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# The Wage Premium of Globalization: Evidence from European Mergers and Acquisitions

Harald Oberhofer\*      Matthias Stöckl†      Hannes Winner‡

## Abstract

We provide evidence on the impact of globalization on labor market outcomes analyzing pay differences between foreign-acquired and domestically-owned firms. For this purpose, we use firm level data from 16 European countries over the time period 1999 to 2006. Applying propensity score matching techniques we estimate positive wage premia of cross-boarder merger and acquisitions (M&As), suggesting that foreign acquired firms exhibit higher short-run (post-acquisition) wages than their domestic counterparts. The observed wage disparities are most pronounced for low paying firms (with average wages below the median). Finally, we find systematic wage premia in Western European countries, but not so in Eastern Europe.

**JEL Codes:** C21; F15; G34; J31.

**Keywords:** Globalization; mergers and acquisitions; wage effects; propensity score matching.

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# 1 Introduction

Since two or three decades there is a lively debate among social scientists on how the still ongoing process of globalization has changed the social and economic environment not only in developing countries but also in the developed world. One common held believe in this regard is that (relatively immobile) labor is harmed by the increased internationalization of production processes. In light of this 'dark side' of globalization, it is often stipulated in the political arena to strengthen the role of the welfare state via specific employment or social programs.

The early economic research on globalization, including contributions by Rodrik (1998), Harrison (2002) or Mayda and Rodrik (2005), among others, analyzed its impact on the extent and the scope of the welfare state. Most of these studies observe a larger public sector in more open economies, which is often explained by an increased demand for the welfare state reducing individual risks associated with globalization (e.g., income losses due to sectoral downturns).

More recent research focused on economic activities of multinational firms (MNEs), also considering their impact on labor market outcomes. Basically, two strands of literature can be distinguished here. A first line of research simply compares employment and wage figures of foreign- and domestically-owned firms (see, e.g., Aitken, Harrison and Lipsey 1996, Lipsey and Sjöholm 2004, Görg, Strobl and Walsh 2007). Other authors, in contrast, argue that such differences not necessarily indicate any causal effects of MNE activity (see, e.g., Almeida 2007). But rather, they propose to analyze pay differences in firms with ownership changes, especially for cross boarder mergers and acquisitions (M&As). Accordingly, comparing post-acquisition wages of targeted firms with wages of purely domestically owned (non-acquired) firms allows to identify the causal effect of MNEs on labor market outcomes. Relying mainly on firm-level data from single countries and allowing for non-random selection of acquisition targets, these studies find insignificant or even positive wage premia of cross-boarder M&As.<sup>1</sup>

This paper contributes to the empirical literature on wage effects of cross-boarder M&As. It complements the existing research applying firm-level data from a cross-section of 16 European countries between 1999 and 2006. Our cross-country database allows to analyze the differential impact of M&As on wages over countries or country groups. In our case, we are especially interested in wage premia differences across Western and Eastern European countries. Empirically, we focus on the growth of a firm's average wages one year after the acquisition has taken place (which might be viewed as a short-run effect). Further, we follow the previous research applying propensity score matching techniques to account for a systematic selection of M&A targets.

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<sup>1</sup>Significantly positive wage effects of cross-boarder M&As are found in Conyon, Girma, Thompson and Wright (2002) for the UK, Almeida (2007) for Portugal and Huttunen (2007) for Finland; insignificant wage differentials are observed by Martins (2004) for Portugal, Girma and Görg (2007) for the UK, as well as Heyman, Sjöholm and Gustavsson Tingvall (2007, 2011) and Bandick (2011) for Sweden.

Our findings suggest that M&As, and especially cross-boarder acquisitions, induce a positive short-run impact on wages. We observe highest wage premia for firms at the lower end of the pay distribution (i.e., firms paying average wages below the median). Further, we find differences in wage premia between Western and Eastern European countries, suggesting that M&As expose a systematically different impact on wage policies of firms in both country groups.

The remainder is organized as follows. Section 2 describes the data and provides some descriptive statistics. Section 3 elaborates the estimation strategy and summarizes our empirical results. Section 4 concludes.

## 2 Data

### 2.1 Data description

We exploit two firm level datasets to analyze the wage effects of M&As. First, we use the AMADEUS database (provided by Bureau van Dijk), including balance sheet information from more than 8 million firms located in 41 European countries (specifically, we rely on update no. 170 of the database, published in November 2008). Second, information on firm transactions including M&As is obtained from the ZEPHYR database (also available from Bureau van Dijk). This database covers large shareholder transactions, but also a large number of smaller ones with relatively low deal values, which, in our view, represents a major strength of this database (see also Stiebale and Trax 2011). In both datasets, each firm is assigned to one unique identification number, allowing to merge the firm-specific information from AMADEUS with M&A data from ZEPHYR.

Our interest lies in a comparison of wages in acquired firms with the ones in non-acquired firms. In our case, we calculate an *average wage rate* ( $w$ ) for each firm in the sample and each year, given by a firm's ratio of total labor compensation to its total number of employees (for simplicity, we use *wage rate* and *wage* synonymously below). To obtain real wages, we deflate the sum of labor compensations in the numerator using (purchasing power corrected) country/year-specific producer price indices taken from the World Development Indicators 2010.

To identify merger cases, we only focus on transactions either classified as mergers or as acquisitions in the ZEPHYR database. In addition, we define an M&A as a transaction where the fraction of shares controlled by the acquiring firm amounts to less/more than 50 percent before/after the acquisition has taken place (see also Gugler and Yurtoglu 2004, Oberhofer 2010). Further, we classify a change in ownership as *cross-boarder* M&A if the acquiring and the acquired firms are located in different countries.

To provide a sensitivity check regarding the definition of M&As, we apply two alternative ownership limits. First, we take 25 percent after-transaction ownership as a threshold for

M&As (henceforth, we refer to this case as M&A-25 as opposed to the above mentioned M&A-50 ownership limit). The choice of this value is motivated by the fact that acquiring firms typically obtain significant legal rights virtually in all European countries if their ownership fraction exceeds 25 percent of all outstanding shares. In this case, firms might be interested in only acquiring just more than 25 percent of all shares and, thus, gain a strategic position in the target firm. Second, we only consider M&As where an acquiring firm immediately takes over 100 percent ownership with one single transaction (M&A-100). In this case, it is most likely that the new owner is able to impose strategic changes, including modifications in wage policies.

In the empirical analysis below, we focus on manufacturing firms (NACE rev. 2 industries 10-33) that are active within the time period 1999 to 2006. Since we are interested in wage effects of international acquisitions at the level of subsidiaries, we only include unconsolidated accounts in our dataset. We also exclude firms from countries where ZEPHYR does not report any M&A activities. Overall, our sample includes 317,946 observations corresponding to 87,652 firms (of which 432 are M&As and 230 are cross-boarder M&As) located in 16 European countries.<sup>2</sup>

## 2.2 Descriptive statistics

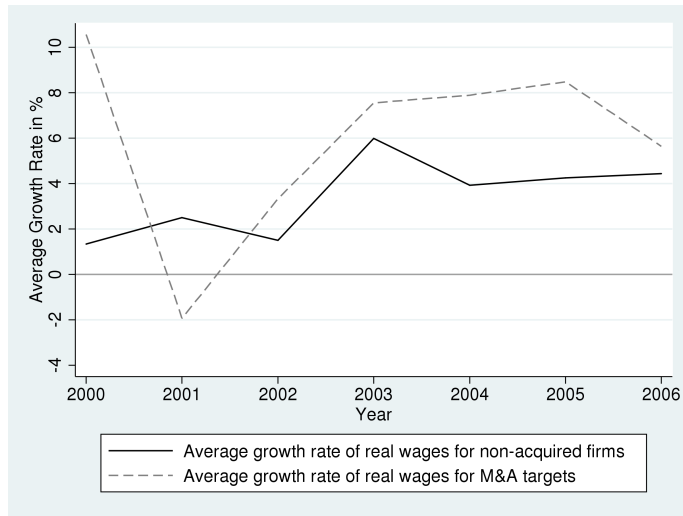
Figure 1 displays the average growth rate of real wages for acquired and non-acquired firms using our baseline definition of M&As (i.e., M&A-50). Panel (a) includes the full country coverage of our sample (i.e., 16 countries), panel (b) focuses on Western European countries (i.e., Belgium, France, Germany, Italy, Norway, Portugal, Spain and Sweden), and panel (c) relies on Eastern Europe (i.e., Bosnia and Herzegovina, Bulgaria, Czech Republic, Hungary, Poland, Russia, Slovakia and Ukraine).

Three important conclusions can be drawn from the figure. First, as can be seen from panel (a), for most of the years after 1999 wage growth seems to be higher for acquired than for non-acquired firms (the only exception is 2001, where we find a negative difference in wage growth between these two firm types). In particular, wage growth is around 4 to 5 percent in years after 2003 for non-acquired firms, and about 7 to 8 percent for acquired ones. Second, the wage difference between acquired and non-acquired firms in the full sample is obviously driven by a corresponding difference in Western European countries (panel (b) of the graph). The only exemption is 2002 with a slightly negative average wage growth of firms acquired in 2001.

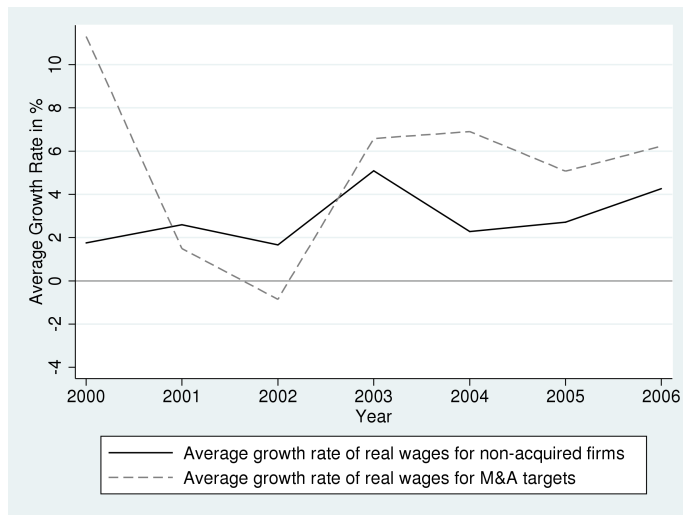
Third, wage growth in Eastern European countries was generally negative before 2002, and increased substantially since then. For example, wage growth in 2005 was around 12 (20) percent for non-acquired (acquired) firms in those countries, which is much higher as the corresponding

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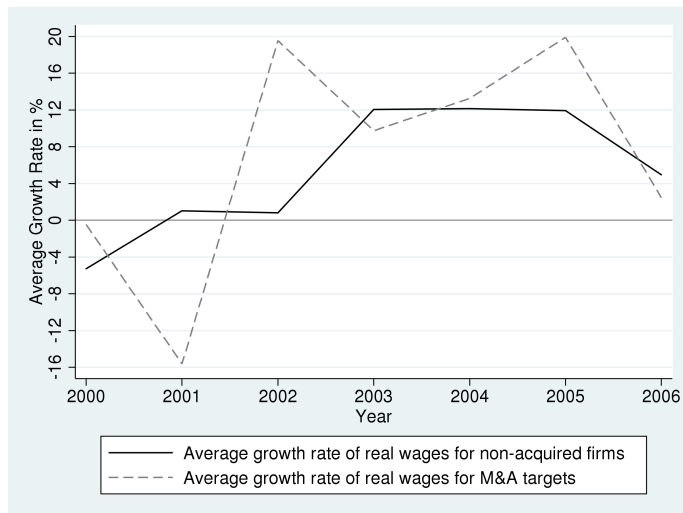
<sup>2</sup>Our country coverage includes Belgium, Bosnia and Herzegovina, Bulgaria, Czech Republic, France, Germany, Hungary, Italy, Norway, Poland, Portugal, Russia, Slovakia, Spain, Sweden and Ukraine.



(a)



(b)



(c)

Figure 1: Average growth rate of real wages for acquired and non-acquired firms in (a) all 16 European countries of the sample, (b) Western European countries, and (c) Eastern European countries.

Table 1: Summary statistics

Variable	Firms <sup>a</sup>	Mean	Std.Dev.	Min.	Max.
<b>Non-acquired firms</b>					
Real wage growth	87,652	0.037	0.225	-1	2
Number of employees	87,652	80.548	268.429	2	10,000
Total factor productivity	87,652	15.342	8.868	1.553	56.745
Profitability	87,652	0.069	0.112	-1	0.840
Leverage	87,652	0.656	0.239	0	2
Market shares	87,652	0.000	0.002	0	0.184
Capital intensity	87,652	126.331	256.014	0.09	50,195.500
<b>Acquired firms</b>					
Real wage growth	432	0.075	0.288	-0.970	1.841
Number of employees	432	318.854	801.387	3	8,271
Total factor productivity	432	21.769	11.278	2.334	56.628
Profitability	432	0.051	0.126	-0.637	0.461
Leverage	432	0.632	0.266	0	1.619
Market shares	432	0.001	0.006	0	0.065
Capital intensity	432	197.402	350.792	1.826	4,311.635

*Notes:* <sup>a</sup>The 87,652 non-acquired firms in the sample are typically observed repeatedly, leaving us with 317,514 observations for the empirical exercise below.

figures in Western European countries. In most of the years, we also observe that acquired firms experience higher average growth rates in comparison to non-acquired ones.

Table 1 provides additional statistics for acquired and non-acquired firms. For M&As, wage growth refers to the first year after the acquisition has taken place; all other variables reported in the table are measured one year before the takeover in order to facilitate a suitable comparison of both firm types in the pre-M&A situation.

In line with Figure 1, we can see that the average wage growth differential between acquired and non-acquired firms is about 4 percentage points (7.5 vs. 3.7 percent). Apart from that, we observe additional systematic differences between both firm types. For instance, in terms of the number employees an average M&A target is approximately four times larger than its non-acquired counterpart. M&A targets are also more productive and tend to produce with more capital (in terms of total assets per employee).<sup>3</sup> Further, non-acquired firms tend to be slightly more profitable in terms of return on assets. Only with regard to leverage (i.e., short- and long-term liabilities to total assets) and market shares (measured by a firm's turnover to the total country-industry specific revenues as calculated from the AMADEUS database) we do not find systematic differences between acquired and non-acquired firms.

Overall, a broad inspection of our data suggests that workers employed in M&A targets, on average, receive higher wages in the first year after a takeover has taken place, although these wage

<sup>3</sup>In Table 1, we provide an estimate for total factor productivity taking account for the vast literature on the estimation of production functions at the firm level (see, e.g., Del Gatto, Di Liberto and Petraglia 2011, for a recent survey). In particular, to deal with simultaneity of input and output choices we follow Levinsohn and Petrin (2003), who propose a semi-parametric estimation approach that utilizes a firm's demand for intermediate inputs (such as materials or electricity) in order to proxy for unobservable productivity shocks.



differentials are changing much over time (being more pronounced in recent years). However, our descriptive evidence also suggests that M&A targets and their non-acquired counterparts crucially differ in firm characteristics, which *simultaneously* might affect a firm’s takeover probability and an individual worker’s wage premium. Hence, simply regressing firm-year specific real wages on a dummy indicating whether a firm has been acquired or not along with other controls, would raise a severe endogeneity issue implying seriously flawed estimation results with regard to the impact of M&A-activities on (post-acquisition) wages. In the next section, we propose an econometric framework that allows to address this issue adequately.

### 3 Empirical analysis

#### 3.1 Specification and estimation

A study on the impact of M&A on wages has to tackle two central empirical issues (see, e.g., Egger and Hahn 2010). First, once a firm is acquired it is impossible to observe its wage growth for the counterfactual situation where it has not been acquired, and vice versa. Second, it is unlikely that a firm is acquired randomly, but rather, (un-)observed characteristics might explain why it is an attractive M&A target. In Table 1, we report systematic differences between acquired and non-acquired firms, which, in turn, might explain the observed pay differences between both firm types. The related empirical literature cited above addressed these issues mainly via propensity score matching, which explicitly accounts for observable characteristics affecting a firm’s takeover probability and, therefore, also its wage growth. We follow this lead here and apply a very similar estimation approach.

We firstly specify a binary choice model predicting a firm’s probability of being acquired as a function of observed firm characteristics (see, e.g., Heckman, Ichimura and Todd 1997)

$$\begin{aligned}
 T_{it}^* &= \Phi(\mathbf{x}'_{i,t-1}\beta), \\
 T_{it} &= \begin{cases} 1 & \text{if } T_{it}^* > 0 \\ 0 & \text{otherwise} \end{cases}
 \end{aligned} \tag{1}$$

where  $i$  indicates the  $i^{\text{th}}$  firm, and  $t$  is a time index.  $T_{it}^*$  represents a latent variable capturing a firm’s M&A target probability. Observed outcome,  $T$ , takes entry 1 if the latent variable exceeds the zero threshold, and zero otherwise.  $\mathbf{x}$  is a vector of explanatory variables (discussed below), measured in period  $t - 1$ , and  $\beta$  is the corresponding parameter vector.  $\Phi$  denotes the cdf of a normal distribution (i.e., we estimate a probit model).

We are interested in comparing the post-acquisition wage growth of an acquired firm,  $\tilde{w}_{i,t+1}^{(1)}$ , with the corresponding wage growth if it were not acquired,  $\tilde{w}_{i,t+1}^{(0)}$ , which defines the *average*

treatment effect on the treated ( $\tau_{\text{ATT}}$ ) (see, e.g., Wooldridge 2010)

$$\tau_{\text{ATT}} = E(\tilde{w}_{i,t+1}^{(1)} - \tilde{w}_{i,t+1}^{(0)} | T_{it} = 1). \quad (2)$$

As described above, we are not able to observe  $\tilde{w}_{i,t+1}^{(0)}$ , but the non-acquired firms in our sample might deliver an appropriate control group for this counterfactual. For this, we estimate eq. (1) and calculate each firm’s probability of being acquired in  $t$  (i.e., the propensity score). To proxy  $\tilde{w}_{i,t+1}^{(0)}$ , we use the wage growth of non-acquired firms with a propensity score as close as possible to a firm in the treatment group. In our case, we rely on nearest neighbor matching, where we use the (weighted) average of the *five nearest neighbors* as the appropriate comparison firm.<sup>4</sup>

Following previous research and also theoretical work on M&A activity, vector  $\mathbf{x}$  contains a firm’s number of employees, total factor productivity, level of profitability and debt ratio as well as its market share and capital intensity. The inclusion of number of employees is mainly motivated by the managerial discretion hypothesis (see, e.g., Williamson 1963). Accordingly, if a manager’s utility is positively affected by the size of the controlled firm, she would be interested in acquiring larger targets. Further, acquiring larger competitors also increases market concentration and gives more leeway in pricing decisions.

Regarding productivity, two opposing predictions can be inferred from the theoretical literature. First, the market for corporate control theory argues that managers, assessing the relative performance of competing firms, tend to acquire currently underperforming firms within their markets (see Manne 1965). The neoclassical theory of the firm, in contrast, states that only the most productive firms are attractive acquisition targets, which also applies to profitability.

Further, according to Dewey (1961) the least successful firms either leave the market or will be acquired by their competitors. In the latter case, M&As might be viewed as a ‘civilized’ alternative to market exit. Hence, a firm’s probability of being acquired increases with the risk of going bankrupt. Empirically, we measure a firm’s market exit hazard using a firm’s leverage. We would predict that both, market exit and the probability of being an M&A target, are positively associated with a firm’s debt ratio.

In line with the literature on the impact of firm size on a firm’s acquisition probability, market concentration might be crucial for the decision to engage in M&As. Typically, only those firms already controlling a substantial fraction of the market might substantially gain through additional market concentration. Therefore, it might be reasonable that firms with larger market shares are more likely to be the acquiring firms and, consequently, face lower M&A target probabilities.

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<sup>4</sup>Alternatively, we also applied one-to-one and ten nearest neighbor matching, leaving our estimation results nearly unchanged. Same applies to local linear and radius matching (with caliper 0.02).

Firms also might use M&As in order to improve their production technologies and, thus, are interested in acquiring firms possessing such technologies. Empirically, we measure this motive for M&As by capital intensity. Finally, we control for unobserved heterogeneity across countries, industries and time including the corresponding fixed effects.

## 3.2 Results

Table 2 summarizes the estimation results of our selection equation (1). The coefficients reported there represent average marginal effects (AMEs) for the baseline definition of M&As, where the acquirer possesses more than 50 percent of outstanding shares after the transaction has taken place (M&A-50).<sup>5</sup> Column (1) of the table refers to the full sample (domestic and foreign M&As), column (2) to cross-boarder M&As (230 firms), and column (3) to domestic transactions only (202 M&As).

Table 2: Selection equation (probability of being an M&A target; baseline definition M&A-50)

Variable	Full sample M&As	Cross-boarder M&As	Domestic M&As
Number of employees	0.0009*** (0.0001)	0.0005*** (0.0001)	0.0004*** (0.0000)
Total factor productivity	0.0003** (0.0001)	0.0002** (0.0001)	0.0001 (0.0001)
Profitability	-0.0015*** (0.0005)	-0.0006* (0.0004)	-0.0008** (0.0003)
Leverage	0.0002 (0.0002)	0.0001 (0.0002)	0.0001 (0.0002)
Market shares	-0.0026* (0.0016)	-0.0005 (0.0008)	-0.0127*** (0.0036)
Capital intensity	0.0006*** (0.0001)	0.0003*** (0.0000)	0.0003*** (0.0000)
<i>Fixed effects</i>			
Country	Yes	Yes	Yes
Industry	Yes	Yes	Yes
Year	Yes	Yes	Yes
McFadden's $R^2$	0.1343	0.1642	0.1051
Number of M&As	432	230	202
Observations	317,946	317,744	317,716

*Notes:* Parameter estimates represent average marginal effects (see Bartus 2005). \*, \*\* and \*\*\* denote significance at 10%, 5% and 1% levels, respectively.

Our estimation results are mainly in accordance with our expectations and the previous literature. At face value, market shares and profitability seem to be the driving forces behind M&A activities. Both variables enter negatively, which is in line with our discussion above.

<sup>5</sup>For the sake of brevity, we do not report the results of alternative definitions M&A-25 and M&A-100 here, but it turns out that they are very similar to the ones of our baseline definition M&A-50.

Managerial discretion exhibits a positive sign, indicating that larger firms, *ceteris paribus*, are more likely to be an M&A target. Further, we observe a positive estimate for capital intensity, suggesting that capital abundant firms tend to be acquired more likely. Only for the debt ratio we find insignificant coefficients, which seems to contradict Dewey (1961). Finally, total factor productivity enters positively, which lends support to the neoclassical theory of the firm. Generally, we do not find systematic differences with regard to domestic and cross-boarder M&As, which indicates that the motives behind acquisition policies are not very different between those types of transactions. After all, we may conclude that the probit model from Table 2 works well to explain the probability of being acquired.<sup>6</sup>

Next, we turn to the wage effects of M&As. Regarding this, Table 3 shows our results from the propensity score matching procedure with five nearest neighbors. Again, column (1) of the table represents the full sample, column (2) only presents the results for cross-boarder M&As, and column (3) the ones of domestic acquisitions. Further, the upper block of the table refers to our baseline definition of acquisitions (i.e., M&A-50), the middle and lower blocks indicate the results of our alternative measures, M&A-25 and M&A-100, respectively. Finally, we estimate the wage premia for Western and Eastern European countries separately, and examine the wage growth effects for firms with (pre-acquisition) average wages above and below our sample median. The latter gives some indication on whether (foreign) M&As are associated with additional wage ‘dumping’ in target firms.

Let us start with our baseline definition M&A-50. There, we find a significantly positive wage effect of M&As in the full sample, which is in line with the empirical literature on M&As. In particular, in the first year after acquisition, wages in M&A targets are increased by 3.45 percentage points more than in the counterfactual situation where these firms would not have been acquired. As can be seen from the table, this result is mainly driven by M&A targets located in Western European countries. Further, we observe the largest positive wage growth effects for firms with average (pre-acquisition) pay below median wages. Our baseline estimate for this group of firms suggests that their (average) wage growth is approximately 7.3 percentage points higher as in a situation without being an M&A target.

Cross-boarder M&As reported in column (2) turn out to be insignificant, indicating that there are no systematic wage premia for this type of acquisition. The only exception are M&As at the lower end of the wage distribution, where we find strong and statistically significant effects on wages, suggesting that cross-boarder acquisitions do not influence wages in low paying firms in a negative way. Moreover, the estimated ATT of 8.41 percentage points indicates that the overall

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<sup>6</sup>Of course, this is not sufficient for matching being a suitable framework to estimate the impact of (foreign) M&A on post-acquisition wages. Rather, it is important that the observable characteristics explaining M&A probabilities are similar enough between the acquired and non-acquired control firms (i.e., balancing property). Checking this property, we find a considerable bias reduction, indicating that the difference between both firm types reduced substantially after matching. For the sake of brevity, we do not report these results here, but they are available from the authors upon request.

Table 3: Wage growth effects of M&amp;As (matching estimates)

Sample	All M&As		Cross-boarder M&As		Domestic M&As	
	ATT	#M&As	ATT	#M&As	ATT	#M&As
<b>Baseline merger definition M&amp;A-50</b>						
Full Sample	3.45** (2.37)	432 –	2.91 (1.40)	230 –	0.81 (0.39)	202 –
Western European countries	3.29** (2.04)	341 –	1.74 (0.71)	163 –	1.63 (0.74)	178 –
Eastern European countries	3.61 (1.08)	91 –	5.74 (1.50)	67 –	–6.25 (–0.96)	24 –
Average wages below median	0.51 (0.37)	258 –	–0.81 (–0.38)	135 –	–0.43 (–0.24)	123 –
Average wages above median	7.22** (2.55)	174 –	8.41** (2.24)	95 –	0.56 (0.13)	79 –
<b>Merger definition M&amp;A-25</b>						
Full Sample	2.99** (2.26)	524 –	4.05** (2.25)	292 –	1.65 (0.85)	232 –
Western European countries	2.86** (1.96)	425 –	3.60* (1.75)	219 –	2.21 (1.07)	206 –
Eastern European countries	3.18 (1.05)	99 –	5.25 (1.47)	73 –	–2.47 (–0.42)	26 –
Average wages below median	–0.19 (–0.15)	319 –	0.22 (0.12)	179 –	0.24 (–0.13)	140 –
Average wages above median	7.31*** (2.82)	205 –	9.71*** (2.80)	113 –	3.81 (0.98)	92 –
<b>Merger definition M&amp;A-100</b>						
Full Sample	2.99* (1.85)	380 –	2.75 (1.22)	206 –	3.21 (1.38)	174 –
Western European countries	3.28* (1.91)	345 –	3.64 (1.50)	181 –	3.86 (1.58)	164 –
Eastern European countries	–0.59 (–0.13)	35 –	–3.82 (–0.62)	25 –	–8.33 (–1.48)	10 –
Average wages below median	–0.09 (–0.06)	265 –	–0.34 (–0.17)	150 –	1.27 (0.60)	115 –
Average wages above median	8.97** (2.28)	115 –	11.58** (1.99)	56 –	5.69 (1.06)	59 –

<sup>a)</sup> Average treatment effect on the treated (ATT) reported in percentage points. *t*-values based on robust standard errors in parentheses. \*, \*\* and \*\*\* denote significance at 10%, 5% and 1% levels, respectively.

effect of M&As in the low wage firms is mainly driven by cross-boarder acquisitions. Regarding domestic acquisitions, (column (3) of the table) we observe insignificant results throughout, indicating that this type of firm transactions exerts a negligible impact on post-acquisition wage growth.

Our findings from the baseline definition M&A-50 seem to be confirmed by the results of the alternative measures of acquisitions (middle and lower blocks of the table), with one notable exception. Applying the M&A-25 definition, we are able to estimate significantly positive wage premia for cross-boarder acquisitions, not only for firms with average wages below the median, but also in the full sample and in the group of Western European countries. For this country group, we are able to exploit information from 56 additional foreign M&As (the sample includes 219 M&As as opposed to 163 firms before), which might explain the significant estimation results now. For Eastern Europe, in contrast, we only gain 6 foreign M&As (having 73 firm now), leading to insignificant wage premia for foreign acquisitions again.

On balance, our estimation results from Table 3 let us conclude that M&As in general, and particularly ones where the acquirer is a foreign firm, tend to induce positive short-run wage effects for workers in the acquired firms. These effects are most pronounced in low wage M&A targets and tend to be solely induced by cross-border M&As.

## 4 Conclusions

This paper provides evidence on whether globalization, as measured by cross-boarder acquisitions of firms, exerts a systematic impact on labor compensation. We focus on a cross-section of countries using firm-level data from 16 European economies between 1999 and 2006. To account for a possible selection bias we use propensity score matching techniques, also applied in previous related contributions. Accordingly, we compare wages in acquired firms with ones in non-acquired firms, focusing on wage growth one year after the transaction has taken place.

Our findings might be summarized as follows. First, we are not able to provide evidence that foreign mergers and acquisitions (M&As) are associated with a downward pressure on wages, but rather, we broadly observe positive wage premia of such ownership changes. Second, pay differences between acquired and non-acquired firms are largest for ones with average labor compensation below the median. From this, one might conclude that foreign acquisitions do not induce a downward pressure on wages at the lower end of the wage distribution. Third, we find systematic differences in wage premia between Western and Eastern European countries, suggesting that wage policies of acquiring firms are distinctive in these groups of countries.

In contrast to the existing literature, providing comprehensive single-country evidence on wage premia, our results rely on firm-level information from more than one economy. Unfortunately, matched employer-employee data for a larger country coverage are not available so far and,

therefore, we are unable to analyze within-firm wage distributions. Previous papers exploiting such information for single countries suggest that foreign M&As, on average, are paying higher wages, being in line with the evidence presented in our paper. However, they also observe negative pay differentials for workers at lower end of the wage distribution (see, e.g., Heyman, Sjöholm and Gustavsson Tingvall 2011). Our results indicate that this is not necessarily driven by low wage industries and firms, but it might be rather rooted in a general increase of within-firm wage inequalities. From this, one might conclude that there are still losers of globalization. Hopefully, matched employer-employee data from more than one country is available soon to address this issue further.

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