How Comparable are Labor Demand Elasticities across Countries?*

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Abstract: The paper has two goals. First it presents the first comparable dynamic panel estimates of labor demand relations using establishment data from Chile, Colombia, and Mexico and examines the benefits and limits of the Arrellano and Bond GMM in differences estimator and the Blundell and Bond GMM system estimator. Second, it explores the limitations of such measures as diagnostics of labor market flexibility and finds three: 1) estimates are extremely dependent on estimation approach and specification; 2) even where these are held constant, industry level estimates suggest that compositional effects are critical; 3) estimates change greatly, if not secularly, with sample period.

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1. Introduction

This paper has two goals. First, it establishes the first comparable, dynamic estimates of labor demand functions across three Latin American countries-Chile, Colombia and Mexico-using panel establishment level data. It employs, among other techniques, the recent Blundell and Bond (1998) GMM system approach to the problem of weak instruments plaguing the GMM in differences approach proposed by Arellano and Bond (1991). The results suggest dramatic improvements over more traditional techniques, as well as possible limitations to the Blundell and Bond approach.

Second, it tests the feasibility of making inferences, particularly about relative labor market flexibility, based on comparisons of these or any estimated elasticities. This is tempting since standard dynamic specifications are often anchored in theoretical models where cost of adjustment –barriers to firing, severance pay, training or recruitment costs- drive the speed of adjustment (see Hammermesh (1993) for a review of the literature). Ideally, we might look at the own wage elasticity as a measure of ease of changing factor mix in response to changes in relative prices, and specifically at the lagged adjustment coefficient as a measure of ease of hiring or firing. The legal codes of the countries in our sample (see Annex I) range from granting little flexibility in adjusting the workforce (Mexico, Colombia) to a great deal (Chile) and we might expect to see this reflected in the estimated elasticities[1].

[1] Only in Chile is it permitted to dismiss for reasons of economic necessity and firing costs at one year's tenure are half that of Mexico, and at 10 years roughly half of both Colombia and Mexico (see annex I). Mexico has double the severance pay at one year as the other two and has no provisions for temporary contracts making it, on paper, the least flexible. See Heckman and Pagés-Serra (2000) for a recent attempt to relate job security regulations to employment and turnover across countries.

However, we show that, for at least three reasons, such comparisons must be approached with caution. First, we show that differences in estimation techniques yield radically different results. Second, even if a common estimation method is used, differing composition of industries within the sample of industrial firms, can lead to different aggregate elasticities unrelated to labor market regulation. This is confirmed by our estimates of labor demand elasticities at the industry level for each country, which suggest that compositional effects could indeed be large. Finally, we show, using the longest panel available, from Chile, that aggregate demand elasticities change dramatically from year to year. This makes cross-country inference very dependent on what moment in time is selected.

II. Estimation Approach

We employ both data and techniques that are thought to provide the most consistent and reliable estimates. Micro- panel data offer more precise estimates of demand functions, allow factor prices to be taken as exogenous, permit compensation for unobserved heterogeneity, and permit distinguishing changes in parameters arising from firm behavior versus the entry end exit of firms into the industry. Despite those benefits, and probably due to the larger efforts associated with generating micro data sets, only a small fraction of the nearly two hundred empirical studies of labor demand functions reviewed by Hamermesh (1993) are based on establishment-level microeconomic data. Moreover, only two published papers have estimated labor demand functions using establishment data for developing countries.[2]

[2] Sosin and Fairchild (1984) employ two stage least squares in levels to estimate demand functions using interview data from 221 firms, covering seven industries in Mexico, Colombia and four Central American

The present paper takes advantage of recent advances in dynamic panel modeling. We first estimate a dynamic levels GMM specification and then a dynamic differences GMM specification following Arellano and Bond (1991). While the latter estimates are shown to be, in all probability, superior to the levels estimates, they are potentially contaminated by biases associated to the quality of the instruments for the lagged dependent and output variables. We thus follow Blundell and Bond (1998) in the use of a system estimator that exploits both the temporal and the cross-sectional variation in the data. This estimator leads to substantial improvement in coefficient estimates, particularly on the output variable. However, as shown below, there are still some concerns about the credibility of the assumptions on initial conditions that are required to apply the Blundell and Bond (1998) estimator.

III. Data

We work with comparable firm level data from Colombia (1977-1991), Mexico (1984-1990), and Chile (1979-86). These data sets were prepared in the context of the World Bank funded project “Industrial Competition, Productivity, and Their Relation to Trade Regimes” (Roberts and Tybout, 1996) and have at least two advantages that set them above any other work done to date (see Annex II for more detail).

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countries, during the 1970-1974 period. Roberts and Skoufias (1997) use a much larger panel data set on Colombia for the period 1981-1987 applying a variety of differenced specifications to account for unobserved plant heterogeneity. Unpublished estimates have also been obtained for Mexico by Maloney and Ribeiro (1998) using cross sectional establishment data, for Colombia, by Cardenas and Bernal, and Brazil, by Barros, Corseuil and Gonzaga.The papers on Colombia and Brazil were done in the context of the IDB project “Labor Market Regulations and Employment in Latin America and the Caribbean.” Cardenas and Bernal find relatively low short-run wage elasticities, ranging from –0.05, estimated with a panel of establishments, and to –0.1 and –0.6, estimated, respectively, with monthly time series and a panel of manufacturing subsectors. Long run elasticities are higher: from –2.27 using establishment data to –1.42 using data aggregated by subsectors. Barros et al. use data on a panel of manufacturing establishments and

1. They have broad micro-level coverage, including most manufacturing establishments with at least ten employees, and have been "cleaned" on a consistent basis[3]. Working at this level permits more precise estimation as well as permitting wages to be taken as exogenous.

2. The panel nature of the data sets- following individual firms over time- permits studying the dynamics of the employment adjustment process. It also provides lagged values to serve as instruments for potentially endogenous variables. Finally, it permits controlling for the existence of plant-specific effects that may be correlated with explanatory variables.

IV. Dynamic Panel Modeling

We depart from a reasonably standard log linear autoregressive specification in which plant employment is a function of its lag, current and lagged wages (skilled and unskilled) and value added, industry value added (to capture cyclical effects), time varying levels effects, individual "fixed" effects, and a random error term. Thus, our base specification is:

$$l_{(u,s)it} = h_l l_{(u,s)i(t-1\}} + \sum_{j=0}^{n} h_{wu(t-j)} w_{ui(t-j\}} + \sum_{j=0}^{n} h_{ws(t-j)} w_{si(t-j\}} + \sum_{j=0}^{n} h_{q(t-j)} q_{i(t-j\}} + h_Q Q_{it} + m_t + m_i + e_{it}$$

where l denotes employment, w wages, q plant value-added, Q industry value added, m_i and m_t are plant- and year-specific effects, and e_{it} is the regression error term. The subscripts i, t, s and u denote, respectively, plant, time period, skilled and unskilled. All variables are in logs so the h coefficients are the relevant elasticities.

Unfortunately, the standard OLS techniques for approaching the individual effects

find wage elasticities close to –0.2 and –0.4, respectively in the short and long run.

[3] See annex II and Roberts and Tybout (1996) for details.

(random or fixed effects estimators) are not consistent in this context. The assumption of a lack of correlation between μ_i and the explanatory variables required for variable effects estimators is not defensible in this context since both l_t *and* l_{t-1} are a function of μ_i. On the other hand, OLS is clearly inconsistent and FGLS is also should the errors show either heteroskedasticity or serial correlation (Sevestre and Trognon: 102). Further, the usual elimination of μ_i by subtracting off the time mean induces a negative correlation between the transformed error and the lagged dependent variables of order 1/T, which, in short panels such as those used here remains substantial.

If at least one of the explanatory variables is truly exogenous, Balestra and Nerlove (1966) show that its lags can be used as instruments and will yield consistent estimates. However, in the present case, it is difficult to assume that either wages, or output are uncorrelated with μ_i. As an example, larger output firms tend to use more sophisticated production techniques. These also require a more reliable or skilled work force, which will show up as receiving a higher wage.[4] Both output and the observed wage are thus correlated with the unobserved "sophistication" of the production technology.

Following Anderson and Hsiao (1982), we therefore difference the data to eliminate μ_i, yielding:

$$\Delta l_{(u,s)it} = h_l \Delta l_{(u,s)i(t-1\}} + \sum_{j=0}^{n} h_{wu(t-j)} \Delta w_{ui(t-j\}} + \sum_{j=0}^{n} h_{ws(t-j)} \Delta w_{si(t-j\}} + \sum_{j=0}^{n} h_{q(t-j)} \Delta q_{i(t-j\}} + h_Q \Delta Q_{it} + \Delta m_t + \Delta e_{it}$$

where Δ is a time-difference operator. Unless the idiosyncratic error followed a random walk, this differencing necessarily gives the transformed error an MA(n) structure that is correlated

[4] This does not imply lack of competitiveness in product markets. Firms take the wage for workers of all combinations of characteristics they desire. Since we do not observe these characteristics, the firm may

with the differenced lagged dependent variable (LDV). This can be overcome by using instruments dated t-n and earlier. We follow Arellano and Bond's (1991) employment of additional lags as instruments to improve the efficiency of the estimates in a Generalized Method of Moments (GMM) context.[5]

We instrument lagged differenced employment and output with the plants' capital stocks and with the second and further lags of differenced employment.[6] Though we attempted to instrument for any remaining endogeneity in wages, the results, as with Roberts and Skoufias (1997), were poor and counterintuitive. As we use lags of differenced employment as instruments, we lose at least three years of data in each panel.[7]

Blundell and Bond (1998) estimated a similar labor demand model for UK manufacturing companies over the period 1976-1984 – the only difference being that employment in their specification is capital- instead of output-constrained. They found implausibly low estimated capital elasticities (which measure returns to scale) using the first difference GMM estimator. They attribute this to a downward bias that would affect the coefficient on the LDV due to the weakness of lagged levels as instruments for first differences

appear to be paying more for the workers.

[5] Bhalotra (1998) estimates a similar labor demand model using Arellano and Bond's (1991) estimator, and data on 18 industries disaggregated by their location across 15 Indian states.

[6] First, there is likely to be measurement error in the output variable particularly when micro data is used. Moreover, as Roberts and Skoufias (1997:331) argue, measured output does not necessarily coincide with "planned output", which is the variable firms are likely to use in employment decisions. This constitutes measurement error that is potentially correlated with the explanatory variables (Griliches and Hausman, 1986). In addition, first differencing the data is likely to increase the noise to signal ratio and aggravate the measurement error problem further.

[7] As shown by Sevestre and Trognon (1996: 102), both lagged differences and lagged levels of the dependent variable are valid instruments in the present context. We use lagged differences because in our data sets they perform better than levels. This is suggested by the results of the Sargan test of overidentifying restrictions.

of the LDV, at least under certain conditions. For instance, they show that as the coefficient on the autoregressive parameter, h_l, increases toward unity, or when the relative variance of the fixed effects increases, the LDV coefficient estimated using lagged levels of employment as instruments is biased towards zero. This is critical since the long run estimates of own and cross wage elasticities, as well as long run capital (or output) elasticities are calculated based on the estimates of the adjustment coefficient. As an alternative, Blundell and Bond (1998) suggest a system estimator that combines a levels equation, using lagged first differences as instruments, with the traditional first difference equation using lagged levels as instruments. This permits exploiting several additional moment conditions that, as suggested by Monte Carlo simulations, dramatically improve both consistency and efficiency for high values of h_l (above 0.8)

Employing the system GMM estimator requires assumptions that may or may not be credible. The first is that the deviations of the initial conditions from their long run values are uncorrelated with their long run values as influenced by individual effects. As Hahn (1999) notes, the panel literature has tended to disregard the potentially informative role of the distribution of the initial values for the estimation of the autoregressive coefficient precisely because misspecification of that distribution would lead to inconsistency in the estimates. In the present case, it doesn't seem implausible that more efficient firms may adjust more quickly to the steady state and therefore be closer to the steady state at any moment in time. Hence, though a relatively low power Sargan test may suggest that this assumption is supported, there is residual reason for doubts.

The second assumption is that current or lagged changes in the explanatory variables are not correlated with individual effects. While this assumption is clearly weaker than that of exogeneity of the explanatory variables – e.g. that the levels of wages are independent of unobserved firm efficiency – it is not self-evident that it is valid in the present context – e.g. that more efficient firms might not also show faster wage growth. In fact, when we use differenced wages as instruments for their levels, the results are not supported by Sargan tests of overidentifying restrictions. We thus apply the Blundell and Bond (1998) estimator using lagged differenced employment and capital stocks as instruments for the levels of wages and output in the equations in levels.

VI. Results

Tables 1-3 present the results of three specifications: GMM in levels, GMM in differences and system GMM (levels and differences). The sample period is kept the same for each specification even though the data requirements differ[8]. Plants that enter or exit the panel during the considered period and plants for which data is not available for the whole period are excluded. The diagnostics are those suggested by Arellano and Bond (1991): the Sargan test for overidentifying restrictions, implicitly a test of specification, and tests for first and second order serial correlation.[9] Since the output variable is included, the interpretation of the wage parameters, is, in theory, the constant output own wage elasticity.

GMM in levels

[8] The only exception is given by the first year of data in the GMM in differences specification, which is only used as the base year for taking differences.

[9] With regressions in differences, however, first-order serial correlation is to be found by construction, so the relevant specification test is that of second-order serial correlation, which does support the reported

The GMM in levels specification implicitly assumes that there is no plant heterogeneity and that the only estimation problem is that of measurement error in the output variables – which are instrumented with lagged levels of capital stocks. The absence of heterogeneity is however rejected by the estimation results, which show evidence of autocorrelation in the residuals. This can lead to biased estimates of the LDV coefficient, which explains the very high estimates of the coefficient on lagged employment. Thus, as seen in table 4, the half-lives of the adjustment processes derived from the GMM in levels estimates are implausibly large, varying from 5.6 to 15.8 years for blue collar workers, and from 3.5 to 17 years for white collar workers. The evidence that the residuals are autocorrelated and the associated very high estimates of the autoregressive coefficient lead one to also question the validity of the estimates of long run wage and output elasticities. Furthermore, if the autocorrelation is caused by the presence of plant heterogeneity, and one assumes that plant efficiency, output and wages are correlated, the specification in levels without controlling for fixed effects should also lead to biased estimates of the latter variables.

GMM in Differences (Arrellano and Bond)

The GMM in differences specification performs much better in terms of most diagnostics and for all countries. Test results reject the hypothesis of second order serial correlation – first order correlation is expected by construction – which suggests that controlling for plant heterogeneity is in fact a necessity. As expected, after the elimination of the probable source of autocorrelation the estimated LDV coefficients become smaller in all countries. The

results.

associated estimates of the half-life of the adjustment process are much more much credible, ranging from 0.4 to 1.2 years for blue collars and from 0.5 to 0.7 years for white collars (table 4).

As for the effect of differencing the data on the estimates of the wage variables, it is noteworthy that the short run elasticity of employment on contemporaneous wages does not change significantly – levels estimates are, in most cases, within one standard error of estimates obtained in first differences. The coefficient on lagged wages, on the other hand, does change considerably: although it remains positive, its magnitude and significance are smaller after the autocorrelation in the residuals is eliminated by "sweeping out" unobserved firm heterogeneity. The combined effect of this change in the lagged wages estimates and the smaller LDV is a reduction in long run own wage elasticities, with estimates ranging from -0.20 to -0.49 for blue collars, and from –0.13 to –0.26 for white collar employment. As expected, the demand for unskilled labor is estimated to be more elastic than the demand for skilled workers. Comparisons across countries reveal that labor demand is most elastic in Colombia and least elastic in Mexico suggesting little obvious correlation with the degree of rigidity nominally imposed by labor legislation.

Unfortunately, the benefits of differencing the data are at least in part compensated by the probable aggravation of the problem of measurement error that afflicts the value-added variables. Thus, the estimated coefficients on these variables after differencing are smaller in most cases. The corresponding best point estimates for long run output elasticities are usually close to zero or even negative – the only exception being blue collar employment in Chile – suggesting improbably high economies of scale, as found by Blundell and Bond (1998).

GMM System Estimates (Blundell and Bond)

The final set of estimates therefore employs Blundell and Bond's (1998) system GMM estimator as a way of redressing the likely weakness of the instruments for both the LDV and output. Reasonable specifications were identified in Chile and Mexico but the estimates for Colombia persistently fail the test for second order serial correlation.

The systems estimator has several impacts, some logical, some less so. First, the total output elasticities are now more significant and have credibly moved toward unity in most cases, the only exception being blue collar workers in Chile. Potentially more problematic are the adjustment parameters which, in theory, were suffering from strong downward bias due to poor instrumentation. All have risen substantially now with the implication of extending the adjustment times. Table 4 shows that for blue collar workers the half-lives of adjustment now place Chile, with virtually no barriers to firing, as having the shortest adjustment lags whereas in differences, they were the longest. However, the magnitudes of these lags now seem implausible, ranging from 2.2 to 5.2 years for blue collars and from 1 to 4.8 years for white collars. Though the Colombia regression might be discarded due to the evidence on autocorrelation, it still seems unlikely that Mexico would take almost 4 years to adjust half way to a shock, or even that Chile would take over 2 years to half adjust its blue collar work force.

If these adjustment speeds are considered excessively slow, the question does arise as to whether the system GMM methodology is a cure for an improbable disease. The Monte-Carlo simulations performed by Blundell and Bond (1998) suggest that the downward bias in the LDV becomes very large when the true LDV coefficient is above 0.8. But this value implies a half-life of 3.11 years, which seems to be too long for the adjustment of employment to changes in wages or planned output. If forced to choose whether the LDV estimates in the difference specification are extremely downwardly biased from their true values above 0.8, or in fact accurately reflect the adjustment process, we might choose the latter.[10]

The own wage elasticities are far more similar across methodologies, with most changes in long run elasticities being driven by changes in the LDV coefficient. Thus, as estimates of the latter are much larger when the system GMM estimator is used, long run own wage elasticities are correspondingly large – the order of the increases is above 2 to 1, on average. However, what is perhaps odd is that for Chile and Mexico, the system GMM estimate of the white collar elasticity exceeds that of the blue collar – significantly in the former case. This implies a greater wage response for workers with relatively more human capital and potentially more firm specific capital, which goes against both intuition and much of the literature.

Preferred Specifications and Estimates

Our preferred specifications are therefore those in differences, treating them perhaps as total own wage elasticities in light of the weak output estimates. This does, however, leave us with long run own wage elasticities – on average -.35 and -.2 for blue and white collars respectively – that are at the low end of those often found in the literature, using establishment data: Sosin and Fairchild (1984) estimate a value of -.5; Dunnes and Roberts (1993) -.55;

[10] Nor is it necessarily obvious that Chile with its very flexible labor markets should have the highest rate of adjustment to shock. The level of education is the highest in the region this may lead to more labor hoarding to preserve firm specific capital. Using cross sectional data from Latin America and the OECD, Maloney (1997) showed that turnover fell as mean levels of education rose.

Barros et al. -.4; Roberts and Skoufias (1997) -.43 (skilled) and -.64 (unskilled); Maloney and Ribeiro (1999) -.22 (skilled) and -.63 (unskilled). Part of this can be attributed to our different estimation strategy.[11] But part may also be due to the specification that we adopt, and in particular to the inclusion of lags on the wage variables, which tend to enter with a positive sign and hence reduce the total elasticity. This is also the case in Arellano and Bond, who find a long-run elasticity of -.24), and in Blundell and Bond who, using the same data set, obtain long-run estimates of -.71 and –1.31, respectively with a GMM in differences and a system GMM estimator.

The bottom line is that estimation approaches and specifications critically affect estimated elasticities and must be held in common for comparisons to be meaningful. Further, at the aggregate level, even very consistent estimates do not seem, at this point, closely correlated with our priors on the level of rigidity in the three labor markets.

V. Results by Industry-Is Composition Important?

Tables 5 to 10 report results of the preferred GMM in differences specification, estimated with data disaggregated by 13 common industrial categories. Though the number of firms often becomes relatively small, the smallest number of observations is 132 (printing in Mexico) and in most cases we have substantially more than 200. Several conclusions emerge.

First, as in Roberts and Skoufias and Dunnes and Roberts we find the variance in

[11] Although she uses industry data, Bhalotra's (1998) estimate for India using a GMM in differences estimator (-.28) is remarkably similar to ours.

measured elasticities at the industrial level to be large.[12] And, in fact it is probably large enough to account for differences in aggregate elasticities. For Blue Collar workers, in Chile the long run own elasticities range from -.022 (printing and publishing) to -.68 (apparel), in Colombia from -.43 (metal products) to -1.6 (leather and footware) and in Mexico from -.04 (food) to -.5 (chemicals). Even dropping the top and bottom estimates still leads to a quite wide range. These estimates partially reflect the variation in the point estimates of the lagged dependent variable which ranges from .05 (food) to .69 (printing and publishing) in Chile, from .13 (machinery) to .72 (leather and footwear) in Colombia, and in Mexico from effectively 0 for several categories to .85 (chemicals).

Second, at the industry level, the general ranking of Colombia, Chile and Mexico in terms of magnitude of aggregate own wage elasticities does not hold with the exception of 7 industries for blue collar workers and only 4 industries for white collar workers. Thus, for example, demand for blue collar workers in Chemicals is most elastic in Mexico while Chile has the most elastic demand in the apparel industry. For white collars, in 5 out of 13 industries labor demand elasticities are largest in Chile, while in the other 8 industries they are largest in Colombia. Obviously, idiosyncratic factors or the distinct composition of even these disaggregated industrial categories may be responsible. What we can, say, however, is that we do not simply see a uniform shifting of the ranked sectoral elasticies consistent with the differences in aggregate elasticities.

[12] Roberts and Skoufias (1997) find that in Colombian manufacturing "the estimates of the own-wage elasticity (of the demand for labor) vary substantially across industries, particularly for unskilled labor" (p. 333). A similar finding, it is worth noting, is reported by Dunnes and Roberts (1993) using plant level data for the United States. As stated by these authors, "the range of estimates (for the own-wage elasticity of labor demand) suggests that the impact of wage changes on employment will vary widely across industries" (p.

In fact, somewhat disturbingly, we find essentially no correlation in the rankings of sectoral elasticities across countries. The only marginally significant Spearman rank correlations are actually negative: for blue collar workers, the industries in which Chile and Colombia have relatively high elasticities are the ones where Mexico has low elasticities and vice versa (results available on request). As mentioned above, this is unlikely to be due to deficient numbers of observations and in the vast majority of cases the estimated specifications seem very reasonable. One possibility is that the level of aggregation is still too large and hides significant intra-industry variation. This would only confirm our point that composition matters in comparing aggregate elasticities. It may also be that idiosyncratic factors, such as union representation vary greatly both within and across countries. Or, since only in Chile do we find a significant correlation of industry rankings even between blue and white collar workers, it may be that there is substantial cross country variation in production technologies within industries and across countries.

Nonetheless, it is striking that, on average, there is essentially no possible ranking of industries supported by the three countries and this is vital for comparative work. If we cannot say that, broadly speaking, a common ranking of countries, based on their labor demand elasticities, applies to most industries, then it is difficult to argue that there is something systematically different in their labor markets that explains the different aggregate elasticities.

VI. Estimates Across Time-Chile

Comparisons of elasticities across countries across time may also be complicated by the

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fact that they may not be stable over time. In tables 11 and 12 we use longer data series for Chile to estimate our base specification including interactive time dummies to allow the elasticities to change yearly. These longer series were not used in the earlier work since they lack industry identifiers. Figure 1 suggests that, while there is no obvious trend over time, there is substantial volatility year by year. Blue collar elasticities quadruple from 1982 to 1985 and white collar elasticities double from 1982 to 1989. Tables 11 and 12 suggest that while there is relatively little statistically significant variation in the adjustment coefficient, the short run elasticities do show significant changes, particularly in 1986 and 1990-92 for blue collars, and in 1985-91 for white collars.

Some of this variance can be attributed to the 1982-85 crisis and then the recovery that began in 1986 so these movements are not necessarily purely statistical artifacts. Nonetheless, the point remains that comparing a country against Chile in 1984-85 would yield very different results than if we were to use the 1990-91 period, for example.

V. Conclusion

This paper, first, has provided the first comparable dynamic estimates of labor demand functions for three countries. To summarize the results, reincorporating the cross sectional information using the system GMM estimator appears to have generated far more reasonable estimates of output elasticities. However, for the lagged dependent variable especially, and, to a lesser degree own wage elasticities, the system estimates suggest some counterintuitive findings that may cast doubt on the credibility of the assumptions around initial conditions that underlie the application of this estimator. Our preferred specifications are therefore those in differences, treating them perhaps as total own wage elasticities in light of the weak output estimates.

This does, however, leave us with long run own wage elasticities – on average -.35 and -.2 for blue and white collars respectively – that are at the low end of those often found in the literature. Part of this can be attributed to our different estimation strategy. But part is also due to the specification that we adopt, and in particular to the inclusion of lags on the wage variables which, as in Arellano and Bond and Blundell and Bond, tend to enter with a positive sign and hence reduce the total elasticity.

The paper then shows that even accounting for the large variance induced by differing estimation techniques, it is doubtful that we can say much about the flexibility of different labor markets based on comparing estimated demand elasticities. As just one example, Colombia, with severe firing restrictions, has much higher long run own wage elasticities than Chile, which has none.

Three factors work to make such comparisons difficult. First, as Roberts and Skoufias and Dunnes and Roberts, we find that elasticities differ greatly across industries and hence the composition of industry in each country very likely affects the aggregate elasticity. Second, we find that even for individual industries there are large differences in labor demand elasticities across countries. Moreover, we do not find a common pattern of country rankings across industries, which suggests that those differences cannot be solely attributed to systematic characteristics of the countries' labor markets. Third, estimates for Chile over a 15 year period suggest substantial and significant variation of elasticities across time. Comparisons across countries are thus highly dependent not only on the industries involved but also on the sample periods of time that are used.

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Table 1: Industry Labor Demand in Chile (1981-86)
(standard errors in parenthesis)

Dependent Variable (L_t)	Blue Collar Employment			White Collar Employment		
	(1) GMM-levels [(a)]	(2) GMM-Differences [(b)]	(3) System GMM[(c)]	(4) GMM-levels [(a)]	(5) GMM-Differences [(b)]	(6) System GMM[(c)]
Ln WB_t	-0.203(*)	-0.265(*)	-0.234(*)	0.043(**)	0.079	-0.034
	(0.018)	(0.035)	(0.020)	(0.020)	(0.053)	(0.028)
Ln WB_{t-1}	0.146(*)	0.101(**)	0.148(*)	-0.051(**)	0.075	0.041
	(0.022)	(0.045)	(0.024)	(0.022)	(0.057)	(0.039)
Ln WW_t	0.084(*)	0.014	0.028(*)	-0.326(*)	-0.318(*)	-0.413(*)
	(0.011)	(0.030)	(0.013)	(0.015)	(0.047)	(0.023)
Ln WW_{t-1}	-0.058(*)	-0.034(***)	-0.014	0.283(*)	0.179(*)	0.167(*)
	(0.011)	(0.019)	(0.011)	(0.016)	(0.052)	(0.026)
Ln VA_t	-0.039	0.336(***)	0.230(*)	0.084	-0.068	0.540(*)
	(0.057)	(0.194)	(0.045)	(0.054)	(0.313)	(0.100)
Ln VA_{t-1}	0.055	0.047	-0.099(**)	0.056	-0.386(**)	-0.104
	(0.059)	(0.114)	(0.050)	(0.057)	(0.200)	(0.103)
Ln Industry Value	0.002	-0.066	-0.032(***)	-0.011(*)	0.033	-0.161(*)
$Added_t$	(0.002)	(0.066)	(0.019)	(0.003)	(0.105)	(0.044)
Ln $L_{(t-1)}$	0.944(*)	0.561(*)	0.731(*)	0.820(*)	0.351(*)	0.493(*)
	(0.012)	(0.119)	(0.028)	(0.012)	(0.101)	(0.036)
Constant	0.161(*)	-0.125(*)	0.534(***)	-0.438(*)	-0.094(**)	0.778
	(0.049)	(0.028)	(0.312)	(0.067)	(0.044)	(0.659)
Sargan Test: p-value	0.090	0.423	0.115	0.257	0.215	0.289
First-Order Serial Correlation: p-v.	0.000	0.000	0.000	0.000	0.000	0.000
Second-Order Serial Correl.: p-v.	0.000	0.370	0.689	0.116	0.288	0.478
Number of Firms (Observations)	1910 (11460)	1910 (9550)	1910 (11460)	1910 (11460)	1910 (9550)	1910 (11460)
Long Run Own Wage Elasticity	-1.009	-0.373	-0.319	-0.241	-0.214	-0.486
Long Run Output Elasticity	0.290	0.872	0.485	0.779	-0.699	0.860

Notes: (*) Significant at the 1% level. (**) Significant at the 5% level. (***) Significant at the 10% level. (a) All variables are assumed exogenous except for the log of value added. Instruments are the second and further lags of capital stocks. (b) The 1981 data is only used to take the 1982 first difference. All variables are assumed exogenous except for the log of value added and lagged employment. Instruments are the third and further lags of capital stocks and the second lag of differenced employment (c) In differences, all variables are assumed exogenous except for the log of value added and lagged employment Instruments are the third and further lags of capital stocks and the second lag of differenced employment In levels, all variables are assumed endogenous. Instruments are the first lag of differenced employment and the second and further lags of differenced capital stocks.

Table 2: Industry Labor Demand in Colombia (1980-91)
(standard errors in parenthesis)

Dependent Variable (L_t)	Blue Collar Employment			White Collar Employment		
	(1) GMM-levels [(a)]	(2) GMM-Differences [(b)]	(3) System GMM[(c)]	(4) GMM-levels [(a)]	(5) GMM-Differences [(b)]	(6) System GMM[(c)]
Ln WB_t	-0.413(*)	-0.424(*)	-0.448(*)	-0.046(*)	-0.018	-0.084(*)
	(0.023)	(0.024)	(0.025)	(0.013)	(0.017)	(0.017)
Ln WB_{t-1}	0.310(*)	0.022	0.278(*)	0.002	0.027(***)	-0.023
	(0.026)	(0.023)	(0.027)	(0.013)	(0.015)	(0.016)
Ln WW_t	0.045(*)	0.058(*)	0.043(*)	-0.302(*)	-0.291(*)	-0.382(*)
	(0.011)	(0.012)	(0.014)	(0.015)	(0.017)	(0.018)
Ln WW_{t-1}	-0.076(*)	0.008	-0.054(*)	0.243(*)	0.095(*)	0.146(*)
	(0.011)	(0.011)	(0.014)	(0.015)	(0.021)	(0.018)
Ln VA_t	0.096(*)	0.060(***)	0.078(***)	0.048	-0.002	0.260(*)
	(0.032)	(0.033)	(0.043)	(0.035)	(0.041)	(0.055)
Ln VA_{t-1}	0.007	0.016	0.034	0.063(***)	-0.088(***)	0.121(**)
	(0.035)	(0.036)	(0.041)	(0.035)	(0.046)	(0.054)
Ln Industry Value $Added_t$	-0.017(*)	0.049(*)	0.041(**)	0.006(*)	0.038(**)	0.008(*)
	(0.003)	(0.015)	(0.018)	(0.002)	(0.017)	(0.017)
Ln $L_{(t-1)}$	0.884(*)	0.177(*)	0.876(*)	0.881(*)	0.247(*)	0.602(*)
	(0.010)	0.047	(0.018)	(0.008)	(0.054)	(0.024)
Constant	0.241(*)	-0.0003	-0.494(**)	-0.323(*)	0.019(***)	-1.055(*)
	(0.042)	(0.008)	(0.241)	(0.035)	(0.011)	(0.247)
Sargan Test: p-value	0.121	0.216	0.284	0.143	0.363	0.316
First-Order Serial Correlation: p-v.	0.010	0.000	0.000	0.000	0.000	0.000
Second-Order Serial Correl.: p-v.	0.006	0.313	0.031	0.786	0.969	0.089
Number of Firms (Observations)	1916 (22992)	1916 (21076)	1916 (22992)	1916 (22992)	1916 (21076)	1916 (22992)
Long Run Own Wage Elasticity	-0.886	-0.489	-1.373	-0.497	-0.260	-0.593
Long Run Output Elasticity	0.890	0.092	0.906	0.932	-0.118	0.957

Notes: (*) Significant at the 1% level. (**) Significant at the 5% level. (***) Significant at the 10% level. (a) All variables are assumed exogenous except for the log of value added. Instruments are the second and further lags of capital stocks. (b) The 1980 data is only used to take the 1981 first difference. All variables are assumed exogenous except for the log of value added and lagged employment. Instruments are the third and further lags of capital stocks and the third lag of differenced employment (c) In differences, all variables are assumed exogenous except for the log of value added and lagged employment Instruments are the third and further lags of capital stocks and the third (second for white collars) lag of differenced employment In levels, all variables are assumed endogenous. Instruments are the second lag of differenced employment and the second and further lags of differenced capital stocks.

Table 3: Industry Labor Demand in Mexico (1986-90)
(standard errors in parenthesis)

Dependent Variable (L_t)	Blue Collar Employment			White Collar Employment		
	(1) GMM-levels [(a)]	(2) GMM-Differences [(b)]	(3) System GMM[(c)]	(4) GMM-levels [(a)]	(5) GMM-Differences [(b)]	(6) System GMM[(c)]
Ln WB_t	-0.208(*)	-0.189(*)	-0.214(*)	0.002	0.047(***)	-0.004
	(0.028)	(0.035)	(0.029)	(0.023)	(0.029)	(0.024)
Ln WB_{t-1}	0.152(*)	0.076	0.141(*)	-0.030	0.032	-0.006
	(0.029)	(0.068)	0.034	(0.024)	(0.028)	(0.025)
Ln WW_t	0.021	0.046(***)	0.014	-0.186(*)	-0.173(*)	-0.206(*)
	(0.019)	(0.025)	(0.019)	(0.025)	(0.027)	(0.026)
Ln WW_{t-1}	-0.025	-0.007	-0.005	0.185(*)	0.080(**)	0.147(*)
	(0.020)	(0.022)	(0.018)	(0.024)	(0.037)	(0.026)
Ln VA_t	0.102	-0.043	0.156(**)	0.105	0.004	0.174(**)
	(0.080)	(0.122)	(0.064)	(0.074)	(0.113)	(0.081)
Ln VA_{t-1}	-0.063	0.056	-0.018	-0.076	-0.089	-0.060
	(0.083)	(0.112)	(0.066)	(0.074)	(0.096)	(0.067)
Ln Industry Value $Added_t$	-0.008(**)	0.011	-0.061(*)	0.002	0.016	-0.085
	(0.003)	(0.106)	(0.059)	(0.003)	(0.103)	(0.075)
Ln $L_{(t-1)}$	0.957(*)	0.444(***)	0.824(*)	0.960(*)	0.277	0.866(*)
	(0.009)	(0.259)	(0.065)	(0.007)	(0.177)	(0.038)
Constant	-0.070(***)	-0.009	0.670	-0.052	-0.016(*)	0.754
	(0.037)	(0.010)	(0.586)	(0.045)	(0.006)	(0.729)
Sargan Test: p-value	0.090	0.500	0.384	0.595	0.934	0.370
First-Order Serial Correlation: p-v.	0.188	0.030	0.000	0.006	0.052	0.000
Second-Order Serial Correl.: p-v.	0.039	0.260	0.704	0.360	0.393	0.388
Number of Firms (Observations)	2383 (11915)	2383 (9532)	2383 (11915)	2383 (11915)	2383 (9532)	2383 (11915)
Long Run Own Wage Elasticity	-1.272	-0.203	-0.417	-0.030	-0.128	-0.437
Long Run Output Elasticity	0.898	0.092	0.786	0.711	-0.105	0.853

Notes: (*) Significant at the 1% level. (**) Significant at the 5% level. (***) Significant at the 10% level. (a) All variables are assumed exogenous except for the log of value added. Instruments are the second and further lags of capital stocks. (b) The 1986 data is only used to take the 1987 first difference. All variables are assumed exogenous except for the log of value added and lagged employment. Instruments are the third and further lags of capital stocks and the second lag of differenced employment (c) In differences, all variables are assumed exogenous except for the log of value added and lagged employment Instruments are the third and further lags of capital stocks and the second lag of differenced employment In levels, all variables are assumed endogenous. Instruments are the first lag of differenced employment and the second and further lags of differenced capital stocks.

Table 4: Half Life of Adjustment(*)
(in years)

Country/ Dependent Variable (L_t)	Blue Collar Employment			White Collar Employment		
	GMM-Levels	GMM-Differences	System GMM	GMM-levels	GMM-Differences	System GMM
Chile	12.0	1.2	2.2	3.5	0.7	1.0
Colombia	5.6	0.4	5.2	5.5	0.5	1.4
Mexico	15.8	0.8	3.6	17.0	0.5	4.8

(*) Calculated as $\ln(0.5)/\ln(\eta_l)$

Table 5: Industry Labor Demand for Blue Collar Workers in Chile (1982-86)
(standard errors in parenthesis)

Dependent Variable (L_t)	Food	Beverages	Textiles	Apparel	Leather, Footwear	Wood Products, Furniture	Printing and Publishing	Chemicals	Rubber and Plastic Products	Non-Met. Mineral Products	Metal Products	Machinery	Transport Equipment
Ln $WB_{(t)}$	-0.314(*)	-0.250(*)	-0.338(*)	-0.317(*)	-0.298(*)	-0.217(*)	-0.036	-0.082(*)	-0.347(*)	-0.157(**)	-0.260(*)	-0.092(***)	-0.191(*)
	(0.040)	(0.061)	(0.069)	(0.099)	(0.081)	(0.040)	(0.031)	(0.023)	(0.064)	(0.064)	(0.051)	(0.052)	(0.048)
Ln $WB_{(t-1)}$	0.026	0.023	0.290(***)	0.102	0.004	-0.018	0.029	0.052(***)	0.176(*)	-0.177	0.153(*)	0.027	0.100(*)
	(0.043)	(0.074)	(0.158)	(0.087)	(0.059)	(0.068)	(0.073)	(0.030)	(0.070)	(0.129)	(0.056)	(0.051)	(0.032)
Ln $WW_{(t)}$	0.025	0.157(*)	0.062	0.088(**)	0.055(***)	-0.001	0.002	0.009	0.060(***)	-0.022	0.149(*)	0.083	0.172(*)
	(0.017)	(0.051)	(0.040)	(0.042)	(0.030)	(0.030)	(0.126)	(0.037)	(0.035)	(0.073)	(0.036)	(0.052)	(0.018)
Ln $WW_{(t-1)}$	0.009	0.009	-0.059	-0.084(***)	0.065(**)	0.043(**)	0.055	-0.048	0.015	0.046	-0.059	0.077(**)	0.068(**)
	(0.015)	(0.041)	(0.049)	(0.052)	(0.028)	(0.030)	(0.132)	(0.033)	(0.034)	(0.097)	(0.038)	(0.031)	(0.030)
Ln $VA_{(t)}$	0.342(*)	-0.037	0.277(***)	0.039	0.043	0.313(*)	0.032	-0.119	0.128(*)	-0.278	0.055	-0.086	0.010
	(0.097)	(0.067)	(0.146)	(0.120)	(0.042)	(0.039)	(0.563)	(0.076)	(0.024)	(0.287)	(0.047)	(0.082)	(0.011)
Ln $VA_{(t-1)}$	0.014	0.083	-0.165	0.193	-0.169(*)	0.123(*)	0.163	0.036	0.124(*)	-0.017	-0.036	-0.158(*)	-0.032(***)
	(0.064)	(0.063)	(0.160)	(0.173)	(0.033)	(0.041)	(0.286)	(0.080)	(0.049)	(0.165)	(0.044)	(0.059)	(0.017)
Ln $L_{(t-1)}$	0.054	0.488(***)	0.626(***)	0.682(*)	0.037	-0.198(*)	0.694(*)	0.607(*)	0.539(*)	0.036	0.608(*)	0.572(*)	0.333(*)
	(0.128)	(0.228)	(0.374)	(0.159)	(0.101)	(0.073)	(0.137)	(0.073)	(0.096)	(0.133)	(0.133)	(0.066)	(0.064)
Constant	-0.159(*)	-0.042	-0.243(*)	-0.281(*)	-0.144(*)	-0.109(*)	-0.203	-0.109(*)	-0.194(*)	-0.368(**)	-0.264(*)	-0.289(*)	-0.138(*)
	(0.015)	(0.038)	(0.051)	(0.046)	(0.023)	(0.040)	(0.241)	(0.026)	(0.042)	(0.176)	(0.038)	(0.044)	(0.029)
Sargan Test	0.303	0.945	0.783	0.315	0.705	0.633	0.505	0.479	0.494	0.877	0.814	0.838	0.591
1st o. Corr.	0.005	0.085	0.049	0.013	0.134	0.278	0.013	0.001	0.001	0.882	0.002	0.074	0.075
2nd o. Corr.	0.266	0.739	0.281	0.957	0.732	0.179	0.599	0.286	0.65	0.567	0.234	0.249	0.352
No. Plants	571	51	143	109	66	131	70	107	74	40	141	56	31
(observ.)	(2855)	(255)	(715)	(545)	330	655	350	585	370	200	705	280	155
Long Run Own Wage Elasticity	-0.305	-0.445	-0.129	-0.676	-0.305	-0.196	-0.022	-0.075	-0.371	-0.346	-0.273	-0.151	-0.136
Long Run Out-Put Elasticity	0.376	0.089	0.300	0.729	-0.131	0.363	0.638	-0.212	0.546	-0.307	-0.231	-0.569	-0.032

Notes: (*) Significant at the 1% level. (**) Significant at the 5% level. (***) Significant at the 10% level. All variables are assumed exogenous except for the log of value added and lagged employment. Instruments are based on the third and further lags of capital stocks and the second lag of differenced employment.

Table 6: Industry Labor Demand for White Collar Workers in Chile (1982-86)
(standard errors in parenthesis)

Dependent Variable (L_t)	Food	Beverages	Textiles	Apparel	Leather, Footwear	Wood Products, Furniture	Printing and Publishing	Chemicals	Rubber and Plastic Products	Non-Met. Mineral Products	Metal Products	Machinery	Transport Equipment
Ln $WB_{(t)}$	0.154(**)	0.090(**)	0.200(*)	0.152	0.038	-0.001	-0.182(*)	-0.049	-0.239(**)	0.086	0.077	-0.173(**)	0.112
	(0.067)	(0.043)	(0.068)	(0.094)	(0.076)	(0.112)	(0.037)	(0.033)	(0.101)	(0.066)	(0.052)	(0.082)	(0.121)
Ln $WB_{(t-1)}$	-0.068	-0.002	0.079	0.011	-0.071	0.106	0.000	0.053(***)	-0.033	0.296(**)	0.109	0.059	-0.055
	(0.064)	(0.069)	(0.052)	(0.070)	(0.073)	(0.127)	(0.040)	(0.028)	(0.075)	(0.142)	(0.070)	(0.078)	(0.090)
Ln $WW_{(t)}$	-0.364(*)	-0.152(***)	-0.326(*)	-0.454(*)	-0.417(*)	-0.403(*)	-0.210(*)	-0.284(*)	-0.584(*)	-0.376(*)	-0.362(*)	-0.383(*)	-0.298(*)
	(0.037)	(0.080)	(0.050)	(0.045)	(0.070)	(0.070)	(0.067)	(0.049)	(0.069)	(0.084)	(0.056)	(0.089)	(0.044)
Ln $WW_{(t-1)}$	0.098(***)	0.060	-0.006	0.067	0.019	0.175(***)	0.089	0.058(***)	0.245(*)	-0.154	0.176(*)	0.144(**)	0.261(***)
	(0.052)	(0.104)	(0.049)	(0.057)	(0.058)	(0.092)	(0.066)	(0.032)	(0.069)	(0.097)	(0.050)	(0.071)	(0.140)
Ln $VA_{(t)}$	0.200	-0.003	-0.078	0.217	0.113(***)	0.558(*)	-0.068	-0.047	0.239(*)	0.469(**)	-0.149(**)	-0.135	0.074(*)
	(0.217)	(0.083)	(0.096)	(0.141)	(0.060)	(0.113)	(0.183)	(0.082)	(0.067)	(0.225)	(0.075)	(0.090)	(0.023)
Ln $VA_{(t-1)}$	0.040	0.153(***)	-0.119	0.071	-0.077	-0.214	-0.327(*)	0.076	-0.033	-0.180	-0.154(***)	0.397(*)	0.058
	(0.130)	(0.090)	(0.083)	(0.128)	(0.051)	(0.177)	(0.117)	(0.076)	(0.047)	(0.146)	(0.092)	(0.103)	(0.079)
Ln $L_{(t-1)}$	0.315(**)	0.056	-0.133	0.317(*)	0.012	0.247(***)	0.154	0.387(*)	0.525(*)	-0.150	0.391(*)	0.457(*)	0.659(**)
	(0.135)	(0.153)	(0.117)	(0.115)	(0.102)	(0.134)	(0.118)	(0.057)	(0.109)	(0.135)	(0.094)	(0.119)	(0.331)
Constant	-0.028	0.000	-0.060	-0.086	0.000	-0.046	0.014	-0.123(*)	-0.127	0.181	-0.255(*)	-0.307(*)	-0.167(*)
	(0.025)	(0.048)	(0.042)	(0.065)	(0.037)	(0.085)	(0.124)	(0.032)	(0.051)	(0.129)	(0.057)	(0.061)	(0.056)
Sargan Test	0.921	0.747	0.899	0.421	0.679	0.663	0.642	0.866	0.771	0.972	0.653	0.868	0.834
1^{st} o. Corr.	0.000	0.166	0.231	0.021	0.067	0.025	0.027	0.000	0.001	0.200	0.001	0.011	0.027
2^{nd} o. Corr.	0.773	0.894	0.662	0.549	0.467	0.249	0.373	0.658	0.289	0.314	0.429	0.659	0.543
No. Plants	57	51	143	109	66	131	70	107	74	40	141	56	31
(observ.)	2855	255	715	545	330	655	350	535	370	200	705	280	155
Long Run Own Wage Elasticity	-0.389	-0.098	-0.293	-0.566	-0.403	-0.302	-0.143	-0.369	-0.714	-0.461	-0.306	-0.439	-0.108
Long Run Out-Put Elasticity	0.350	0.158	-0.173	0.422	0.036	0.457	-0.467	0.047	0.434	0.252	-0.498	0.484	0.387

Notes: (*) Significant at the 1% level. (**) Significant at the 5% level. (***) Significant at the 10% level. All variables are assumed exogenous except for the log of value added and lagged employment. Instruments are based on the third and further lags of capital stocks and the second lag of differenced employment.

Table 7: Industry Labor Demand for Blue Collar Workers in Colombia (1980-91)
(standard errors in parenthesis)

Dependent Variable (L_t)	Food	Beverages	Textiles	Apparel	Leather, Footwear	Wood Products, Furniture	Printing and Publishing	Chemicals	Rubber and Plastic Products	Non-Met. Mineral Products	Metal Products	Machinery	Transport Equipment
Ln $WB_{(t)}$	-0.583(*)	-0.457(*)	-0.610(*)	-0.522(*)	-0.582(*)	-0.624(*)	-0.581(*)	-0.298(*)	-0.607(*)	-0.479(*)	-0.423(*)	-0.475(*)	-0.505(*)
	(0.041)	(0.022)	(0.020)	(0.024)	(0.073)	(0.010)	(0.006)	(0.024)	(0.035)	(0.014)	(0.046)	(0.037)	(0.026)
Ln $WB_{(t-1)}$	0.139(*)	-0.037(***)	0.194(*)	0.274(*)	0.134(***)	0.174(*)	0.281(*)	-0.042(*)	0.360(*)	0.198(*)	0.129(**)	0.044	-0.066(*)
	(0.032)	(0.021)	(0.019)	(0.022)	(0.079)	(0.012)	(0.004)	(0.016)	(0.019)	(0.012)	(0.055)	(0.067)	(0.024)
Ln $WW_{(t)}$	0.051(***)	0.098(*)	0.046(*)	-0.083(*)	0.019	-0.063(*)	-0.017(*)	0.034	-0.004	0.023	-0.085(*)	0.013	-0.069(*)
	(0.022)	(0.028)	(0.016)	(0.006)	(0.035)	(0.016)	(0.007)	(0.022)	(0.015)	(0.019)	(0.024)	(0.031)	(0.026)
Ln $WW_{(t-1)}$	-0.007	0.061(**)	-0.072(*)	0.077(*)	-0.005	-0.144(*)	-0.037(*)	-0.028	-0.038(*)	-0.003	0.074(*)	0.007	-0.079(*)
	(0.024)	(0.026)	(0.017)	(0.007)	(0.038)	(0.012)	(0.006)	(0.020)	(0.012)	(0.014)	(0.025)	(0.027)	(0.017)
Ln $VA_{(t)}$	0.062(*)	0.040(***)	0.207(*)	0.679(*)	-0.027(*)	0.551(*)	0.278(*)	-0.280(*)	0.200(*)	-0.033(*)	0.499(*)	0.359(*)	0.139(*)
	(0.023)	(0.023)	(0.018)	(0.017)	(0.124)	(0.012)	(0.006)	(0.030)	(0.022)	(0.009)	(0.065)	(0.076)	(0.014)
Ln $VA_{(t-1)}$	0.242(*)	0.016	-0.151(*)	-0.177(*)	-0.221	0.046(**)	-0.147(*)	0.215(*)	-0.051(*)	0.129(*)	-0.072(*)	-0.320(*)	-0.037(*)
	(0.034)	(0.034)	(0.019)	(0.026)	(0.152)	(0.019)	(0.009)	(0.029)	(0.020)	(0.009)	(0.067)	(0.103)	(0.007)
Ln $L_{(t-1)}$	0.477(*)	0.181(*)	0.532(*)	0.506(*)	0.718(*)	0.516(*)	0.414(*)	0.238(*)	0.671(*)	0.517(*)	0.318(*)	0.132	0.161(*)
	(0.050)	(0.015)	(0.024)	(0.011)	(0.096)	(0.032)	(0.006)	(0.012)	(0.022)	(0.013)	(0.095)	(0.103)	(0.034)
Constant	-0.002	-0.104(*)	0.075(*)	0.101(*)	0.086(*)	0.026(*)	-0.024(*)	-0.023(**)	0.065(*)	0.032	0.114(*)	0.044(**)	-0.087(*)
	(0.014)	(0.016)	(0.009)	(0.008)	(0.022)	(0.010)	(0.002)	(0.011)	(0.014)	(0.014)	(0.025)	(0.019)	(0.012)
Sargan Test	0.707	0.665	0.333	0.364	0.447	0.928	0.347	0.642	0.631	0.824	0.583	0.536	0.686
1^{st} o. Corr.	0.000	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.006	0.001
2^{nd} o. Corr.	0.553	0.292	0.952	0.463	0.365	0.268	0.661	0.513	0.237	0.258	0.228	0.182	0.606
No. Plants	343	62	115	111	50	60	77	159	84	85	129	130	51
(observ.)	(3773)	(682)	(1265)	(1221)	(550)	(660)	(847)	(1749	(924)	(935)	(1419)	(1430)	(561)
Long Run Own Wage Elasticity	-0.848	-0.602	-0.890	-0.504	-1.589	-0.930	-0.513	-0.446	-0.752	-0.583	-0.432	-0.497	-0.680
Long Run Out-Put Elasticity	0.581	0.068	0.119	1.016	-0.879	1.233	0.225	-0.085	0.453	0.199	0.627	0.045	0.122

Notes: (*) Significant at the 1% level. (**) Significant at the 5% level. (***) Significant at the 10% level. All variables are assumed exogenous except for the log of value added and lagged employment. Instruments are based on the third and further lags of capital stocks and the third lag of differenced employment.

Table 8: Industry Labor Demand for White Collar Workers in Colombia (1980-91)
(standard errors in parenthesis)

Dependent Variable (L_t)	Food	Beverages	Textiles	Apparel	Leather, Footwear	Wood Products, Furniture	Printing and Publishing	Chemicals	Rubber and Plastic Products	Non-Met. Mineral Products	Metal Products	Machinery	Transport Equipment
Ln $WB_{(t)}$	-0,053(**)	0,096(*)	-0,090(*)	-0,004	-0.015	-0,168(*)	-0,115(*)	-0,061(*)	-0,213(*)	-0,031(*)	-0,001	-0,018(*)	-0,226(*)
	(0,026)	(0,027)	(0,030)	(0,022)	(0.060)	(0,022)	(0,021)	(0,018)	(0,024)	(0,009)	(0,027)	(0,015)	(0,026)
Ln $WB_{(t-1)}$	0,011	0,044(*)	-0,018	0,063(*)	0.275(*)	0,047(*)	0,001	0,014	-0,010	0,044(*)	0,045(***)	-0,042(*)	0,013
	(0,021)	(0,019)	(0,025)	(0,014)	(0.051)	(0,019)	(0,018)	(0,012)	(0,018)	(0,007)	(0,024)	(0,016)	(0,033)
Ln $WW_{(t)}$	-0,376(*)	-0,374(*)	-0,498(*)	-0,342(*)	-0.226(*)	-0,369(*)	-0,368(*)	-0,470(*)	-0,264(*)	-0,345(*)	-0,333(*)	-0,330(*)	-0,335(*)
	(0,028)	(0,031)	(0,030)	(0,010)	(0.046)	(0,025)	(0,034)	(0,025)	(0,018)	(0,017)	(0,027)	(0,020)	(0,020)
Ln $WW_{(t-1)}$	0,165(*)	-0,054(*)	0,157(*)	0,123(*)	0.021	0,058(*)	0,266(*)	0,049(*)	0,018	0,137(*)	0,024	0,033(**)	0,110(*)
	(0,030)	(0,017)	(0,022)	(0,015)	(0.038)	(0,019)	(0,020)	(0,019)	(0,016)	(0,007)	(0,025)	(0,017)	(0,019)
Ln $VA_{(t)}$	0,021	-0,087(*)	0,322(*)	0,278(*)	0.450(*)	0,372(*)	0,439(*)	0,136(*)	0,211(*)	-0,035(*)	0,266(*)	0,115(*)	0,030(*)
	(0,026)	(0,028)	(0,018)	(0,024)	(0.084)	(0,021)	(0,023)	(0,018)	(0,026)	(0,007)	(0,027)	(0,015)	(0,009)
Ln $VA_{(t-1)}$	-0,176(*)	0,183(*)	-0,018	-0,057(*)	-0.464(*)	0,029	-0,130(*)	0,114(*)	0,033(***)	0,000	-0,063(**)	0,120(*)	0,033(*)
	(0,027)	(0,026)	(0,017)	(0,023)	(0.160)	(0,021)	(0,036)	(0,018)	(0,019)	(0,006)	(0,030)	(0,020)	(0,005)
Ln $L_{(t-1)}$	0,408(*)	0,049(*)	0,414(*)	0,542(*)	0.107	0,460(*)	0,597(*)	0,151(*)	-0,041(**)	0,263(*)	0,109(*)	0,169(*)	0,237(*)
	(0,040)	(0,009)	(0,019)	(0,017)	(0.099)	(0,025)	(0,039)	(0,024)	(0,017)	(0,012)	(0,040)	(0,023)	(0,032)
Constant	0,022	-0,020	0,068(*)	-0,036(*)	0.097(*)	0,005	0,132(*)	0,004	0,031(*)	0,055(*)	0,093(*)	0,015	0,010
	(0,017)	(0,018)	(0,006)	(0,013)	(0.033)	(0,017)	(0,015)	(0,010)	(0,011)	(0,005)	(0,014)	(0,011)	(0,012)
Sargan Test	0,779	0,624	0,629	0,697	0.473	0,741	0,768	0,542	0,621	0,384	0,350	0,842	0,861
1^{st} o. Corr.	0,000	0,002	0,000	0,000	0.002	0,000	0,000	0,000	0,039	0,000	0,000	0,000	0,001
2^{nd} o. Corr.	0,951	0,812	0,559	0,762	0.283	0,354	0,281	0,237	0,131	0,750	0,294	0,150	0,259
No. Plants	343	62	115	111	50	60	77	159	84	85	129	130	51
(observ.)	3773	682	1265	1221	550	660	847	1749	924	935	1419	1430	561
Long Run Own Wage Elasticity	-0,357	-0,451	-0,582	-0,477	-0.231	-0,575	-0,253	-0,496	-0,237	-0,282	-0,347	-0,357	-0,295
Long Run Out-Put Elasticity	-0,262	0,101	0,519	0,482	-0.016	0,743	0,768	0,295	0,234	-0,048	0,228	0,283	0,083

Notes: (*) Significant at the 1% level. (**) Significant at the 5% level. (***) Significant at the 10% level. All variables are assumed exogenous except for the log of value added and lagged employment. Instruments are based on the third and further lags of capital stocks and the second and third lags of differenced employment.

Table 9: Industry Labor Demand for Blue Collar Workers in Mexico (1986-90)
(standard errors in parenthesis)

Dependent Variable (L_t)	Food	Beverages	Textiles	Apparel	Footwear	Wood Products. Furniture	Printing and Publishing	Chemicals	Rubber and Plastic Products	Non-Met. Mineral Products	Metal Products	Machinery	Transport Equipment
Ln $WB_{(t)}$	-0.143(***)	-0.288(**)	-0.084(***)	-0.134(***)	-0.032	-0.135(*)	-0.295(*)	-0.259(*)	-0.145(**)	-0.232(**)	-0.223(*)	-0.405(*)	-0.177(**)
	(0.079)	(0.126)	(0.047)	(0.071)	(0.057)	(0.050)	(0.084)	(0.094)	(0.071)	(0.098)	(0.080)	(0.100)	(0.075)
Ln $WB_{(t-1)}$	0.114	0.078	0.009	0.005	-0.006	-0.029	-0.029	0.184	0.069	0.135	0.126	0.047	0.063
	(0.112)	(0.106)	(0.046)	(0.109)	(0.048)	(0.060)	(0.049)	(0.204)	(0.053)	(0.086)	(0.102)	(0.379)	(0.134)
Ln $WW_{(t)}$	0.043	-0.035	0.058	0.044	-0.062	0.002	0.070	0.153(***)	-0.004	-0.091	0.045	-0.122	0.059
	(0.041)	(0.095)	(0.041)	(0.053)	(0.064)	(0.041)	(0.067)	(0.079)	(0.038)	(0.068)	(0.044)	(0.159)	(0.084)
Ln $WW_{(t-1)}$	0.039	0.086(**)	0.004	0.075	-0.067	0.074(**)	0.138(*)	-0.042	0.066(**)	0.012	-0.053	0.096	0.079
	(0.064)	(0.043)	(0.021)	(0.095)	(0.059)	(0.038)	(0.040)	(0.059)	(0.034)	(0.076)	(0.036)	(0.157)	(0.067)
Ln $VA_{(t)}$	-0.042	0.001	0.083	0.010	0.411(*)	0.102	-0.059	0.194(***)	0.131	1.046(*)	0.006	0.828	0.074
	(0.106)	(0.262)	(0.064)	(0.088)	(0.081)	(0.071)	(0.100)	(0.117)	(0.088)	(0.229)	(0.078)	(0.697)	(0.154)
Ln $VA_{(t-1)}$	-0.132	-0.129	-0.007	-0.032	0.113(***)	-0.044	-0.038	-0.221	-0.258(*)	-0.100	-0.034	-0.030	0.066
	(0.143)	(0.107)	(0.091)	(0.190)	(0.069)	(0.090)	(0.024)	(0.318)	(0.061)	(0.262)	(0.090)	(0.332)	(0.126)
Ln $L_{(t-1)}$	0.280	-0.061	0.479	0.157	0.445(***)	0.040	0.152(**)	0.851	0.492(**)	-0.310	0.121	-0.001	0.411
	(0.268)	(0.182)	(0.636)	(0.311)	(0.248)	(0.112)	(0.064)	(0.849)	(0.220)	(0.367)	(0.229)	(1.901)	(0.492)
Constant	0.009	-0.039	0.027	-0.038	-0.052(***)	-0.005	-0.042	0.014	-0.042(***)	-0.087	-0.022	-0.029	-0.015
	(0.017)	(0.025)	(0.018)	(0.041)	(0.031)	(0.037)	(0.093)	(0.033)	(0.019)	(0.063)	(0.024)	(0.058)	(0.036)
Sargan Test	0.951	0.743	0.818	0.852	0.801	0.868	0.615	0.886	0.544	0.752	0.860	0.887	0.386
1st o. Corr.	0.524	0.947	0.555	0.780	0.058	0.744	0.399	0.445	0.033	0.326	0.360	0.643	0.304
2nd o. Corr.	0.542	0.945	0.387	0.413	0.154	0.508	0.269	0.617	0.610	0.742	0.646	0.280	0.400
No. Plants	274	122	163	158	50	71	33	350	193	135	142	286	128
(observ.)	1096	488	652	632	200	284	132	1400	772	540	568	1144	512
Long Run Own Wage Elasticity	-0.041	-0.197	-0.145	-0.153	-0.069	-0.171	-0.381	-0.500	-0.150	-0.074	-0.111	-0.358	-0.194
Long Run Out-Put Elasticity	-0.241	-0.121	0.147	-0.026	0.944	0.060	-0.115	-0.178	-0.250	0.723	-0.032	0.797	0.237

Notes: (*) Significant at the 1% level. (**) Significant at the 5% level. (***) Significant at the 10% level. All variables are assumed exogenous except for the log of value added and lagged employment. Instruments are based on the third and further lags of capital stocks and the second lag of differenced employment.

Table 10: Industry Labor Demand for White Collar Workers in Mexico (1986-90)
(standard errors in parenthesis)

Dependent Variable (L_t)	Food	Beverages	Textiles	Apparel	Footwear	Wood Products, Furniture	Printing and Publishing	Chemicals	Rubber and Plastic Products	Non-Met. Mineral Products	Metal Products	Machinery	Transport Equipment
Ln $WB_{(t)}$	0.031	-0.032	0.100	0.078	0.021	0.100(**)	-0.179	-0.126	0.026	-0.022	0.155	0.034	0.079
	(0.069)	(0.077)	(0.065)	(0.073)	(0.088)	(0.048)	(0.184)	(0.080)	(0.092)	(0.055)	(0.111)	(0.048)	(0.054)
Ln $WB_{(t-1)}$	-0.026	0.049	0.024	0.066	-0.075	-0.063	0.117	0.114(***)	0.029	-0.058	0.111(**)	0.010	0.062
	(0.067)	(0.084)	(0.038)	(0.065)	(0.087)	(0.053)	(0.081)	(0.062)	(0.101)	(0.052)	(0.057)	(0.047)	(0.067)
Ln $WW_{(t)}$	-0.195(*)	-0.197(**)	-0.227(*)	-0.079	0.125	-0.084	-0.102	-0.133(***)	-0.311(*)	-0.101(*)	-0.240(*)	-0.284(*)	-0.209(*)
	(0.055)	(0.084)	(0.106)	(0.067)	(0.303)	(0.054)	(0.078)	(0.079)	(0.107)	(0.040)	(0.086)	(0.049)	(0.091)
Ln $WW_{(t-1)}$	0.106	0.139(**)	0.051	0.063	0.281	0.003	0.069	0.105	-0.025	0.018	-0.160	-0.025	0.053
	(0.073)	(0.060)	(0.067)	(0.100)	(0.215)	(0.053)	(0.071)	(0.067)	(0.092)	(0.040)	(0.131)	(0.063)	(0.095)
Ln $VA_{(t)}$	0.068	0.129	-0.050	-0.111	-0.244	0.296(**)	0.153	0.380(*)	0.706	0.058	-0.081	0.089	0.011
	(0.092)	(0.174)	(0.072)	(0.088)	(0.263)	(0.134)	(0.149)	(0.150)	(0.469)	(0.053)	(0.159)	(0.126)	(0.075)
Ln $VA_{(t-1)}$	-0.004	0.051	0.007	-0.067	-0.147	0.225(**)	-0.029	-0.284(**)	-0.178	0.127	0.105	-0.035	0.027
	(0.117)	(0.079)	(0.108)	(0.147)	(0.183)	(0.100)	(0.022)	(0.131)	(0.272)	(0.168)	(0.158)	(0.128)	(0.102)
Ln $L_{(t-1)}$	0.411(*)	0.644(*)	-0.056	-0.137	0.861	-0.197(***)	0.807(*)	0.488(**)	-0.302	0.017	-0.380	-0.070	0.085
	(0.164)	(0.167)	(0.154)	(0.491)	(0.889)	(0.117)	(0.290)	(0.253)	(0.442)	(0.083)	(0.473)	(0.187)	(0.283)
Constant	-0.008	-0.021	-0.020	-0.026	0.005	0.095(**)	-0.147	0.000	0.020	0.021	-0.027	-0.041	-0.030
	(0.015)	(0.018)	(0.026)	(0.036)	(0.111)	(0.039)	(0.135)	(0.021)	(0.044)	(0.028)	(0.024)	(0.026)	(0.026)
Sargan Test	0.522	0.674	0.512	0.784	0.668	0.603	0.883	0.746	0.654	0.466	0.562	0.884	0.519
1^{st} o. Corr.	0.008	0.003	0.596	0.876	0.320	0.787	0.024	0.062	0.303	0.463	0.624	0.584	0.383
2^{nd} o. Corr.	0.555	0.469	0.257	0.402	0.229	0.591	0.887	0.355	0.628	0.107	0.698	0.411	0.286
No. Plants	274	122	163	158	50	71	33	350	193	135	142	286	128
(observ.)	1096	488	652	632	200	284	132	1400	772	540	568	1144	512
Long Run Own Wage Elasticity	-0.152	-0.164	-0.166	-0.014	2.924	-0.067	-0.172	-0.055	-0.258	-0.085	-0.290	-0.289	-0.171
Long Run Out-Put Elasticity	0.108	0.507	-0.041	-0.157	-2.812	0.435	0.643	0.189	0.406	0.189	0.017	0.050	0.042

Notes: (*) Significant at the 1% level. (**) Significant at the 5% level. (***) Significant at the 10% level. All variables are assumed exogenous except for the log of value added and lagged employment. Instruments are based on the third and further lags of capital stocks and the second lag of differenced employment.

Table 11: Industry Labor Demand for Blue Collar Workers in Chile (1982-95) (standard errors in parenthesis)

Dependent Variable (L_t)	Ln L t-1	Ln WBt	Ln WBt-1	Ln WWt	Ln WWt-1	Constant	Wald Test: p-value(b)	L.R. Elast.(a)	Sargan Test	Autoco. Test (2nd o.)	No. Obs (Plants)
Base Specification(c)	0.381(*) (0.095)	-0.244(*) (0.015)	0.068(*) (0.023)	0.041(*) (0.007)	-0.006 (0.007)	-0.179(*) (0.010)	--	-0.285	0.972	0.695	21014 (1501)
Time Variant Specification	0.627 (0.475)	-0.169(*) (0.043)	0.112 (0.105)	0.071(*) (0.027)	-0.034 (0.039)	-0.176(*) (0.021)	--	-0.153	0.660	0.811	21014 (1501)
Variable* T83	-0.533 (0.531)	-0.072 (0.048)	-0.104 (0.116)	-0.001 (0.032)	0.036 (0.046)	0.142(*) (0.038)	0.442	-0.257			
Variable* T84	0.607 (0.572)	-0.009 (0.067)	0.193 (0.126)	-0.103(**) (0.045)	-0.046 (0.055)	0.316(*) (0.033)	0.159	-0.545			
Variable* T85	0.224 (0.853)	-0.068 (0.067)	0.029 (0.163)	-0.051 (0.038)	0.049 (0.048)	0.143(**) (0.067)	0.199	-0.641			
Variable* T86	-0.707 (0.607)	-0.106(***) (0.061)	-0.253(***) (0.135)	-0.036 (0.034)	0.059 (0.045)	0.223(*) (0.028)	0.043	-0.385			
Variable* T87	-1.108(***) (0.663)	-0.031 (0.077)	-0.193 (0.142)	-0.038 (0.034)	0.032 (0.046)	0.284(*) (0.034)	0.111	-0.190			
Variable* T88	-0.596 (0.499)	-0.067 (0.059)	-0.153 (0.116)	0.007 (0.033)	0.054 (0.044)	0.244(*) (0.025)	0.666	-0.286			
Variable* T89	-0.289 (0.568)	-0.110 (0.070)	0.025 (0.126)	-0.072(**) (0.037)	0.006 (0.053)	0.214(*) (0.028)	0.012	-0.215			
Variable* T90	-0.313 (0.568)	-0.130(***) (0.075)	-0.060 (0.142)	-0.012 (0.036)	0.058 (0.043)	0.180(*) (0.032)	0.243	-0.360			
Variable* T91	-0.694 (0.501)	-0.123(**) (0.061)	-0.125 (0.121)	-0.036 (0.033)	0.038 (0.042)	0.205(*) (0.023)	0.108	-0.286			
Variable* T92	-0.027 (0.558)	-0.138(**) (0.067)	0.012 (0.140)	-0.004 (0.046)	0.057 (0.046)	0.215(*) (0.024)	0.177	-0.457			
Variable* T93	-0.156 (0.888)	-0.025 (0.058)	0.038 (0.226)	-0.065(***) (0.040)	-0.022 (0.061)	0.176(*) (0.044)	0.167	-0.085			
Variable* T94	0.981 (1.638)	-0.056 (0.089)	0.136 (0.292)	-0.027 (0.059)	-0.002 (0.076)	0.149(*) (0.040)	0.930	-0.037			
Variable* T95	0.192 (1.213)	-0.069 (0.088)	0.012 (0.235)	-0.053 (0.046)	0.005 (0.072)	0.168(*) (0.024)	0.780	-0.634			
Wald Test (d)	0.120	0.591	0.044	0.158	0.431	0.000					

Notes: GMM estimates with first-differenced data. All variables are assumed exogenous except for lagged employment. Instruments are based on second and further lags of employment and output. (*) Significant at the 1% level. (**) Significant at the 5% level. (***) Significant at the 10% level. (a) Best point estimates calculated as [(Ln WBt + Ln WBt-1)/ Ln Lt-1]. (b) Wald Test of Joint Significance of the variables interacted with a given year dummy. (c) Time dummies were included but are here omitted (d) P. Values. Wald Test of Joint Significance of year dummies interacted with a given variable.

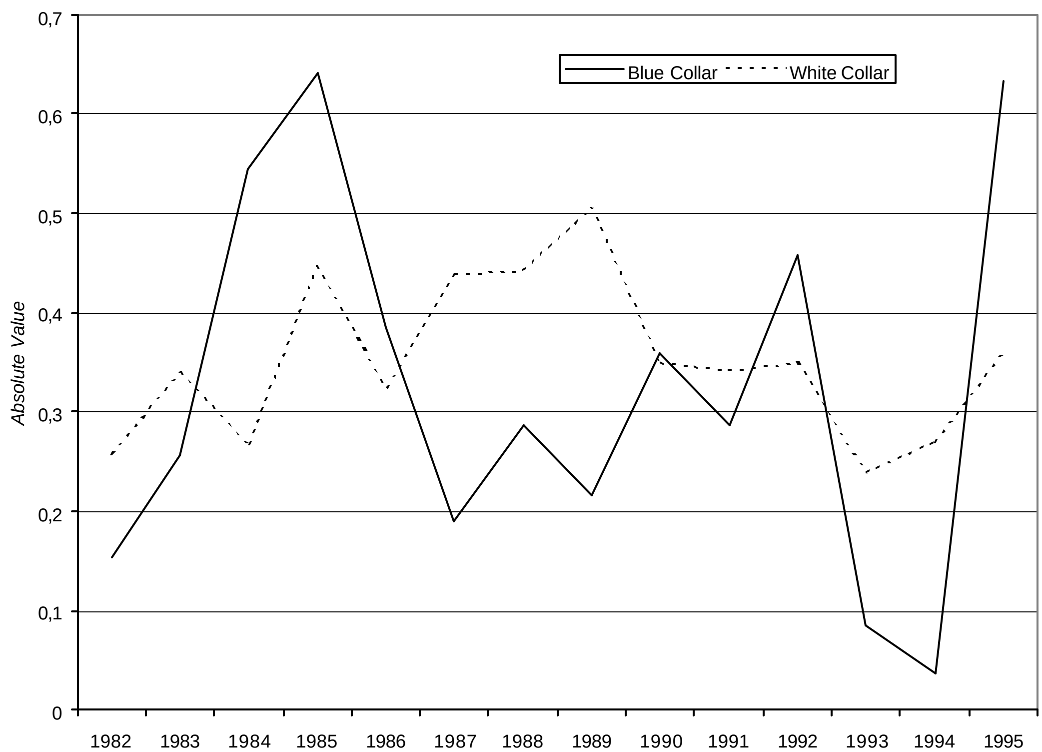
Table 12: Industry Labor Demand for White Collar Workers in Chile (1982-95)

(standard errors in parenthesis)

Dependent Variable (L_t)	Ln L t-1	Ln WBt	Ln WBt-1	Ln WWt	Ln WWt-1	Constant	Wald Test: p-value(b)	L.R. Elast.(a)	Sargan Test	Autoco. Test (2nd o.)	No. Obs (Plants)
Base	0.248(*)	0.032(**)	-0.032(**)	-0.376(*)	0.108(*)	-0.074(*)	--	-0.357	0.221	0.795	21014
Specification(c)	(0.045)	(0.015)	(0.013)	(0.012)	(0.018)	(0.013)					(1501)
Time Variant	0.262(***)	0.019	-0.032	-0.289(*)	0.099(***)	-0.070(*)	--	-0.258	0.213	0.599	21014
Specification	(0.153)	(0.049)	(0.045)	(0.032)	(0.054)	(0.020)					(1501)
Variable* T83	-0.032	0.008	-0.006	-0.054	-0.017	-0.014	0.899	-0.339			
	(0.170)	(0.063)	(0.062)	(0.043)	(0.068)	(0.030)					
Variable* T84	-0.103	-0.016	-0.008	-0.009	-0.026	0.098(*)	0.991	-0.268			
	(0.254)	(0.067)	(0.065)	(0.045)	(0.093)	(0.028)					
Variable* T85	0.028	0.012	0.003	-0.114(**)	-0.012	0.049(***)	0.408	-0.446			
	(0.240)	(0.071)	(0.059)	(0.052)	(0.082)	(0.027)					
Variable* T86	-0.122	0.054	0.093	-0.096(**)	0.007	0.168(*)	0.110	-0.325			
	(0.232)	(0.074)	(0.074)	(0.049)	(0.090)	(0.024)					
Variable* T87	-0.102	0.122(***)	0.007	-0.168(*)	-0.009	0.159(*)	0.007	-0.438			
	(0.218)	(0.070)	(0.070)	(0.049)	(0.085)	(0.027)					
Variable* T88	-0.104	0.110	0.042	-0.145(*)	-0.036	0.156(*)	0.050	-0.442			
	(0.180)	(0.069)	(0.067)	(0.049)	(0.079)	(0.026)					
Variable* T89	0.282	-0.076	-0.131(***)	-0.194(*)	0.153	0.108(*)	0.003	-0.506			
	(0.282)	(0.073)	(0.070)	(0.051)	(0.119)	(0.034)					
Variable* T90	-0.069	-0.031	0.014	-0.094(***)	0.002	0.105(*)	0.469	-0.349			
	(0.244)	(0.079)	(0.061)	(0.050)	(0.105)	(0.026)					
Variable* T91	-0.095	0.005	0.018	-0.082(***)	-0.012	0.106(*)	0.627	-0.341			
	(0.219)	(0.068)	(0.060)	(0.047)	(0.087)	(0.023)					
Variable* T92	0.004	0.006	0.019	-0.065	-0.001	0.102(*)	0.862	-0.349			
	(0.261)	(0.065)	(0.061)	(0.050)	(0.100)	(0.024)					
Variable* T93	0.173	-0.006	-0.069	-0.047	0.103	0.105(*)	0.715	-0.239			
	(0.251)	(0.074)	(0.069)	(0.056)	(0.099)	(0.025)					
Variable* T94	0.008	-0.074	-0.049	-0.027	0.020	0.101(*)	0.844	-0.270			
	(0.228)	(0.068)	(0.070)	(0.049)	(0.089)	(0.024)					
Variable* T95	0.297	-0.066	0.025	-0.090	0.122	0.056(**)	0.499	-0.359			
	(0.369)	(0.080)	(0.067)	(0.060)	(0.125)	(0.028)					
Wald Test (d)	0.970	0.204	0.474	0.003	0.973	0.000					

Notes: GMM estimates with first-differenced data. All variables are assumed exogenous except for lagged employment. Instruments are based on second and further lags of employment and output. (*) Significant at the 1% level. (**) Significant at the 5% level. (***) Significant at the 10% level. (a) Best point estimates calculated as [(Ln WBt + Ln WBt-1)/ Ln Lt-1]. (b) Wald Test of Joint Significance of the variables interacted with a given year dummy. (c) Time dummies were included but are here omitted (d) P. Values. Wald Test of Joint Significance of year dummies interacted with a given variable.

Figure 1: Long Run Own Wage Elasticities
(Chile)



Annex I: Limitations on and Costs of Adjusting Work Force

	Chile	Colombia	Mexico
Economic Difficulties as Reason for Dismissal	Yes	No	No
Flexibility on Temporary Contracts	Some	Some	None
Compensation for Dismissal at 1 Year (months pay)	2.0	1.5	4.0
Compensation for Dismissal at 10 Years (months pay)	6.0	10.5	10.7

Source: Burki and Perry (1997)

Annex II: Data Description

Table A1 contains means and standard deviations for the samples that were used in the analysis. Each longitudinal data set was constructed by merging several yearly cross-sectional data sets, on the basis of plant-specific variables, including plant identification codes when available. Monetary variables were put in constant prices using industry-specific price deflators. Capital stocks were constructed using the perpetual-inventory method. Observations with non-positive values for employment, wages or output were excluded. In addition, odd observations were eliminated when they implied large jumps in the corresponding variables, suggesting reporting or recording errors. Finally, the plants with incomplete information for the periods considered were also excluded, so the final samples consist of complete and balanced panels.

Table A1: Summary Statistics (means with standard deviations in parenthesis)

Country (period)	Blue Collar Employment (per plant)	White Collar Employment (per plant)	Blue Collar Wages [(a)] (per worker)	White Collar Wages [(a)] (per worker)	Value Added[(b)] (per plant)	Capital Stocks[(b)] (per plant)
Chile	49.8	18.2	122.8	310.9	65.9	87.6
(1981-86)	(79.0)	(40.7)	(76.2)	(260.6)	(267.5)	(490.4)
Colombia	93.1	42.6	23.9	41.0	17.9	5.8
(1980-91)	(166.7)	(88.3)	(15.2)	(29.4)	(50.6)	(21.5)
Mexico	249.1	105.3	63.4	137.2	240.5	209.8
(1986-90)	(517.5)	(185.0)	(33.0)	(101.4)	(775.1)	(653.0)

Source: Authors' calculations. (a) Thousands of 1980 pesos (of the corresponding country). (a) Millions of 1980 pesos (of the corresponding country).