	firm-level, panel, admin	1993-2002
Benito and Hernando (2008)	long-run, conditional	reduced-form, endogenous wage, FE	firm-level, panel, survey	1985-2001

Table B.4: continued

Study	Model specifics		Data	
	Theoretical model	Empirical specification	Characteristics	Period
Micevska (2008)	long-run, conditional	reduced-form, exogenous wage, FE	firm-level, panel, admin	1994-1999
Onaran (2008)	short-run, conditional	reduced-form, endogenous wage, FE	industry-level, panel, admin	1999-2004
Brixy and Fuchs (2010)	long-run, conditional	reduced-form, exogenous wage, (no) FE	firm-level, panel, survey	2001-2006
Buch and Lipponer (2010)	long-run, conditional	reduced-form, endogenous wage, FE	firm-level, panel, admin	1997-2004
Hijzen and Swaim (2010)	short-/long-run, conditional	reduced-form, ex/endogenous wage, FE	industry-level, panel, admin	1980-2002
Muendler and Becker (2010)	intermediate-run, conditional	structural-from, exogenous wage, FE	firm-level, panel, survey	1996-2001
Peichl and Siegloch (2012)	long-run, conditional	structural-form, exogenous wage, no FE	firm-level, panel, admin	1996-2007
Sala and Trivin (2012)	long-run, (un)conditional	reduced-form, ex-/endogenous wage, FE	industry-level, panel, admin	1964-2007

Table B.5: Full meta-regression analysis results

Full regression results for: Dep. var.: Own-Wage Elasticity of Labor Demand	Tab. 2 Col. (5)	Tab. 3 Col. (1)	Tab. 3 Col. (3)
Specification			
Time period (omitted: Short-run)			
Intermediate-run	-0.114**	-0.110**	-0.183***
	(0.045)	(0.048)	(0.053)
Long-run	-0.151***	-0.147***	-0.253***
	(0.046)	(0.044)	(0.074)
Labor demand model (omitted: Conditional/Reduced-form)			
Conditional/Structural-form	-0.049	-0.066	-0.036
	(0.070)	(0.076)	(0.084)
Unconditional/Reduced-form	-0.009	0.015	-0.033***
	(0.027)	(0.038)	(0.013)
Unconditional/Structural-form	-0.150	-0.184	-0.129
	(0.103)	(0.113)	(0.121)
Instrumenting wages	0.008	0.001	0.008
	(0.013)	(0.012)	(0.014)
Dataset			
Panel data specification (omitted: No panel data)			
Panel data/No unit-fixed effects	-0.266**	-0.297***	-0.364***
	(0.123)	(0.108)	(0.091)
Panel data/Unit-fixed effects	-0.249**	-0.310***	-0.337***
	(0.121)	(0.100)	(0.087)
Industry-level data	-0.067	-0.071	-0.110*
	(0.081)	(0.075)	(0.062)
Administrative data	-0.116	-0.130	-0.147
	(0.114)	(0.103)	(0.114)
Industry-level admin data	0.255*	0.328**	0.332**
	(0.148)	(0.138)	(0.137)
Workforce characteristics			
Skill level (omitted: All workers)			
High-skilled workers	0.044	0.046	-0.012
	(0.079)	(0.086)	(0.100)
Low-skilled workers	-0.213***	-0.270***	-0.227***
	(0.035)	(0.095)	(0.040)
Demand for female workers	-0.174***	-0.174***	-0.168***
	(0.031)	(0.030)	(0.024)
Atypical employment	-0.539***	-0.539***	-0.548***
	(0.046)	(0.047)	(0.037)
Worker characteristics (omitted: All workers)			
Blue-collar	-0.075	-0.054	0.002
	(0.054)	(0.066)	(0.071)
White-collar	-0.062	-0.012	0.015
	(0.056)	(0.068)	(0.072)
Estimates' mean year of observation (centralized)	-0.008*	-0.008	-0.008*
	(0.004)	(0.005)	(0.005)
Year of publication (omitted: 1980)			
1981	0.620***	0.562***	0.649***
	(0.132)	(0.143)	(0.176)
1984	0.382*	0.446*	0.382
	(0.214)	(0.233)	(0.249)
1985	-0.032	0.149	0.028
	(0.252)	(0.318)	(0.258)
1986	0.333*	0.347*	0.427*
	(0.187)	(0.187)	(0.250)
1987	0.507**	0.575**	0.673***
	(0.202)	(0.255)	(0.228)

1988	0.179	0.144	0.201
	(0.132)	(0.144)	(0.177)
1990	0.891***	1.083***	1.046***
	(0.293)	(0.315)	(0.267)
1991	0.324	0.429	0.460*
	(0.265)	(0.282)	(0.248)
1992	-0.770***	-0.851***	-0.795***
	(0.174)	(0.190)	(0.211)
1993	0.594***	0.541***	0.660***
	(0.198)	(0.204)	(0.224)
1994	0.537**	0.566**	0.464*
	(0.214)	(0.256)	(0.246)
1995	0.575**	0.697**	0.700**
	(0.283)	(0.291)	(0.280)
1996	-0.115	-0.190	-0.757*
	(0.446)	(0.479)	(0.395)
1997	0.609**	0.719**	0.640**
	(0.270)	(0.321)	(0.278)
1998	0.540***	0.690***	0.677***
	(0.200)	(0.243)	(0.203)
1999	0.837***	0.945***	0.983***
	(0.194)	(0.227)	(0.200)
2000	1.006***	1.114***	1.122***
	(0.241)	(0.271)	(0.294)
2001	0.824***	0.945***	0.886***
	(0.215)	(0.244)	(0.241)
2002	0.801***	0.909***	0.890***
	(0.193)	(0.232)	(0.214)
2003	0.740***	0.799***	0.777***
	(0.204)	(0.245)	(0.224)
2004	0.652***	0.762***	0.689***
	(0.227)	(0.258)	(0.232)
2005	0.674***	0.744***	0.765***
	(0.203)	(0.235)	(0.217)
2006	0.807***	0.878***	0.884***
	(0.225)	(0.249)	(0.246)
2007	0.508**	0.562**	0.416*
	(0.213)	(0.238)	(0.213)
2008	0.496**	0.509**	0.546**
	(0.219)	(0.231)	(0.235)
2009	0.964***	1.116***	1.125***
	(0.290)	(0.272)	(0.259)
2010	0.730***	0.774***	0.694***
	(0.202)	(0.224)	(0.222)
2011	0.678***	0.715***	0.679***
	(0.209)	(0.239)	(0.229)
2012	0.587***	0.664***	0.610***
	(0.214)	(0.236)	(0.225)
Industry (ISIC code)			
(omitted: All industries)			
Mining (B)	-0.237*	-0.304*	-0.352**
	(0.138)	(0.169)	(0.156)
Overall manufacturing (C)	-0.233**	-0.319***	-0.244**
	(0.105)	(0.111)	(0.098)
Manufacture of food, beverage, tobacco (10-12)	0.128	-0.020	-0.080
	(0.160)	(0.183)	(0.109)
Manufacture of textile, apparel and leather (13-15)	0.015	-0.137	-0.133
	(0.197)	(0.218)	(0.122)
Manufacture of wood and wood products (16)	0.006	-0.140	0.016
	(0.201)	(0.221)	(0.258)

Manufacture of paper and paper products (17)	-0.126	-0.269	-0.180
	(0.154)	(0.163)	(0.127)
Printing (18)	-0.158	-0.312**	-0.207*
	(0.121)	(0.144)	(0.112)
Manufacture of coke and petroleum (19)	-0.010	-0.164	-1.613***
	(0.124)	(0.147)	(0.188)
Manufacture of chemicals and chemical products (20)	0.057	-0.081	-0.248**
	(0.174)	(0.196)	(0.106)
Manufacture of rubber and plastic products (22)	-0.083	-0.236	-0.137
	(0.121)	(0.143)	(0.112)
Manufacture of non-metallic mineral products (23)	-0.181	-0.332**	-0.222*
	(0.132)	(0.151)	(0.119)
Manufacture of basic metals (24)	-0.535***	-0.660***	-0.570***
	(0.152)	(0.160)	(0.095)
Manufacture of metal products (25)	-0.319***	-0.447***	-0.278***
	(0.115)	(0.135)	(0.098)
Manufacture of electrical equipment (27)	0.065	-0.071	-0.144
	(0.175)	(0.198)	(0.111)
Manufacture of machinery (28)	-0.229*	-0.351**	-0.170*
	(0.118)	(0.134)	(0.095)
Manufacture of transport equipment (30)	-0.071	-0.217	-0.102
	(0.116)	(0.136)	(0.105)
Other manufacturing (32)	0.132	-0.008	-0.089
	(0.152)	(0.175)	(0.105)
Electricity, gas and water supply (D-E)	-0.044	-0.176	-0.001
	(0.180)	(0.197)	(0.179)
Construction (F)	-0.326**	-0.462***	-0.472***
	(0.138)	(0.149)	(0.133)
Wholesale (G)	0.094	-0.025	0.151
	(0.173)	(0.188)	(0.180)
Transportation (H)	-0.151	-0.284**	-0.168
	(0.122)	(0.119)	(0.166)
Services (I-S)	-0.178	-0.102	-0.195
	(0.240)	(0.271)	(0.263)
Information and Communication (J)	-0.260	-0.373**	-0.923***
	(0.173)	(0.188)	(0.173)
Country (omitted: Germany)			
Belgium	-0.595***	-0.646***	-0.665***
	(0.123)	(0.128)	(0.130)
Denmark	-0.459***	-0.360***	-0.460***
	(0.119)	(0.117)	(0.120)
Finland	-0.138	-0.039	
	(0.119)	(0.117)	
France	-0.116	-0.208	-0.177
	(0.109)	(0.166)	(0.172)
Italy	-0.197**	-0.204**	-0.246**
	(0.078)	(0.091)	(0.103)
Netherlands	-0.337	-0.278	0.196
	(0.344)	(0.371)	(0.381)
Norway	-0.182	-0.109	-0.205
	(0.215)	(0.220)	(0.211)
Spain	-0.201**	-0.258*	-0.222
	(0.100)	(0.146)	(0.139)
Sweden	-0.083	-0.062	-0.119
	(0.076)	(0.090)	(0.114)
United Kingdom	-0.351***	-0.406***	-0.479***
	(0.130)	(0.105)	(0.084)
Ireland	-0.555***	-0.553***	-0.712***
	(0.211)	(0.185)	(0.201)
Turkey	-0.284	-0.247	-0.284

	(0.174)	(0.183)	(0.172)
Japan	-0.087	-0.054	-0.164
	(0.098)	(0.119)	(0.157)
USA	-0.103	0.010	-0.133
	(0.106)	(0.171)	(0.121)
Portugal	-0.292*	-0.334**	-0.348**
	(0.160)	(0.163)	(0.140)
Colombia	0.093	0.107	0.071
	(0.115)	(0.120)	(0.119)
Tunisia	-0.293	-0.240	0.115
	(0.202)	(0.231)	(0.162)
Uruguay	0.007	-0.044	-0.031
	(0.106)	(0.095)	(0.105)
Peru	0.007	-0.049	-0.027
	(0.103)	(0.110)	(0.090)
Chile	0.171	0.200*	0.136
	(0.111)	(0.118)	(0.112)
Mexico	0.206	0.233*	0.164
	(0.133)	(0.137)	(0.159)
Ghana	0.092	0.111	0.060
	(0.113)	(0.122)	(0.117)
Argentina	-0.022	0.036	-0.163
	(0.159)	(0.156)	(0.153)
Macedonia	0.381*	0.398	0.338*
	(0.209)	(0.242)	(0.200)
India	-0.271*	-0.337**	-0.372***
	(0.153)	(0.145)	(0.127)
China	-0.273**	-0.177	-0.578***
	(0.127)	(0.153)	(0.137)
Czech Republic	0.123	0.486***	0.039
	(0.119)	(0.170)	(0.225)
Slovak Republic	-0.202	-0.081	-0.226*
	(0.126)	(0.138)	(0.123)
Poland	-0.119	-0.239	-0.617***
	(0.130)	(0.153)	(0.114)
Hungary	0.330***	0.412***	0.410***
	(0.118)	(0.135)	(0.110)
South Korea	0.989***	1.038***	
	(0.083)	(0.127)	
Slovenia	1.101***	1.126***	
	(0.077)	(0.099)	
Bulgaria	0.347***	0.396***	
	(0.083)	(0.127)	
Romania	0.118	0.104	-0.257**
	(0.100)	(0.100)	(0.120)
Lithuania	-0.296***	-0.351***	-0.434***
	(0.109)	(0.122)	(0.129)
Mauritius	-0.374*	-0.351	-0.364
	(0.199)	(0.218)	(0.240)
Canada	-0.161	-0.212**	-0.127*
	(0.098)	(0.104)	(0.070)
Aggregate Europe	-0.279**	-0.363**	-0.220***
	(0.110)	(0.152)	(0.071)
Constant	-0.354*	-0.355	-0.259
	(0.193)	(0.239)	(0.235)
No. of observations	890	609	627
Adjusted R-Squared	0.850	0.827	0.856

Note: Standard errors (in parentheses) are clustered at the study level. Significance levels are 0.1 (*), 0.05 (**) and 0.01 (***).

Table B.6: Full meta-regression analysis results

Full regression results for: Dep. var.: Own-Wage Elasticity of Labor Demand	Tab. 3 Col. (5)	Tab. 3 Col. (4)	Tab. 3 Col. (6)
Specification			
Time period (omitted: Short-run)			
Intermediate-run wage elasticity	-0.305***	-0.214**	-0.174***
	(0.113)	(0.085)	(0.041)
Long-run wage elasticity	-0.434***	-0.275***	-0.242***
	(0.095)	(0.063)	(0.034)
Conditional/Structural-form	0.050	0.117	-0.015
	(0.073)	(0.071)	(0.047)
Unconditional/Reduced-form	-0.193**	-0.042	-0.030
	(0.090)	(0.054)	(0.035)
Unconditional/Structural-form	0.381*	-0.000	-0.099
	(0.226)	(0.124)	(0.192)
Instrumenting wages	-0.247***	-0.247***	-0.064*
	(0.075)	(0.076)	(0.038)
Dataset			
Skill level (omitted: All workers)			
Panel data/No unit-fixed effects	0.140*	0.043	-0.153*
	(0.074)	(0.110)	(0.084)
Panel data/Unit-fixed effects	0.045	-0.007	-0.212***
	(0.083)	(0.095)	(0.080)
Industry-level data	-0.148	-0.207**	-0.010
	(0.109)	(0.089)	(0.071)
Administrative data	-0.405***	-0.194***	-0.150***
	(0.094)	(0.072)	(0.056)
Industry-level admin data	0.478***	0.369***	0.164**
	(0.134)	(0.130)	(0.079)
Workforce characteristics			
High-skilled workers	-0.016	-0.055	0.003
	(0.096)	(0.089)	(0.046)
Low-skilled workers	-0.285***	-0.162**	-0.139***
	(0.098)	(0.079)	(0.035)
Demand for female workers	-1.323	-1.436	-0.295***
	(0.851)	(0.868)	(0.079)
Atypical employment	-0.446*	-0.325	-0.403***
	(0.262)	(0.304)	(0.049)
Worker characteristics (omitted: All workers)			
White-collar	0.106	-0.027	-0.082
	(0.114)	(0.104)	(0.073)
Blue-collar	-0.160	-0.370***	-0.121*
	(0.140)	(0.107)	(0.067)
Estimates' mean year of observation (centralized)	-0.008**	-0.014**	-0.016***
	(0.004)	(0.006)	(0.003)
Year of publication (omitted: 1971)			
1974	0.208		
	(0.136)		
1974	-0.051		
	(0.146)		
1977	-0.014		
	(0.180)		
1979	-0.171		
	(0.142)		
1980	-0.165	1.290***	-0.447*
	(0.141)	(0.254)	(0.265)
1981	-0.380	1.827***	-0.228
	(0.265)	(0.096)	(0.253)

1983	-0.454***		
	(0.123)		
1984	-0.627***	1.001***	-0.645***
	(0.209)	(0.264)	(0.235)
1985	-0.802**	0.529*	-1.045***
	(0.313)	(0.304)	(0.258)
1986	-0.251	1.071***	-0.415*
	(0.240)	(0.259)	(0.241)
1987	-0.304*	1.545***	-0.308
	(0.168)	(0.290)	(0.347)
1988	-0.645***	1.150***	-0.675***
	(0.237)	(0.244)	(0.239)
1989	-0.082		
	(0.189)		
1990	-0.958**	1.751***	
	(0.372)	(0.310)	
1991	-0.726***	1.189***	-0.439**
	(0.209)	(0.297)	(0.223)
1992	-0.678**		-1.396***
	(0.328)		(0.317)
1993	-0.223	1.574***	-0.165
	(0.183)	(0.233)	(0.228)
1994	-0.520**	1.602***	-0.284
	(0.205)	(0.290)	(0.270)
1995	-0.449	1.448***	-0.289
	(0.276)	(0.286)	(0.248)
1996	-0.353	1.006***	-0.901***
	(0.235)	(0.220)	(0.276)
1997	-0.807***	1.283***	-0.289
	(0.249)	(0.308)	(0.217)
1998	-0.523**	1.569***	-0.204
	(0.220)	(0.286)	(0.214)
1999	-0.510**	1.532***	-0.030
	(0.230)	(0.292)	(0.218)
2000	-0.155	1.813***	0.362
	(0.182)	(0.296)	(0.245)
2001	-0.380*	1.540***	-0.040
	(0.213)	(0.283)	(0.225)
2002	-0.394*	1.429***	-0.094
	(0.237)	(0.293)	(0.230)
2003	-0.839***	1.425***	-0.147
	(0.220)	(0.282)	(0.215)
2004	-0.578***	1.387***	-0.286
	(0.208)	(0.295)	(0.221)
2005	-0.393	1.729***	-0.046
	(0.252)	(0.280)	(0.212)
2006	-0.151	1.706***	0.005
	(0.201)	(0.285)	(0.221)
2007	-0.623**	1.455***	-0.080
	(0.283)	(0.337)	(0.230)
2008	-0.224	1.620***	-0.129
	(0.266)	(0.337)	(0.231)
2009	-0.293	1.770***	0.173
	(0.230)	(0.277)	(0.238)
2010	-0.152	1.850***	0.151
	(0.213)	(0.266)	(0.223)
2011	-0.449**	1.714***	-0.003
	(0.196)	(0.291)	(0.241)
2012	-0.442*	1.548***	-0.070
	(0.231)	(0.329)	(0.225)

Industry (ISIC code)			
(omitted: All industries)			
Mining (B)	0.221	0.613**	0.022
	(0.262)	(0.243)	(0.203)
Overall manufacturing (C)	0.047	-0.087	-0.089**
	(0.090)	(0.075)	(0.041)
Manufacture of food, beverage, tobacco (10-12)	0.151	-0.201	-0.099
	(0.169)	(0.199)	(0.134)
Manufacture of textile, apparel and leather (13-15)	0.112	-0.504**	-0.162
	(0.177)	(0.195)	(0.131)
Manufacture of wood and wood products (16)	-0.040	-0.253	-0.229
	(0.170)	(0.212)	(0.174)
Manufacture of paper and paper products (17)	-0.070	-0.260	-0.191
	(0.168)	(0.164)	(0.138)
Printing (18)	0.220	-0.377**	-0.246
	(0.205)	(0.164)	(0.216)
Manufacture of coke and petroleum (19)	-1.158**	-1.289**	-0.138
	(0.503)	(0.537)	(0.207)
Manufacture of chemicals and chemical products (20)	0.015	-0.290	-0.106
	(0.167)	(0.187)	(0.115)
Manufacture of rubber and plastic products (22)	0.174	-0.175	-0.174
	(0.154)	(0.166)	(0.219)
Manufacture of non-metallic mineral products (23)	-0.063	-0.445**	-0.312***
	(0.160)	(0.200)	(0.114)
Manufacture of basic metals (24)	-0.203	-0.192	-0.434***
	(0.294)	(0.237)	(0.140)
Manufacture of metal products (25)	0.030	-0.368**	-0.317**
	(0.162)	(0.180)	(0.138)
Manufacture of electrical equipment (27)	0.300	0.005	-0.078
	(0.234)	(0.212)	(0.139)
Manufacture of machinery (28)	0.086	-0.216	-0.171
	(0.164)	(0.159)	(0.132)
Manufacture of transport equipment (30)	0.096	-0.153	-0.132
	(0.133)	(0.173)	(0.132)
Other manufacturing (32)	0.227	-0.122	-0.020
	(0.179)	(0.236)	(0.122)
Electricity, gas and water supply (D-E)	0.554***	0.378**	0.151
	(0.184)	(0.158)	(0.124)
Construction (F)	0.257	0.164	-0.175
	(0.229)	(0.169)	(0.112)
Wholesale (G)	0.624***	0.320*	0.268
	(0.175)	(0.191)	(0.168)
Transportation (H)	0.326		
	(0.230)		
Services (I-S)	-0.133	-0.122	-0.028
	(0.116)	(0.119)	(0.048)
Information and Communication (J)	0.760**	0.236	0.176
	(0.350)	(0.433)	(0.370)
Financial and insurance services (K)	-0.202	-0.506***	-0.197
	(0.175)	(0.191)	(0.241)
Country (omitted: Germany)			
Belgium	-0.384**	-0.328***	-0.431***
	(0.168)	(0.105)	(0.116)
Denmark	-0.593***	-0.267***	-0.396
	(0.191)	(0.098)	(0.305)
Finland	0.449**	0.054	-0.075
	(0.191)	(0.098)	(0.549)
France	0.204	0.146	-0.114
	(0.205)	(0.102)	(0.086)
Italy	0.092	-0.362***	-0.370***

	(0.300)	(0.101)	(0.083)
Netherlands	-0.389**	-0.080	-0.145
	(0.157)	(0.201)	(0.195)
Norway	-0.061	-0.208	-0.213
	(0.144)	(0.135)	(0.160)
Spain	-0.177	-0.074	-0.251**
	(0.140)	(0.195)	(0.112)
Sweden	-0.035	-0.080	-0.152**
	(0.110)	(0.103)	(0.069)
United Kingdom	-0.149	-0.242***	-0.375***
	(0.119)	(0.079)	(0.062)
Ireland	-0.656***	-0.533***	-0.643***
	(0.144)	(0.096)	(0.151)
Turkey	0.230	0.145	-0.214
	(0.285)	(0.280)	(0.135)
Japan	0.061	0.093	-0.104
	(0.230)	(0.196)	(0.072)
USA	-0.506***	-0.182	-0.252***
	(0.118)	(0.126)	(0.060)
Portugal	0.217**	0.064	-0.223
	(0.098)	(0.089)	(0.153)
Colombia	0.015	0.039	-0.081
	(0.104)	(0.127)	(0.065)
Tunisia	-0.233	-0.213	-0.302**
	(0.256)	(0.225)	(0.147)
Uruguay	0.090	0.174	0.094
	(0.091)	(0.109)	(0.115)
Peru	0.090	0.146	0.126
	(0.161)	(0.162)	(0.101)
Chile	0.479***	0.395***	0.173
	(0.153)	(0.105)	(0.180)
Mexico	0.390***	0.322***	0.170
	(0.121)	(0.101)	(0.117)
Ghana	-0.369**		
	(0.153)		
Argentina	-0.097	0.272***	0.189*
	(0.100)	(0.103)	(0.114)
Macedonia	-1.231***	-0.105	-0.075
	(0.156)	(0.207)	(0.277)
India	0.372*	0.451***	0.059
	(0.202)	(0.169)	(0.169)
China	-0.217	-0.303**	-0.230
	(0.181)	(0.134)	(0.205)
Czech Republic	-0.271	-0.426	-0.345*
	(0.350)	(0.307)	(0.200)
Slovak Republic	0.439***	0.440	0.115
	(0.156)	(0.283)	(0.169)
Poland	0.057	-0.056	-0.232**
	(0.101)	(0.122)	(0.106)
Hungary	-0.294***	-0.425***	-0.200
	(0.100)	(0.118)	(0.222)
South Korea	0.263*	0.246**	0.260*
	(0.139)	(0.107)	(0.148)
Slovenia	-0.347**	1.147***	1.002
	(0.172)	(0.165)	(1.608)
Bulgaria	1.129***	1.316***	1.147
	(0.172)	(0.158)	(1.626)
Romania	-0.209	0.505***	0.360
	(0.172)	(0.165)	(0.702)
Lithuania	-0.057	-0.042	0.178

	(0.156)	(0.161)	(0.235)
Mauritius	-0.528***	-0.501***	-0.445**
	(0.111)	(0.074)	(0.189)
Canada	-0.705**	-0.977***	-0.726**
	(0.302)	(0.341)	(0.306)
Aggregate Europe	-0.065	-0.197	-0.192***
	(0.095)	(0.137)	(0.062)
Aggregate Data	-0.276**	-0.273**	-0.355***
	(0.107)	(0.113)	(0.069)
Constant	0.511***	-1.492***	0.387*
	(0.148)	(0.267)	(0.234)
No. of observations	1334	890	890
Adjusted R-Squared	0.288	0.281	

Note: Standard errors (in parentheses) are clustered at the study level. Significance levels are 0.1 (*), 0.05 (**) and 0.01 (***).

Table B.7: Full meta-regression analysis results

Full regression results for: Dep. var.: Own-Wage Elasticity of Labor Demand	Tab. 4 Col. (1)	Tab. 4 Col. (2)	Tab. 4 Col (3)	Tab. 4 Col. (4)	Tab. 4 Col. (5)
Specification					
Time period (omitted: Short-run)					
Intermediate-run	-0.093**	-0.087**	-0.100**	-0.089**	-0.091**
	(0.038)	(0.036)	(0.046)	(0.037)	(0.042)
Long-run	-0.126***	-0.110**	-0.135***	-0.120**	-0.122**
	(0.045)	(0.048)	(0.050)	(0.046)	(0.049)
Labor demand model (omitted: Conditional/Reduced-form)					
Conditional/Structural-form	-0.038	0.019	-0.037	-0.076	-0.075
	(0.068)	(0.082)	(0.068)	(0.071)	(0.071)
Unconditional/Reduced-form	0.002	0.004	0.005	0.006	0.007
	(0.028)	(0.029)	(0.029)	(0.029)	(0.029)
Unconditional/Structural-form	-0.136	-0.130	-0.133	-0.174*	-0.172*
	(0.100)	(0.090)	(0.100)	(0.103)	(0.104)
Instrumenting wages	0.012	0.014	0.013	0.013	0.013
	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)
Dataset					
Panel data specification (omitted: No panel data)	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)
Panel data/No unit-fixed effects	-0.240*	-0.210*	-0.231*	-0.246**	-0.243**
	(0.121)	(0.118)	(0.123)	(0.117)	(0.119)
Panel data/Unit-fixed effects	-0.222*	-0.192	-0.212*	-0.227*	-0.224*
	(0.119)	(0.117)	(0.121)	(0.115)	(0.117)
Industry level data	-0.035	-0.041	-0.030	-0.033	-0.032
	(0.088)	(0.083)	(0.085)	(0.081)	(0.082)
Administrative data	-0.100	-0.114	-0.095	-0.109	-0.107
	(0.112)	(0.114)	(0.114)	(0.112)	(0.115)
Industry-level, admin data	0.197	0.205	0.183	0.198	0.194
	(0.151)	(0.144)	(0.156)	(0.145)	(0.151)
Workforce characteristics					
Skill level (omitted: All workers)					
High-skilled workers	0.049	0.041	0.049	0.046	0.047
	(0.084)	(0.085)	(0.083)	(0.082)	(0.082)
Low-skilled workers	-0.204***	-0.202***	-0.203***	-0.206***	-0.206***
	(0.036)	(0.036)	(0.036)	(0.036)	(0.037)
Demand for female workers	-0.159***	-0.161***	-0.160***	-0.163***	-0.163***
	(0.026)	(0.027)	(0.027)	(0.025)	(0.025)
Atypical employment	-0.536***	-0.542***	-0.536***	-0.527***	-0.527***
	(0.062)	(0.058)	(0.060)	(0.061)	(0.060)
Worker characteristics (omitted: All workers)					
Blue-collar worker	-0.092	-0.098*	-0.095*	-0.071	-0.073
	(0.056)	(0.057)	(0.056)	(0.056)	(0.056)
White-collar worker	-0.082	-0.089	-0.085	-0.063	-0.064
	(0.057)	(0.059)	(0.058)	(0.057)	(0.057)
Estimates' mean year of observation (centralized)	-0.008*	-0.007*	-0.008*	-0.008*	-0.008*
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Year of publication (omitted: 1980)					
1981	0.560***	0.541***	0.562***	0.602***	0.601***
	(0.107)	(0.111)	(0.109)	(0.127)	(0.128)
1984	0.351*	0.310	0.344*	0.373*	0.370*
	(0.202)	(0.194)	(0.203)	(0.207)	(0.208)
1985	-0.021	0.019	-0.013	0.017	0.018
	(0.235)	(0.219)	(0.234)	(0.237)	(0.236)
1986	0.251	0.260*	0.252	0.292	0.290
	(0.167)	(0.155)	(0.167)	(0.182)	(0.181)

1987	0.559***	0.482**	0.545***	0.605***	0.600***
	(0.189)	(0.197)	(0.194)	(0.195)	(0.198)
1988	0.139	0.108	0.139	0.173	0.171
	(0.107)	(0.110)	(0.109)	(0.126)	(0.127)
1990	0.853***	0.799***	0.846***	0.876***	0.873***
	(0.287)	(0.280)	(0.290)	(0.288)	(0.290)
1991	0.354	0.347	0.361	0.390	0.391
	(0.253)	(0.230)	(0.253)	(0.255)	(0.255)
1992	-0.469***	-0.529***	-0.492***	-0.590***	-0.592***
	(0.170)	(0.177)	(0.181)	(0.188)	(0.191)
1993	0.535***	0.445**	0.527***	0.524***	0.522***
	(0.180)	(0.212)	(0.183)	(0.186)	(0.188)
1994	0.591***	0.558***	0.613***	0.650***	0.654***
	(0.201)	(0.201)	(0.197)	(0.204)	(0.202)
1995	0.551**	0.410	0.529*	0.589**	0.582**
	(0.264)	(0.286)	(0.268)	(0.259)	(0.265)
1996	0.005	-0.062	-0.011	-0.050	-0.052
	(0.411)	(0.439)	(0.418)	(0.429)	(0.431)
1997	0.587**	0.497*	0.580**	0.623**	0.620**
	(0.260)	(0.263)	(0.263)	(0.264)	(0.266)
1998	0.490***	0.427**	0.486**	0.523***	0.521***
	(0.185)	(0.205)	(0.188)	(0.191)	(0.193)
1999	0.782***	0.661***	0.772***	0.823***	0.819***
	(0.182)	(0.218)	(0.186)	(0.188)	(0.191)
2000	0.901***	0.819***	0.897***	0.969***	0.966***
	(0.229)	(0.246)	(0.230)	(0.238)	(0.240)
2001	0.808***	0.708***	0.800***	0.848***	0.845***
	(0.197)	(0.226)	(0.202)	(0.203)	(0.206)
2002	0.768***	0.701***	0.758***	0.802***	0.798***
	(0.177)	(0.194)	(0.183)	(0.183)	(0.188)
2003	0.696***	0.624***	0.686***	0.721***	0.717***
	(0.186)	(0.199)	(0.191)	(0.193)	(0.197)
2004	0.621***	0.534**	0.610***	0.656***	0.652***
	(0.210)	(0.239)	(0.215)	(0.216)	(0.219)
2005	0.646***	0.579***	0.636***	0.672***	0.668***
	(0.187)	(0.206)	(0.193)	(0.194)	(0.198)
2006	0.781***	0.713***	0.765***	0.811***	0.806***
	(0.207)	(0.218)	(0.216)	(0.210)	(0.219)
2007	0.489**	0.349	0.487**	0.511**	0.509**
	(0.194)	(0.253)	(0.197)	(0.200)	(0.200)
2008	0.508**	0.381*	0.503**	0.539**	0.537**
	(0.205)	(0.223)	(0.208)	(0.211)	(0.212)
2009	0.912***	0.769**	0.894***	0.937***	0.931***
	(0.280)	(0.301)	(0.287)	(0.281)	(0.287)
2010	0.753***	0.672***	0.746***	0.784***	0.781***
	(0.188)	(0.208)	(0.191)	(0.195)	(0.197)
2011	0.674***	0.590***	0.665***	0.698***	0.695***
	(0.194)	(0.207)	(0.198)	(0.201)	(0.203)
2012	0.561***	0.436*	0.554***	0.601***	0.598***
	(0.197)	(0.232)	(0.201)	(0.204)	(0.206)
Industry (ISIC code) (omitted: all industries)					
Mining (B)	-0.096	-0.018	-0.073	-0.105	-0.099
	(0.137)	(0.172)	(0.139)	(0.133)	(0.137)
Manufacturing (C)	-0.187*	-0.193*	-0.181*	-0.182*	-0.181*
	(0.101)	(0.098)	(0.102)	(0.099)	(0.101)
Manufacture of food,beverages,tobacco (10-12)	0.195	0.161	0.199	0.196	0.197
	(0.161)	(0.159)	(0.162)	(0.162)	(0.163)
Manufacture of textiles,apparel,leather (13-15)	0.102	0.063	0.104	0.107	0.107
	(0.204)	(0.203)	(0.205)	(0.208)	(0.208)
Manufacture of wood & wood products (16)	0.052	0.020	0.057	0.069	0.070

	(0.158)	(0.154)	(0.162)	(0.182)	(0.182)
Manufacture of paper & paper products (17)	-0.012	-0.053	-0.012	-0.006	-0.006
	(0.142)	(0.123)	(0.142)	(0.132)	(0.132)
Printing (18)	-0.068	-0.115	-0.067	-0.073	-0.073
	(0.123)	(0.104)	(0.123)	(0.121)	(0.121)
Manufacture of coke & petroleum (19)	0.075	0.028	0.076	0.072	0.072
	(0.124)	(0.106)	(0.124)	(0.123)	(0.123)
Manufacture of chemicals & chemical products (20)	0.122	0.094	0.127	0.122	0.123
	(0.171)	(0.175)	(0.173)	(0.174)	(0.175)
Manufacture of rubber & plastic products (22)	0.036	-0.012	0.035	0.016	0.017
	(0.127)	(0.107)	(0.126)	(0.122)	(0.122)
Manufacture of non-metallic mineral products (23)	-0.099	-0.144	-0.097	-0.094	-0.093
	(0.127)	(0.108)	(0.127)	(0.125)	(0.125)
Manufacture of basic metals (24)	-0.437***	-0.464***	-0.434***	-0.434***	-0.433***
	(0.153)	(0.139)	(0.153)	(0.148)	(0.148)
Manufacture of metal products (25)	-0.230**	-0.257**	-0.227**	-0.224*	-0.223*
	(0.114)	(0.107)	(0.114)	(0.115)	(0.116)
Manufacture of electrical equipment (27)	0.163	0.132	0.165	0.168	0.168
	(0.175)	(0.176)	(0.176)	(0.179)	(0.179)
Manufacture of machinery (28)	-0.128	-0.153	-0.125	-0.114	-0.113
	(0.118)	(0.113)	(0.118)	(0.119)	(0.119)
Manufacture of transport equipment (30)	0.026	-0.017	0.027	0.035	0.035
	(0.118)	(0.101)	(0.118)	(0.119)	(0.119)
Other Manufacturing (32)	0.205	0.172	0.209	0.206	0.207
	(0.153)	(0.152)	(0.154)	(0.157)	(0.157)
Electricity, gas and water supply (D-E)	-0.018	-0.053	-0.011	-0.010	-0.009
	(0.180)	(0.159)	(0.181)	(0.179)	(0.179)
Construction (F)	-0.233	-0.236*	-0.228	-0.262*	-0.260*
	(0.144)	(0.131)	(0.143)	(0.142)	(0.142)
Wholesale (G)	0.091	0.046	0.099	0.112	0.113
	(0.170)	(0.149)	(0.170)	(0.171)	(0.171)
Services (I-S)	-0.118	-0.112	-0.112	-0.113	-0.111
	(0.106)	(0.104)	(0.106)	(0.101)	(0.103)
Information & communication (J)	-0.142	-0.088	-0.127	-0.138	-0.134
	(0.221)	(0.206)	(0.216)	(0.215)	(0.214)
Financial and insurance activities (K)	-0.106	-0.143	-0.109	-0.162	-0.161
	(0.182)	(0.172)	(0.182)	(0.175)	(0.175)
Country (omitted: Germany)					
Belgium	-0.516***	-0.459***	-0.502***	-0.507***	-0.504***
	(0.125)	(0.131)	(0.127)	(0.127)	(0.128)
Denmark	-0.333***	-0.237**	-0.289***	-0.275***	-0.266***
	(0.116)	(0.112)	(0.099)	(0.103)	(0.096)
Finland	0.157	0.233*	0.263*	0.278**	0.301**
	(0.129)	(0.137)	(0.140)	(0.110)	(0.136)
France	-0.081	-0.053	-0.077	-0.070	-0.070
	(0.103)	(0.093)	(0.101)	(0.099)	(0.098)
Italy	-0.172**	-0.157**	-0.168**	-0.164**	-0.163**
	(0.075)	(0.072)	(0.074)	(0.074)	(0.073)
Netherlands	-0.298	-0.294	-0.277	-0.257	-0.253
	(0.324)	(0.349)	(0.331)	(0.337)	(0.340)
Norway	-0.169	-0.099	-0.165	-0.168	-0.167
	(0.200)	(0.169)	(0.194)	(0.186)	(0.184)
Spain	-0.137	-0.114	-0.123	-0.115	-0.113
	(0.092)	(0.089)	(0.087)	(0.086)	(0.085)
Sweden	-0.072	-0.055	-0.073	-0.071	-0.072
	(0.073)	(0.073)	(0.073)	(0.073)	(0.073)
UK	-0.315**	-0.239*	-0.308**	-0.305**	-0.303**
	(0.133)	(0.138)	(0.132)	(0.132)	(0.131)
Ireland	-0.547***	-0.447**	-0.544***	-0.552***	-0.551***
	(0.208)	(0.199)	(0.206)	(0.207)	(0.206)

Turkey	-0.344**	-0.200	-0.356**	-0.348**	-0.351**
	(0.169)	(0.178)	(0.174)	(0.170)	(0.174)
Japan	-0.068	-0.048	-0.068	-0.065	-0.065
	(0.092)	(0.091)	(0.091)	(0.092)	(0.092)
United States	-0.083	-0.068	-0.082	-0.078	-0.078
	(0.103)	(0.101)	(0.102)	(0.102)	(0.102)
Portugal	-0.235	-0.189	-0.224	-0.224	-0.221
	(0.155)	(0.152)	(0.156)	(0.154)	(0.155)
Colombia	0.075	0.139	0.068	0.057	0.056
	(0.115)	(0.113)	(0.116)	(0.115)	(0.116)
Tunisia	-0.343*	-0.231	-0.349*	-0.333*	-0.335*
	(0.193)	(0.223)	(0.199)	(0.193)	(0.196)
Uruguay	0.012	0.076	0.015	0.010	0.011
	(0.107)	(0.123)	(0.106)	(0.106)	(0.105)
Peru	0.037	0.093	0.039	0.026	0.026
	(0.101)	(0.126)	(0.099)	(0.098)	(0.097)
Chile	0.212*	0.281**	0.205*	0.202*	0.201*
	(0.110)	(0.115)	(0.112)	(0.109)	(0.110)
Mexico	0.164	0.308**	0.158	0.143	0.142
	(0.128)	(0.153)	(0.131)	(0.128)	(0.129)
Argentina	0.077	0.137	0.072	0.060	0.060
	(0.114)	(0.111)	(0.114)	(0.114)	(0.114)
Macedonia	0.149	0.232	0.216	0.227	0.241*
	(0.153)	(0.149)	(0.142)	(0.143)	(0.139)
India	0.364*	0.516**	0.346	0.380*	0.374*
	(0.202)	(0.220)	(0.209)	(0.193)	(0.202)
China	-0.186	-0.160	-0.163	-0.163	-0.158
	(0.151)	(0.154)	(0.155)	(0.150)	(0.154)
Czech Republic	-0.058	-0.024	-0.002	0.037	0.048
	(0.124)	(0.123)	(0.116)	(0.113)	(0.112)
Slovak Republic	0.258*	0.297**	0.307**	0.322**	0.332**
	(0.134)	(0.136)	(0.135)	(0.134)	(0.134)
Poland	-0.230*	-0.204*	-0.237*	-0.225*	-0.227*
	(0.124)	(0.117)	(0.127)	(0.121)	(0.125)
Hungary	0.118	0.156	0.186	0.221*	0.235*
	(0.126)	(0.126)	(0.126)	(0.114)	(0.119)
South Korea	0.273**	0.283***	0.267**	0.268**	0.266**
	(0.112)	(0.108)	(0.113)	(0.110)	(0.111)
Slovenia	1.950***	2.055***	2.316***	2.321***	2.402***
	(0.257)	(0.380)	(0.523)	(0.287)	(0.524)
Bulgaria	2.495***	2.623***	3.021***	3.026***	3.142***
	(0.363)	(0.546)	(0.759)	(0.410)	(0.760)
Romania	0.737***	0.814***	0.889***	0.893***	0.927***
	(0.127)	(0.172)	(0.219)	(0.134)	(0.219)
Lithuania	0.205**	0.255**	0.203**	0.243**	0.241**
	(0.099)	(0.110)	(0.099)	(0.095)	(0.096)
Mauritius	-0.176	-0.084	-0.145	-0.144	-0.137
	(0.120)	(0.153)	(0.118)	(0.118)	(0.117)
Canada	-0.325*	-0.424**	-0.344*	-0.337*	-0.341*
	(0.182)	(0.188)	(0.184)	(0.174)	(0.178)
Aggr. Europe	-0.153	-0.120	-0.151	-0.140	-0.139
	(0.096)	(0.117)	(0.097)	(0.097)	(0.098)
Aggr. Data	-0.235*	-0.162	-0.237**	-0.211	-0.213*
	(0.119)	(0.169)	(0.118)	(0.128)	(0.128)
Standard error	-1.053***	-1.111**	-0.985***	-1.449***	-1.417***
	(0.274)	(0.427)	(0.296)	(0.313)	(0.346)
Normalized impact factor		-0.164			
		(0.156)			
Std. error*Normalized impact factor		0.287			
		(0.895)			

Std. error*Short-run elasticity			-0.462		-0.119
			(0.640)		(0.636)
Std. error*Structural-form model				0.913*	0.882*
				(0.513)	(0.521)
Constant	-0.374**	-0.327*	-0.372**	-0.390**	-0.389**
	(0.175)	(0.178)	(0.174)	(0.181)	(0.182)
No. of observations	890	890	890	890	890
Adjusted R-Squared	0.855	0.856	0.855	0.856	0.856

Note: Standard errors (in parentheses) are clustered at the study level. Significance levels are 0.1 (*), 0.05 (**) and 0.01 (***).