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Shareholders and employees: rent transfer and rent sharing in corporate takeovers

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Shareholders and employees: rent transfer and rent sharing in corporate takeovers

1.1 Introduction

1.1.1 Research motivation

The introduction of the ideology of maximising shareholder value and the rise of institutional investors in LMEs contributed to the development of an active MCC, which threatens managers with replacement if they do not act in the best interests of shareholders. However, some authors argue that restructuring for shareholder value through the MCC may negatively affect labour (Froud et al., 2000; Lazonick and O'Sullivan, 2000). It is suggested that such corporate governance practices may discourage employees from investing in firm-specific human capital and may pressurise managers into taking short-term profit-maximising actions instead of investing in long-term sustainable projects (Blair, 1995).

Specifically, it is suggested that ownership change through corporate takeovers facilitates wealth transfer from employees to shareholders by allowing acquirers to renege on intrinsic contracts with employees, such as promises of extra-marginal wage payments (Shleifer and Summers, 1988). These renegotiations may result in more favourable value redistribution for shareholders. In expectation of the advantages of this bargaining process, acquiring firm managers pay high premiums, leading to a significant rise in share prices. In short, this *value-redistribution theory* suggests that takeovers may be undertaken with the purpose of *rent transfer* from employees to shareholders. This implies that post-takeover employee welfare should be inversely related to shareholder gains earned at the time of the takeover announcement.

Alternatively, *the value-creation* theory of takeovers suggests that shareholder gains come from expected efficiency improvements arising as a result of shifting target firm assets to more

efficient users (Manne, 1965)[1]. Under this theory, post-takeover workforce and wage changes should depend on the success of mergers, which may be characterised by successful integration, higher profitability and better business opportunities. Such positive changes in firm performance should be incorporated into acquirers' share price post-merger. Such efficiency improvements should also benefit employees (Holmstrom, 1988; Conyon et al., 2004). In short, takeovers may be undertaken with the purpose of improving the welfare of all stakeholders, leading to *rent sharing* between them. This implies that post-takeover changes in labour welfare should depend on the success of mergers, where the success could be measured by acquiring firm shareholders' long-run abnormal returns.

Despite extensive research on the effect of takeovers on shareholder value and employee wealth, the question of whether there is any association between these two variables remains unanswered. There is little prior empirical evidence which directly tests this association. At the same time, this small body of literature provides mixed conclusions on the validity of the rent transfer argument: there is empirical evidence both rejecting and supporting the rent transfer hypothesis (Rosett, 1990; Gokhale et al., 1993; Becker, 1995; Beckmann and Forbes, 2004).

To assess these competing hypotheses one needs to analyse the changes in both owners' and employees' wealth around the time of takeover announcements and then test the relationship between these variables. We consider changes in two sets of owners: target firms' short-run abnormal returns surrounding the takeover announcement and acquiring firms' long-run

[1] As outsiders' cash flow expectation from using target assets is higher than the cash flow expectation of incumbent managers, their valuation of these assets is higher than the incumbent's valuation. This higher valuation enables outsiders to make a higher bid. This higher bid (or expectation of such a bid) causes an increase in the market value of the target shares.

abnormal returns as possible explanations of post-takeover changes in labour welfare[2]. We measure the impact of takeovers on labour using changes in two items of labour data: number of workers and their annual wages.

In addition to the full sample analysis, we measure the shareholder wealth effect of takeovers in the WFR and WFG sub-samples[3]. According to *the value-redistribution* theory, the WFR sub-sample shareholders should earn higher abnormal returns than the WFG sub-sample shareholders. To test these predictions, first, we compare short-run shareholder abnormal returns for the WFR and WFG sub-samples. Furthermore, wage growth should depend on target firm shareholder gains. To test this prediction, we regress post-takeover employment and wage changes on target firm shareholders' gains.

According to *the value-creation* theory, the WFG sub-sample shareholders should earn higher long-run abnormal returns than the WFR sub-sample shareholders. Therefore we compare long-run share price abnormal returns of acquiring firms for WFG and WFR sub-samples. Furthermore, workforce and wage growth should depend on the value created by mergers, which could be measured with the acquirers' long-run abnormal returns. Therefore we investigate whether post-takeover long-run abnormal returns are associated with the changes in workforce and wages by regressing long-run abnormal returns on employment and wage growth.

1.1.2 Brief results and contributions

We find that around takeover announcements the WFR sub-sample shareholders earn lower abnormal returns than the WFG sub-sample shareholders. This contradicts the predictions of the

[2] After mergers some target firm shareholders may become shareholders of acquiring firm, if payment was in the form of stock.

[3] The WFR and WFG sub-samples are explained in the chapter 5.

rent transfer argument. Interestingly, the WFR sub-sample acquirers lose significantly, while the WFG acquirers' wealth does not change much. Similarly, in the long run the WFR sub-sample acquirers earn significant negative abnormal returns, while the WFG sub-sample acquirers' performance does not differ from the performance of non-merging control firms.

Furthermore, the regressions show a positive association between target shareholders' abnormal returns and workforce growth, while the premium is positively associated with wage growth. Only in cash-financed acquisitions are higher abnormal returns associated with lower wage growth, while in hostile takeovers a higher premium is associated with lower wage growth. Similarly, in related acquisitions a high premium leads to slower employment growth.

In contrast, the results support the rent-sharing argument: there is significant positive association between shareholders' long-run abnormal returns and post-takeover changes in both workforce and wage, meaning that in acquisitions with low shareholder returns, wage and employment growth is also low. Thus, we conclude that in corporate takeovers employee wealth concessions do not depend on the rent expropriating behaviour of shareholders, but post-takeover jobs and wages depend on the value created by takeovers; if shareholders gain from takeovers, then employees also benefit from such transactions; if shareholders lose from the acquisitions, then employees also suffer from them.

The contribution of this chapter is twofold. First, it provides new evidence on the relationship between shareholder gains and employee wealth concessions around takeover transactions. Although there is well established research on the shareholder wealth effect of takeovers on the one hand, and the effect of takeovers on labour on the other hand, the research on the direct relationship between these two effects of takeovers is limited to a few papers only (discussed in the next section).

Secondly, the chapter clarifies takeover motivations and sources of gains arising from such transactions. *The value-redistribution* theory suggests rent transfer from other stakeholders to shareholders as a source of takeover gains. Alternatively, *the value-creation* theory suggests efficiency improvements as a source of takeover gains. So empirical evidence on these two competing theories clarifies the issues related with the effectiveness of corporate governance practices in LMEs.

Shareholder gains around takeover announcements are well documented: in the short run target shareholders earn significant abnormal returns, while bidder shareholders' wealth does not change much. At the same time there is growing evidence showing that in the long run acquiring firm shareholders lose significantly. However, the sources of these gains are controversial and, more importantly, the reasons for the long-run stock price underperformance, termed as the 'post-takeover performance puzzle' in corporate finance, is unknown. In short, the question of *how* takeovers *create* or *destroy* shareholder value is still unanswered. Therefore the results of this chapter also clarify the matter of whether acquirers' underperformance could be related to the changes in employment and wages.

1.2 Theoretical background and hypothesis development

1.2.1 Target shareholders' gains and post-takeover changes in employee wealth

It is suggested that market mechanisms such as the 'exit' strategy, used in LMEs to discipline managers, excessively pressurise them into maximising shareholder value. As a result, managers may take actions to increase shareholder value at the expense of other stakeholders. Specifically, ownership change may also lead to a change in management control, where new management may not be responsible for adhering to the implicit contracts between incumbent management and employees. Being themselves under market pressure, new management have incentives to

breach those implicit contracts and renegotiate them in favour of shareholders. On the basis of this Shleifer and Summers (1988) suggest that gains to target shareholders at least partially come at the expense of labour, in the form of job losses, wage cuts and other forms of rent reductions for employees. Under the 'nexus of contracts' view of the firm, long-term contracts between shareholders and employees could be implicit, providing a trust-based framework to employees for investing firm-specific capital. Although *ex ante* such contracts are valuable for both shareholders and employees, *ex post* shareholders may derive some benefit from reneging on such contracts by firing more senior workers, whose wage exceeds their marginal product and who were underpaid when they were young. As these implicit contract holders are mainly incumbent managers, shareholders can breach these contracts by replacing the incumbent management through ownership change. Chemla (2005) suggests that even friendly mergers may involve breach of trust between shareholders and other stakeholders, and hence the existence of a takeover threat reduces the ex-ante investments of other stakeholders. Therefore all takeovers may affect long-term labour relations.

In such cases, incumbent management and workers form alliances against shareholders. Hellwig (2000) argues that incumbent management and workers are natural allies against non-controlling shareholders and therefore they have incentives to make implicit contracts. Pagano and Volpin (2005) develop a model formally showing that managers and employees have incentives to make alliances against shareholders. Managers transform employees into anti-takeover defence mechanisms by offering them long-term employment contracts, paying high wages and not monitoring too strictly, when they have small ownership stakes. The reason for such a coalition is that managers value the private benefits of a 'quiet life', while employees fight hostile takeovers to protect their long-term contracts and high salaries. Thus, a generous

employment policy can serve as an entrenchment instrument for the incumbent management and it may be preferable for shareholders to discipline such behaviour through 'exit'.

At the same time, many other authors argue that acquiring firm managers pay high premiums to target shareholders and subsequently cover these by cutting labour costs (Hayward and Hambrick, 1997; Sirower, 2000). This also suggests post-takeover employee layoffs, induced by target firm shareholders' gains in the form of a takeover premium (Krishnan et al., 2007).

The empirical tests of *the value-redistribution* theory include analysing union wealth change, wage growth or labour demand adjustments after takeovers. Some authors have provided at least partial support for the rent transfer argument. Becker (1995) finds that the mean difference in target shareholder returns for unionised and non-unionised firms was statistically significant and economically large. Shareholder returns in unionized target firms were 14-16% larger than average target shareholder returns of 37%, supporting the rent expropriation theory. Rosett (1990) provides evidence showing that 10% (5%) of shareholder gains in hostile (friendly) takeovers could come from labour losses over a period of 18 years after takeovers. Lichtenberg and Siegel (1990) estimate that workforce growth in ownership-changing auxiliary (production) units is 17% (4.5%) lower than in non-ownership-changing units. However, Brown and Medoff (1988) report a 5% increase in employment, while McGuckin and Nguyen (2001) report an insignificant 3% growth in employment.

The results of Gokhale et al. (1993) suggest that hostile takeovers reduce employment for more senior workers than other workers. Bhagat et al. (1990) find that in 28 of 62 hostile takeover cases on average 5.7% of workers were laid off, which provided cost savings to cover only 10-20% of the takeover premium. Using a small UK sample, but adjusting for the effect of relevant asset divestments, Beckmann and Forbes (2004) report an 11% employment decline during the five years post-takeover. Gugler and Yurtoglu's (2004) results reveal that US tender

offer takeovers reduce employment by 8%, while other takeovers do not change employment levels. Therefore these authors interpret this as being consistent with the rent transfer hypotheses as tender offers can be assumed to cause a larger element of hostility than other takeovers. However, interestingly, their results show that UK tender offer takeovers do not significantly change employment levels, while other deals reduce employment by 14%. In short, according to the rent transfer hypothesis, post-takeover workforce changes are predicted to be an inverse function of target firm shareholders' gains (share price abnormal returns or bid premium):

Q3-H1: *Target firm shareholders' short-run abnormal returns surrounding takeover announcements are negatively associated with post-takeover workforce growth.*

Q3-H2: *The takeover premiums paid to target firm shareholders are negatively associated with post-takeover workforce growth.*

In addition to employee layoffs, the rent transfer could also involve slower wage growth and cuts in other rents to workers. Several empirical studies report that unexplained extra-marginal wage differentials exist even amongst firms within the same industries with similar financial indicators (Krueger and Summers, 1988). Lazear (1979) suggests that it is preferable for both firms and workers to agree to a long-term wage stream that pays workers less than the value of their marginal product when they are young and more than the value of their marginal product when they are older. Such an extra-marginal wage provides long-term incentives, urging workers to make firm- specific human capital investment. However, it may be beneficial for shareholders to reverse such payments through ownership change that facilitates the renegotiation of such extra-marginal wage payments.

As discussed above, the Pagano and Volpin (2005) model predicts that incumbent managers have incentives to pay higher wages to protect the private benefits of their own 'quiet life'. In contrast, post-takeover new managers have incentives to cut wages as much as possible

and to introduce more intensive monitoring of workers to maximise takeover gains. Their model predicts that such wage cuts cause an increase in the company's share price in proportion to the share of the total wage bill that is paid to employees with renegotiable contracts.

Gokhale et al. (1993) analyse extra-marginal wage payments to workers in the form of employer-specific wage differentials and steeper-than-average seniority wage payments. Analysing the pre-event characteristics of hostile takeover targets and the probability of subsequent hostile takeovers, they could not find any significant relationship between these two variables. The Gokhale et al. (1993) results reveal that senior employees' wage profiles flatten for firms with an initially high concentration of senior workers, indicating the wealth expropriation after such takeovers. Neumark and Sharpe (1996) argue that if the highest wage premia and the steepest wage profiles for more-tenured workers reflect extra-marginal wage payments, then hostile takeovers should target firms with these characteristics. However, logistic regressions do not show that the likelihood of being a hostile takeover target is related to such characteristics.

However, only one UK study in this area – that of Beckmann and Forbes (2004) - reports that wage growth is also higher than a benchmark wage growth[4]. In their study the regressions of bid premiums on job cuts and wages indicate no significant association between these variables.

In brief, many authors agree that a substantial part of shareholder gains results from employee losses. For example, Pontiff et al. (1990) report that pension fund revisions are higher after hostile takeovers (15%) than after friendly takeovers (8%), consisting of on average 11% of target shareholders' takeover announcement gains. Takeover gains could come in the form of wage cuts (covering 10% of gains, as reported by Rosett (1990)), pension fund revisions

[4] Beckmann and Forbes (2004) estimate the wage growth benchmarks on the basis of pre-takeover historic wage growth and industry average wage growth.

(covering 15% of gains, as reported by Pontiff et al. (1990))[5] and employee layoffs (covering 10-20% of gains, as reported by Bhagat et al. (1990)). On the basis of this discussion, the following hypotheses will be tested:

Q3-H3: *Target firm shareholders' short-run abnormal returns surrounding takeover announcements are negatively associated with post-takeover wage growth.*

Q3-H4: *The takeover premiums paid to target firm shareholders are negatively associated with post-takeover wage growth.*

1.2.2 Acquirer shareholders' gains and post-takeover changes in employee wealth

As discussed above, a strand of literature suggests that in LMEs managers shift risks onto labour during hard times (Froud et al., 2000; Lazonick and O'Sullivan, 2000). According to this view managerial actions will be dictated by the market and managers under market pressure favour shareholders' interests over labour interests. However, a recently emerging strand of literature argues that such a view does not fully represent the reality of labour management (Deakin, 2005). Gospel and Pendleton (2003) and Pendleton (2009) argue that the existing evidence does not support the above hypothesized negative effect on labour of restructuring for shareholder value. Instead the labour management practice in the publicly listed firms in LMEs could also be considered as more favourable towards labour and Pendleton (2009) discusses several reasons for a such management style. Institutional investors have started to use relational forms of governance rather than market forms of governance as the latter is becoming more costly. This gives managers a greater degree of 'strategic choice' and autonomy from shareholders in decision-making. At the same time, corporate law requires managers to exercise independent

[5] However, Pontiff et al. (1990) report that this type of rent cut occurs only in about 10% of cases of takeovers.

judgement and to promote the success of the company, balancing the interests of all stakeholders involved, including shareholders and employees.

On the basis of this it can be argued that wages and workforce growth depend on the value created by takeovers. In other words, post-takeover employee wealth concessions should be determined by a successful outcome of business integration process that enhances firm profitability and creates new growth opportunities. Such changes should alter post-takeover operating performance and gradually raise the share price of acquiring firms. Thus, one of the measures of merger success is the acquiring firms' long-run stock price abnormal returns. Workforce reductions may occur after unsuccessful takeovers, resulting from poor acquisition strategy, mis-match of acquired and acquiring business or failure of business integration. In contrast, only those acquisitions that create high business growth opportunities may benefit workers with new jobs and accelerated wage growth. Therefore we argue that success of mergers is measured by acquirers' long-run abnormal returns. Furthermore, post-takeover wage and employment growth should be associated with acquirers' long-run abnormal returns. Consistent with this hypothesis, the WFR sub-sample acquirers' abnormal returns should be more negative than WFG sub-sample acquirers' abnormal returns.

There may be several reasons for faster wage growth during a post-merger period. First, workers may earn higher wages as a result of changes in the wage setting process and a post-merger profitability increase. Conyon et al. (2004) report that both profitability and wages rise following mergers, where related acquisitions increase wages faster than unrelated acquisitions due to increased efficiency in labour usage. Alternatively, managers may become more entrenched after mergers, having more control rights. Cronqvist et al. (2009) show that managers with more control pay their workers more. While wage cuts are expected after hostile takeovers involving management turnover, it is reasonable to expect wage growth after friendly takeovers.

The reason is that managers may prefer a 'quiet life', as discussed in Pagano and Volpin (2005) and Pendleton (2009). Previously Bertrand and Mullainathan (1999, 2003) showed that when the takeover threat is weak, managers pay high wages. Mergers enlarge firms, making them less vulnerable to takeover threats. As a result managers of such firms become more entrenched and start paying higher wages. Pendleton (2009) also suggests that the high visibility of publicly listed companies may encourage managers to adopt a more labour friendly management style in such companies.

A growing number of empirical studies provide evidence showing that takeovers are value enhancing transactions, benefiting both shareholders and employees. Some of the value enhancements come in the form of economies of scale through decline in labour demand. The Conyon et al. (2002, 2004) and Gugler and Yurtoglu (2004) results indicate that during the first two post-takeover years labour demand declines by about 12-20%. This decline in labour demand is interpreted as evidence of efficiency improvement and significant rationalisations in labour use. Bertrand and Mullainathan (2003) report that after adopting anti-takeover laws, the total factor of productivity and profitability declines. At the same time, worker wages, especially wages of 'white-collar' workers rise after the adoption of anti-takeover rules. Therefore the authors conclude that takeovers do not involve rent transfer to shareholders, but improve economic performance through management disciplining. On the basis of this discussion, the following hypotheses will be tested:

Q3-H5: *Acquiring firm shareholders' long-run abnormal returns are positively associated with post-takeover workforce changes.*

Q3-H6: *Acquiring firm shareholders' long-run abnormal returns are positively associated with post-takeover wage growth.*

1.3 Data and methodology

1.3.1 Econometric modelling

To test hypotheses Q2-H1 and Q2-H3, we estimate the following model:

$$\Delta X = \alpha + \beta_1 CAR^T + \mathrm{B}Control + \varepsilon \quad (1)$$

where ΔX is either the change in the logarithm of number of employees from t-1 to t+3 in the employment equation or the change in the logarithm of average wages per employee per annum in the wage equation. The number of employees represents the average number of both full- and part-time employees during the relevant year. Wages represent annual staff costs paid to all employees and directors of the firms[6], scaled by the number of employees. It includes wages and salaries, social security costs and other pension costs[7]. CAR^T is the target firm shareholders' short-run abnormal returns around takeover announcement, and ε is the error term. *Control* variables include:

- *Change in acquirers' operating performance*, measured as change in the ratio of EBITDA to Total Assets (hereafter ROA);

[6] The most direct test of the rent transfer hypothesis should be undertaken on the basis of the analysis of individual worker wages in both target and acquiring firms, using employee-employer linked data. However, we do not have such a dataset and therefore we use information on firm level staff costs, obtained from *Datastream*. Firm level staff cost data represents wages paid to all employees and officers of the firm. It also includes other employee benefits such as insurance and contributions to pension plans.

[7] These variables have been collected for the period of three years before and three years after the takeover completion year, taking into consideration the fiscal year end of the sample firms.

- *Change in control firm workforce* (in the employment equation), where the control firm is selected on the basis of industry, size and pre-event performance criteria, as recommended by Barber and Lyon (1996)[8];

- *Change in industry average wage* (in the wage equation), calculated as the change in industry-median wage rate;

- *Relative size*, which is the ratio of acquiring firm size to the transaction value (target firm size). Previous research shows that larger firms pay higher wages, because they hire higher quality workers (Brown and Medoff, 1989). Lichtenberg and Siegel (1990) and McGuckin and Nguyen (1995) confirm that the effect of mergers is different for small and large firms: in small firms wages rise more quickly than wage rise in large acquirers;

- *Leverage*, which is the debt-to-equity ratio at the end of the takeover completion year;

- *Board ownership*; prior research argues that Board ownership reduces agency problems and induces managers to make shareholder value maximizing decisions (Cosh et al., 2006). Lewellen

[8] For each acquired and acquiring firm we select a matching firm at the end of year t-1 on the basis of the methodology recommended by Barber and Lyon (1996): first, we filter all firms in the same industry with the sample firm; second, we select all firms within the 25% to 200% size interval of the sample firm's size, size being measured by total assets; third, we select the non-acquiring firm with the closest operating performance measure (EBITA scaled by total assets) to the matching firm. In addition to this, the matched firm should not be involved in major mergers or acquisitions two years before the sample takeover year and three years after the sample takeover year.

et al.(1985) conclude that takeovers initiated by directors with small ownership are more likely to have negative bidder stock returns;

- *Relatedness* dummy regressor, which takes 1 if both target and acquiring firms are in the same industry and 0 otherwise. Prior research suggests that the scope for synergy, and subsequent value created by mergers, differs depending on the relatedness of merging businesses. In related mergers there are more opportunities for achieving a greater level of cost savings by eliminating duplicative activities (Rumelt, 1974);

- *Hostility* dummy regressor, which takes 1 if the management of the target company rejects the initial offer made by any acquirer and 0 otherwise; Shleifer and Summers (1988) argue that the rent transfer hypothesis is especially true in the case of hostile takeovers.

- *Cash paid* dummy regressor, which takes 1 if all payments are made with cash and 0 otherwise; Franks et al. (1988) show that premiums are higher in cash acquisitions than in equity acquisitions. At the same time, the payment means provides the market with some information about the quality of the mergers: prior research shows that in cash acquisitions shareholders' long-term abnormal gains do not differ from zero, while in equity acquisitions shareholders incur significant abnormal losses (Franks et al., 1988; Bhagat et al., 1990).

To test hypotheses Q2-H2 and Q2-H4, we estimate the following model:

$$\Delta X = \alpha + \beta_1 \text{Premium} + \text{B}Control + \varepsilon \qquad (2)$$

where *Premium* is the excess of bid price over share price one month prior to takeover announcement, and other variables are as explained above.

To test hypotheses Q2-H5 and Q2-H6, we estimate the following model:

$$\Delta X = \alpha + \beta_1 BHAR + \mathrm{B}Control + \varepsilon \qquad (3)$$

where *BHAR* is long-run share price abnormal returns for acquiring firm shareholders, and other variables are as explained above.

1.3.2 Data and measuring post-merger changes in workforce and wages

This chapter uses the same sample and data as described in Chapter 5. Similarly, post-merger changes in the workforce and wages are measured using the same technique as described in Chapter 5.

1.3.3 Measuring shareholders' short- and long-run abnormal returns

To measure target firm shareholders' gains, we use two measures: takeover premium and target firm shareholders' abnormal share price returns around takeover announcement dates. A one-month premium is usually used to control for the rumours about takeovers and to determine the true size of the premium. As in other studies, this variable is defined as the difference between the purchase price and the 30 day pre-takeover price divided by the 30 day pre-takeover price.

We use daily stock price return data for the calculation of short-term abnormal returns and monthly stock price return data for that of long-term abnormal returns. To estimate short-run abnormal gains, daily returns are calculated using Stock Returns Index data, downloaded from *Datastream*. For this purpose, for both targets and bidders, 300 daily Stock Return Indexes for both target and buyer firms have been downloaded around the takeover announcement date: 294 days before the announcement date and 5 days after the announcement date. Similarly, FTSE All-Share Index figures for 300 days have been downloaded for each takeover's announcement dates.

Consistent with the previous research, daily stock returns from -300 days to -60 days have been used to estimate market model parameters and to calculate the variance for abnormal returns.

To calculate long-term abnormal returns we use the monthly stock price returns of acquiring firms for the period t+36 months. For this purpose, for each acquirer the monthly stock return index for the period of 37 months following the takeover completion month has been downloaded from *Datastream*. Similarly, for each matching firm (selected on the basis of industry, size and performance) the corresponding 37 monthly return index figures have been downloaded.

We estimate short-run stock price abnormal returns using CAR calculation methodology, and long-run abnormal returns using BHAR methodology, described in Chapter 4.

1.4 Results

1.4.1 Univariate analysis of post-takeover changes in workforce and wages

Table 2 reports the percentage changes in workforce and wages during post-takeover years relative to the pre-takeover year, controlling for the workforce and wage changes in the matched firms, using the Brown and Medoff (1988) regression methodology. We ran separate regressions for each dummy regressor (all takeovers, hostile, related, cash-paid and employee layoff-making takeovers). The table only provides the coefficients of the relevant dummy variables, without reporting the coefficients of pre-takeover wage and employment variables.

Table 1 Post-takeover percentage change in workforce and wages

Post-takeover years	t=0	t+1	t+2	t+3
Panel A: Change in employment relative to the pre-takeover level				
All takeovers	- 0.123***	- 0.032*	- 0.013	- 0.009
Related takeovers	- 0.122***	- 0.041*	- 0.007	0.027
Unrelated takeovers	- 0.124***	- 0.025	- 0.05	- 0.078
Hostile takeovers	- 0.153***	- 0.062*	- 0.06	0.036
Friendly takeovers	- 0.119***	- 0.026	- 0.006	- 0.013
Cash financed takeovers	- 0.124***	- 0.056	- 0.027	0.024
Non-cash financed takeovers	- 0.122***	- 0.026	- 0.012	- 0.026
Panel B: Change in wage rate relative to the pre-takeover level				
All takeovers	- 0.006	- 0.012	0.019*	0.033**
Related takeovers	- 0.01	0.002	0.014	0.032*
Unrelated takeovers	- 0.005	0.033***	0.031**	0.039**
Hostile takeovers	- 0.027*	0.044**	0.029	0.047*
Friendly takeovers	- 0.001	0.005	0.018	0.031**
Cash financed takeovers	0.031***	0.001	0.008	0.028
Non-cash financed takeovers	- 0.018**	0.019*	0.025*	0.035**

The above mean percentage changes were calculated on the basis of Brown and Medoff (1988), which estimates percentage changes, controlling for the lagged variables, on the basis of the following equation:

$$X_{t+j} = \sum_{k=t-3}^{t-1} \alpha_{jk} E_k + \sum_{k=t-3}^{t-1} \beta_{jk} W_k + \delta_j D + \varepsilon, \qquad (2)$$

where X indicates the logarithm of average wages per employee per annum in the merging firms and control firms in the wage equation and the logarithm of number of employees in the merging and control firms in the employment equation; t is the takeover completion year; $j = \{1,2,3\}$, i.e. post-takeover years, W indicates the logarithm of average wages per employee per annum, E indicates the logarithm of number of workers; $k = \{t-1, t-2, t-3\}$, i.e. pre-takeover years; D is a merger dummy variable, which takes 1 for merging firms and 0 for control firms. In this regression the dummy variable coefficient indicates the mean wage (or employment) growth for merging firms, comparing the wage (employment) growth in merging firms with the wage (employment) growth in non-merging control firms. In addition, models also include year and industry dummies in addition to pre-takeover levels of employment and wage. The estimation method is the Ordinary Least Square estimation method. In these regressions a newspaper information-based layoff dummy variable is used.

Panel A reports the *employment* effect of takeovers. During the transaction completion year *all takeovers* reduce the workforce by 12% and by 3.2% one year after mergers. However, in the second and third post-takeover years the change in employment levels is not significantly different from the employment growth in non-merging control firms. Both *related* and *unrelated* acquisition show a 12% decline during the merger year and related mergers result in a 4.1% lower workforce growth in comparison to non-merging firms during the first post-takeover year. In contrast, the results show that *hostil*e takeovers reduce employment levels more than *friendly*

takeovers do. During the merger year hostile takeovers reduce employment by about 15%, while friendly mergers reduce employment by 12%. Furthermore, *hostile* acquisitions reduce employment by 6% during the first post-takeover year. Conyon et al. (2001) suggest that this steep decline in employment levels should not lead to the view that hostile takeovers destroy jobs, as their results show that, after controlling for the pre-takeover wage, employment and output variables, this distinctive effect of takeovers disappears. This indicates that the significant decline in employment in the case of hostile takeovers is the result of output decline, possibly due to high levels of divestments after such takeovers. The results show that the employment effect of *cash-financed* takeovers does not differ from the employment effect of *non-cash-financed* takeovers.

Panel B reports the *wage* effects of takeovers. The results show that takeovers lead to higher levels of wage growth than is the case in non-merging firms. For the full sample, the results indicate that wages rise by 1.9% after two years and 3.3% after three years, indicating that employees in the merged firms earn higher wages on average than in the case of no merger. *Unrelated* acquisitions cause higher wage growth than *related* mergers: although the signs of the related merger coefficients are positive for all three years, the increase is only significant in the third year, while for unrelated mergers they are significant in all three years. After unrelated mergers employees earn about 3-4% higher wages on average than if mergers did not occur. After *hostile* takeovers employees earn about 4-5% higher wages than they would earn in the case of no merger, while *friendly* mergers cause 3% wage growth during the third post-takeover year. The results show that during post-takeover years *non-cash-financed* acquisitions increased wages 2-3.5% faster than non-merging firms, while wages after *cash-financed* acquisitions do not differ from wages in non-merging firms.

The above simple percentage change in workforce and wages during post-takeover years shows no support for the rent transfer hypothesis: post-takeover employment growth does not differ much from workforce growth in control firms, while wage growth is higher in acquiring firms in comparison to wage growth in control firms. Although the results of the above regressions are informative, these models do not control for the effect of output changes and other relevant variables. It is still possible that there may be a negative relationship between shareholder gains and employee wealth concessions. Specifically, higher shareholder gains may be associated with lower growth in wages and employment, after controlling for other relevant variables. The next section investigates this association.

1.4.2 Evidence on the rent transfer hypothesis

Univariate analysis of shareholders' short-run abnormal returns

To investigate the association between shareholder gains and employee wealth concessions, first we calculate CARs for 11 days (5 days before the announcement date and 5 days after the announcement date), for 3 days (1 day before the announcement date and 1 day after the announcement date) and for the announcement date alone. Table 3 reports the mean CARs for both acquiring and acquired firms and associated t-statistics for the full sample as well as for the WFR and WFG sub-samples.

Panel A reports the market model estimates. In the full sample target firm shareholders gain significant abnormal returns, whereas acquiring firm shareholders' wealth does not change significantly. On the takeover announcement date target shareholders gain on average 17%, which increases up to 25% within the 11 days surrounding takeover announcement. On the takeover announcement date acquirers gain small negative abnormal returns, which are significant at 10% level only. Both the magnitude and significance of the CARs are generally

consistent with the previous research: for example, Franks et al. (1992) report a 23.3% total abnormal return for the announcement month.

The results show that although target firm shareholders in both WFR and WFG sub-samples earn positive significant abnormal returns, in the former case their gains are 3-5% lower than in the latter case. In contrast, the WFG acquirers earn very small and insignificant positive abnormal returns, while the WFR sub-sample acquirers earn significantly negative CARs during the 3-day and 1-day event windows[9].

[9] The results are similar when we divide the full sample into workforce growth and workforce reduction sub-samples using the employment change during a 1-year period after takeovers.

Table 2 Short-run takeover announcement returns to acquired and acquiring firm shareholders

	Event Windows					
	Day 0		Days (-1;+1)		Days (-5;+5)	
	CARs	t-stat	CARs	t-stat	CARs	t-stat
Panel A: Market Model						
Full sample						
Target firms mean CARs	0.1652	11.37	0.2158	14.32	0.2519	15.59
Bidder firms mean CARs	-0.0043	-1.39	-0.0044	-0.94	0.0106	0.96
The WFG sub-sample						
Target firms mean CARs	0.2009	8.26	0.2401	10.09	0.2784	12.01
Bidder firms mean CARs	0.0006	0.10	0.0064	0.79	0.0090	0.92
The WFR sub-sample						
Target firms mean CARs	0.1578	7.95	0.2096	9.78	0.2442	9.69
Bidder firms mean CARs	-0.0088	-2.11	-0.0127	-1.95	0.0171	0.80
Panel B: Market Adjusted Model						
Full sample						
Target firms mean CARs	0.1647	11.36	0.2145	14.12	0.2485	15.32
Bidder firms mean CARs	-0.0048	-1.54	-0.0056	-1.22	0.0074	0.67
The WFG sub-sample						
Target firms mean CARs	0.2003	8.29	0.2374	9.94	0.2726	11.72
Bidder firms mean CARs	0.0001	0.01	0.0037	0.46	0.0032	0.35
The WFR sub-sample						
Target firms mean CARs	0.1576	7.92	0.2092	9.65	0.2408	9.55
Bidder firms mean CARs	-0.0090	-2.17	-0.0129	-1.99	0.0141	0.65

Notes: This table reports the mean values of CARs and relevant t-statistics. There are 140 observations in the WFR sub-sample and 95 observations in the WFG sub-sample.

Panel B reports the market-adjusted model estimates of CARs, which are very similar to the above discussed market model estimates. Under both models, acquisitions involving layoffs produce negative short-run abnormal returns for acquirer shareholders. Market efficiency implies that news regarding a firm's earnings should quickly reflect in its share price. Ball and Brown (1968) show that an unexpected change in future expected earnings causes rapid changes in share prices. Employee layoff announcements may also provide new information to the market about the expected changes in earnings. In this respect, announcement of layoffs involving takeovers may reveal a decline in earnings and therefore markets will negatively adjust prices to take

account of this new information. Consistent with this, the results show that workforce reducing acquirers earn negative short-run abnormal returns on takeover announcement.

Several points emerge from this analysis. First, these results do not support *the value-redistribution* theory of takeovers: according to this theory shareholders should have earned higher abnormal returns after acquisitions that involve employee layoffs than after acquisitions that do not. The above results show the opposite of this prediction: in acquisitions involving layoffs for both target and bidder, shareholders earn lower gains than in acquisitions that do not. Secondly, the results suggest that markets correctly forecast employee layoffs for certain types of acquisitions, and negatively react to the announcement of such events. Previous research shows that on takeover announcement acquirers' wealth does not change (Andrade and Stafford, 2004). The results of this chapter not only confirm this conclusion, but also show that firms making layoffs earn significant negative abnormal returns at the time of the takeover announcement. These results suggest that on announcement of a takeover markets distinguish layoff-making acquisitions from those acquisitions that do not make employee layoffs. Thus, the results support the market efficiency hypothesis, given the fact that employee layoffs may occur well after takeovers[10].

Finally, prior research shows that the short-run market reaction to layoff announcements is negative in general, as markets consider such events as reactions to poor operating performance (Hillier et al., 2007). However, prior research also suggests that market reactions to employee layoffs should depend on the underlying reasons for such events, the information provided to

[10] Some takeover announcements include information about future expected redundancies. However, it is in managers' interests to minimise such information about negative labour effects of mergers.

investors and pre-layoff performance: layoffs undertaken to respond to adverse market effects should generate a negative market reaction, while layoffs undertaken to improve efficiency should cause a positive market reaction (Elayan et al., 1998). Chen et al. (2001) also show that markets react negatively to layoffs caused by product demand decline, but react positively to efficiency improvement layoffs. The Hillier et al. (2007) results indicate that layoffs following poor operating performance generate more negative market reaction than layoffs caused by restructuring or cost cutting. In this regard, negative market reactions to layoff-involving acquisitions suggest that markets consider such acquisitions as reactions to adverse market conditions.

Multivariate regression analysis

Managers may cut costs not only by dismissing employees, but also by reducing wages or slowing wage growth. Therefore we use two variables as the dependent variables in the multiple regressions: change in workforce and wages[11]. Prior theoretical research suggests that wages and employment growth may be different in related versus unrelated, hostile versus friendly and cash-financed versus non-cash-financed mergers. Therefore we also use relatedness, hostility, cash-

[11] However, we do not use the wage change variable as the explanatory variable in the employment equation and the employment change variable in the wage equation. The reason is that when we included employment change in the wage equations, the results showed that there was a significant negative relationship between wage growth and employment growth. However, the regression diagnostics indicate that there may be some specification error with that model, as the F-value for the RESET test is very high and the p-value is low. Therefore in wage equations we report the models excluding the employment change variable and in the employment equations we report the models that exclude the wage change variable.

financed and employee layoff dummy regressors and their interactions with CARs and the premium.

Table 4 reports the regression results for the employment equations. The sign of the first main variable of interest – CARs – is positive and it becomes significant in the model which includes dummy regressors and their interactions with the CARs. One unit increase in CARs would cause 0.34% higher employment growth in unrelated (friendly and non-cash) acquisitions. In contrast, in related acquisitions, one unit increase in CARs would cause 0.02% [= 0.336 – 0.357] lower employment growth.

While the premium is not associated with post-takeover workforce change, its interaction with the relatedness dummy variable is significant and negative, implying that in related acquisitions a one percentage point increase in the premium would cause a 0.1% [= 0.177 – 0.273] reduction in employment growth. This is consistent with the view that acquirers pay a higher premium for the targets that create more synergy (for example, in the form of steeper decline in labour demand). The Ravenscraft and Scherer (1987) and McGuckin and Nguyen (2001) results show that firms acquire better-performing firms, which may require a high premium[12]. The interactions of other dummies with the premium are not significant, suggesting that the effect of paying a high premium on employment is the same in hostile versus friendly and cash-paid versus non-cash acquisitions.

[12] If post-merger business growth opportunities are high, providing high expected cash flows, then it is reasonable to assume that some of the cash flows should accrue to target firm shareholders, enabling them to earn a high takeover announcement gain.

Table 3: Regressions of post-takeover workforce change on target firm shareholders' gains (abnormal returns and premium).

Independent variables	**model1**	**model2**	**model3**	**model4**
Target CAR	0.146	0.336**		
Change in acquirers' operating performance	0.025	0.065	0.028	- 0.031
Change in control firm workforce	0.128***	0.105***	0.129***	0.113***
Relative size	- 0.034**	- 0.037*	- 0.043***	- 0.044**
Leverage	- 0.602***	- 0.678***	- 0.644***	- 0.612***
Board ownership	0.008***	0.007***	0.007***	0.005**
Relatedness		0.205**		0.273***
Hostility		- 0.025		0.123
Cash paid		- 0.123		- 0.212**
Relatedness · CAR		- 0.357*		
Hostility · CAR		0.158		
Cash paid· CAR		0.067		
Premium			- 0.010	0.177
Relatedness · Premium				- 0.273*
Hostility · Premium				- 0.190
Cash paid · Premium				0.254
Constant	0.138	0.082	0.187**	0.034
F -statistic	12.84	8.01	11.10	5.79
Adjusted R-square	0.19	0.22	0.18	0.18
Number of observations	182	180	187	183

Notes: The dependent variable is post-takeover workforce change. The estimation method is OLS, using heteroscedasticity-robust standard errors (White, 1980). Significance levels: *p<0.1, **p<0.05; ***p<0.01. Appendix 9.2 provides the definitions of the variables.

The sign of the relative size variable is negative. This suggests that the acquirers that buy large firms slow down further firm size growth during post-takeover years. Similarly, high leverage inversely affects workforce growth. The results imply that 1% point higher leverage causes 0.6% lower employment growth. The Board ownership variable has a positive coefficient, which is significant at the 0.01% level. These results suggest that higher ownership by boards lead to faster employment growth, possibly due to business growth resulting from better strategic management: one percentage point higher board ownership causes 0.8% higher employment growth during the post-takeover years. Finally, as expected, control firm workforce change is positively associated with acquirers' workforce growth.

The estimation results of the wage equations are given in Table 5. Model 1 shows that targets' CARs do not explain post-takeover wage change. However, model 2 indicates a negative

and significant slope coefficient for the cash-paid dummy and the CAR interaction term[13]. This indicates that, consistent with the rent transfer argument, in cash acquisitions a one unit increase in CARs would result in 0.13% [= 0.013 – 0.138] lower wage growth[14]. In non-cash acquisitions CARs do not explain post-takeover wage growth. At the same time there is no significant difference in the association between CARs and wage growth in related versus unrelated acquisitions and hostile versus friendly acquisitions.

[13] In the models that include interaction terms we do not interpret the lower level variable coefficients, because they only provide limited information. For example, in model 2, a significant cash-paid dummy variable would indicate that wage growth is 5.5% higher in cash-paid acquisitions than in non-cash acquisitions, but ???only when CARs are equal to zero. However, in reality CARs are rarely equal to zero. Therefore we only interpret the coefficients of the interaction terms.

[14] The effect of this variable is calculated taking into consideration the main effect and the interaction term effect.

Table 4: Regression of post-takeover wage growth on target firm shareholders' gains (abnormal returns and premium).

Independent variables	**model1**	**model2**	**model3**	**model4**
Target CAR	0.017	0.013		
Change in acquirers' operating performance	0.065	0.037	0.062	0.069
Change in industry average wage	0.173***	0.174***	0.174***	0.176***
Relative size	0.012*	0.012*	0.012*	0.013*
Leverage	- 0.060	- 0.043	- 0.059	- 0.038
Board ownership	- 0.002**	- 0.002**	- 0.002***	- 0.002***
Relatedness		- 0.048*		- 0.009
Hostility		0.024		0.067**
Cash paid		0.058*		0.048
Relatedness · CAR		0.112*		
Hostility · CAR		- 0.036		
Cash paid· CAR		- 0.138**		
Premium			0.008	0.071**
Relatedness · Premium				- 0.033
Hostility · Premium				- 0.120**
Cash paid · Premium				- 0.079
Constant	0.124***	0.117***	0.123***	0.096***
F -statistic	3.76	2.61	3.77	3.43
Adjusted R-square	0.09	0.09	0.09	0.10
Number of observations	182	182	182	181

Notes: The dependent variable is post-takeover wage change. The estimation method is OLS, using heteroscedasticity-robust standard errors (White, 1980). Significance levels: *p<0.1, **p<0.05; ***p<0.01. Appendix 9.2 provides the definitions of the variables.

Model 3 shows that the second variable of interest – premium – does not explain post-takeover wage growth. However, when the model includes dummy regressors and their interactions with the premium, the main effect of the premium variable becomes significant, indicating that in friendly (unrelated and non-cash) acquisitions a higher premium is associated with higher wage growth. Specifically, a one percentage point increase in premium leads to 0.07% higher wage growth in such acquisitions. At the same time, the slope coefficient of the interaction term between hostility dummy and premium is negative, meaning that in hostile acquisitions a one percentage point increase in premium would lead to 0.05% [0.071 – 0.120] lower wages. Other interaction terms indicate no differential effect of the CARs on wages in related versus unrelated and cash-paid versus non-cash acquisitions.

The control variables behave as expected. Wage growth in acquiring firms is strongly related to the industry-wide wage changes. The greater the acquired company size relative to the size of the acquiring company, the higher the wage growth, which is consistent with previous research that suggests that larger firms pay higher wages (Brown and Medoff, 1989). Moreover, high leverage inversely affects wage growth, as indicated by the negative coefficient. The results on the association between Board ownership and wages confirm the Pagano and Volpin (2005) model predictions: higher ownership by Boards lead to lower levels of wage growth[15].

In sum, the results in general do not support the predictions of *the value-redistribution* hypothesis, except on the following points, which provide partial support for this hypothesis. First, higher CARs are associated with wage cuts, when acquisitions are made with cash payments. Secondly, a higher premium is associated with wage cuts, when acquisitions are hostile in nature. Thus, the effect of hostile takeovers on wage growth is distinguishable from the effect of friendly takeovers, as predicted with the rent transfer argument. This evidence shows that in hostile takeovers where a high premium is paid the rent allocated to labour (in the form of lower wages) is less favourable than in the case of friendly takeovers.

At the same time, higher CARs and premiums are associated with slower workforce growth in related acquisitions. However, we argue that this evidence does not suggest rent

[15] When the model is in log – level form (i.e. the dependent variable in the logarithm form and the independent variable in the level form (could be in percentage or proportions), one unit change in the independent variable indicates a percentage change in the dependent variable, where the direction and magnitude of the change IS???given by the coefficient of the independent variable. For example, the CAR variable is entered into the model in decimal form. The Board of ownership is entered in percentage form.

transfer. Specifically, slower workforce growth in related acquisitions does not necessarily facilitate rent transfer by making high levels of employee workforce reductions, but indicates higher levels of synergy realization after such acquisitions. For other types of acquisitions (friendly or non-cash-paid) there is a positive association which contradicts the predictions of the rent transfer hypothesis.

In sum, the results do not support the rent transfer argument: in most cases targets' CARs and labour rent are positively related. In the next section, we investigate the validity of the rent sharing argument by investigating the association between long-run shareholder gains and post-takeover wage and employment growth.

1.4.3 Evidence on the rent sharing hypothesis

Univariate analysis of acquiring firm shareholders' long-run abnormal returns

This section investigates whether shareholders' long-run abnormal returns are different in the WFR and WFG sub-samples. Table 6 reports the long-term share price performance of acquiring firms in comparison to that of non-merging firms for the period of 12, 24 and 36 months following the takeover completion month. The long-run stock price abnormal returns are computed on the basis of BHAR methodology using industry, size and pre-takeover performance-matched firms[16].

Consistent with previous research, the results indicate that during the post-takeover 12 months acquiring firms earn 6% less than their matching firms and this underperformance increases to 24% in a 36-month period. Thus, the full sample results indicate that an average acquirer shareholder's wealth significantly declines during post-takeover years. The results of

[16] The results of the Calendar Time Abnormal Returns (CTAR) approach are given in the Appendix.

this analysis confirm the 'under-performance' puzzle, documented by the existing empirical research (Agrawal and Jaffe, 2003). For example, on the basis of the BHAR approach using size and B/M matched firms, Conn et al. (2005) report that in the period of 36 post-takeover months domestic public firm acquisitions result in significantly negative returns of 20 %.

Table 5 Long-run shareholder wealth effect of takeovers

	Event Windows					
	12 months		24 months		36 months	
	BHAR	t-stat	BHAR	t-stat	BHAR	t-stat
Full sample acquirers' BHAR	-0.0616	-1.84	-0.1970	-3.41	-0.2361	-2.42
The WFG sub-sample acquirers' BHAR	-0.0182	-0.31	-0.0174	-0.20	0.0488	0.32
The WFR sub-sample acquirers' BHAR	-0.0798	-1.69	-0.2269	-2.81	-0.2938	-2.19

Notes: This table reports the mean values of BHARs and relevant t-statistics. There are 140 observations in the WFR sub-sample and 95 observations in the WFG sub-sample.

Further analysis reveals that there is a clear difference in the long-run stock price performance of the WFG and WFR sub-sample acquirers, indicating that much of the underperformance could be linked to the employee layoff-making acquirers. The WFG acquirers' performance does not significantly differ from the non-merging firms' performance. In contrast, the WFR acquirers earn 8% less after 12 months, 22% less after 24 months and 29% less after 36 months in comparison to the non-merging firms.

Thus post-takeover employee workforce reductions could be suggested as one explanation for the acquiring firms' long-run 'under-performance' puzzle. On the one hand, these results imply that those acquirers who make excessive employee layoffs earn significant negative abnormal returns, because such layoffs may destroy human resource capital of acquired firms. On the other hand, the results suggest that acquirers may layoff employees after performance deterioration. Although there is a large body of literature on the market reaction to employee layoff announcements, only a few studies have analysed long-run abnormal returns after employee layoffs. Chen et al. (2001) report that although layoff-making firms' prior performance

is poor, during the post-layoff period their share price returns are not different from market returns. In contrast, Hillier et al. (2007) report significant long-run share price underperformance for employee layoff-making firms.

Multivariate regression analysis

Both short and long-run univariate analyses indicate that the WFR acquirers' wealth declines significantly, while the WFG acquirers' wealth does not change much. This section investigates whether these variations in acquirers' abnormal returns explain changes in workforce and wages, using the multiple regression analysis that controls for other relevant variables.

The regression results are given in Table 7. The results show a strong positive association between workforce changes and long-run abnormal returns[17]. This positive association implies that the lower the shareholders' long-run abnormal returns, the greater the employment reductions. For example, model 1 shows that a one point lower BHAR causes a 0.10% higher employment reduction. Model 2 indicates that in cash-paid acquisitions the regression slope is significantly smaller than the regression slope for the non-cash acquisitions. In cash-paid acquisitions, a one percentage point increase in BHAR would lead to 0.003% [= 0.116 – 0.113] higher employment growth.

Both relative size and leverage is inversely related to employment growth. Acquiring larger firms slows down further workforce growth during the three years after takeovers. Similarly, high levels of debt negatively affect firm growth. In contrast to this, higher ownership by Boards leads to accelerated growth, possibly due to the better operating performance of management.

[17] As there is a high correlation between the layoff dummy variable and the employment change variable, these models exclude the layoff dummy variable.

Table 6 Regression of post-takeover wage and workforce change on shareholders' long-run abnormal returns.

Dependent variable	**Employment change**		**Wage change**	
Independent variables	**model1**	**model2**	**model3**	**model4**
BHAR	0.099***	0.116***	0.022***	0.032**
Change in control firm workforce	0.172***	0.130***		
Change in industry average wage			0.237***	0.209***
Relative size	- 0.041***	- 0.057***	0.011*	0.010
Leverage	- 0.645***	- 0.769***	- 0.055	- 0.083
Board ownership	0.008***	0.009***	- 0.002**	- 0.001
Relatedness		0.059		- 0.014
Hostility		- 0.022		0.005
Cash paid		- 0.089*		0.007
Relatedness · BHAR		0.024		- 0.010
Hostility · BHAR		0.020		0.003
Cash paid · BHAR		- 0.113***		- 0.009
Constant	0.194**	0.205***	0.116***	0.114***
F -statistic	17.45	9.61	10.19	3.69
Adjusted R-square	0.29	0.36	0.16	0.13
Number of observations	180	176	183	183

Notes: The dependent variables are post-takeover workforce change and wage change. The estimation method is OLS, using heteroscedasticity-robust standard errors (White, 1980). Significance levels: *p<0.1, **p<0.05; ***p<0.01. Appendix 9.2 provides the definitions of the variables.

These results are consistent with the previous research. For example, Cascio et al. (1997) report a significant positive association between stock returns and employment change, interpreting this as evidence that firms with employment growth produce higher abnormal returns during the three years after the workforce adjustment.

Model 3 shows that wage growth is positively associated with acquirers' long-run stock price abnormal returns, implying that a one point increase in BHARs leads to 0.02% higher wage growth. Acquiring firms' wage growth is positively associated with industry wage growth. Acquiring larger firms also leads to faster wage growth. This is consistent with the previous research which shows that larger firms pay higher wages. Board ownership is inversely related to wage growth.

Model 4 reports the differential wage growth effect of different types of takeovers. The significant main coefficient for BHAR and non-significant coefficients for its interactions with

the related, hostile and cash-paid dummies indicate that this variable is positively associated with wage growth in the absence of such conditions.

In brief, the results show that there is a significant positive relationship between acquirers' long-run abnormal returns and changes in both workforce and wage growth. This suggests that takeovers which benefit shareholders also benefit employees: employees can have higher rent from improved performance. This strong relationship between post-takeover wage growth and long-run shareholder abnormal returns is consistent with the rent sharing between different stakeholders. Thus, in the case of successful mergers, the resulting efficiency improvements benefit both groups of stakeholders: employees and shareholders.

1.5 Discussion

Two points form the basis for the rejection of the hypotheses that acquired firm shareholders' gains (CARs and premium) negatively affect post-takeover employment (Q3-H1 and Q3-H2). First, the WFG sub-sample firms gain higher takeover announcement abnormal returns than the WFR sub-sample firms. Second, the regressions show that target firm shareholders' CARs are positively associated with post-takeover workforce change, while the premium is positively associated with wage growth.

Similarly, the results reject the hypotheses that acquired firm shareholders' gains (CARs and premium) negatively affect post-takeover wage growth (Q3-H3 and Q3-H4) in friendly mergers. In contrast to the predictions, target firm shareholders' gains (both CARs and premium) do not explain post-takeover wage change. First, wage growth in the merging firms is higher than in non-merging firms. Second, the regressions show no significant (negative) association between target firm shareholder gains and wage growth. In sum, an analysis of short-run shareholder wealth shows that, although there is some support for the rent transfer hypothesis in hostile and

cash-financed acquisitions, the evidence is more consistent with the argument for rent sharing between shareholders and employees in friendly mergers.

However, we fail to reject the hypotheses that acquirers' long-run abnormal returns are positively associated with post-takeover workforce and wage growth (Q3-H5 and Q3-H6). In the long run the WFG sub-sample acquirers earn zero abnormal returns, while the WFR sub-sample acquirers underperform. The regressions show a strong positive association between acquirers' long-run abnormal returns and post-takeover workforce and wage changes. Thus, better performing firms do not make employee layoffs, while firm performance deterioration may lead to workforce reduction. This is consistent with the view that firm under-performance is one of the main factors that may lead to employee layoffs (Hillier et al., 2007). These results imply that if takeovers benefit shareholders, labour also gains from such transactions; if shareholders suffer from a takeover, labour also suffers from such transactions.

We conclude that the evidence contradicts the rent transfer hypothesis, but it is consistent with an alternative explanation: takeovers affect both shareholders and employees in the same direction. We argue that employment growth and wage growth depend on the success of the mergers, measured by the long-run abnormal returns of acquiring firms. If BHAR is negative, then the employment change is negative, if BHAR is positive then the employment change is also positive. Thus, managers may act for the success of the companies, not only for the best interests of shareholders as discussed in Pendleton (2009). The results of this chapter imply that in LMEs the MCC does not negatively affect labour and therefore does not discourage long-run firm-specific human capital investments.

One of the limitations of using long-term analysis in assessing the effect of takeovers on shareholders and employment is that many other events may occur during this period, such as asset divestment and other acquisitions. Although we control for multiple acquisitions, it was not

possible to analyse the effect of divestments. Another possibility is that there may be reverse causality between share price changes and workforce changes. For example, Hillier et al. (2007) report that firms experience significant negative abnormal returns (-0.81%) after employee layoffs. However, it makes more sense to think that economic factors drive share prices, not that share prices lead to changes in economic factors. Thus, we assume that poor operating performance leads to stock price decline and then acquirers undertake employee layoffs to arrest further performance deterioration.

1.6 Conclusions

It has been suggested that takeovers may be motivated by the objective of wealth re-distribution from employees to shareholders. Specifically, Shleifer and Summers (1988) argue that a considerable part of merger-related shareholder gains comes at the expense of employees, especially in hostile takeovers. Alternatively, post-takeover workforce and wage growth could be determined by the success of mergers. This chapter empirically investigates these competing views. In brief, the results support the view that managers act for the success of the company, balancing the interests of shareholders and other stakeholders.

The univariate regressions show that mergers and acquisitions do not change employment levels in the long run, although the immediate effect is negative, with steep job losses. The results also show that wages grow faster in merging firms than in non-merging firms.

Next, the WFR sub-sample shareholder gains are smaller than the WFG sub-sample shareholder gains, which contradicts value-redistribution theory predictions. In particular, the WFR sub-group acquirers earn significantly negative abnormal returns, while the WFG sub-group acquirers' wealth does not change much. This suggests that the market can distinguish

acquisitions of bad targets, which may involve employee layoffs, from the acquisitions of good businesses with growth opportunities.

To directly investigate *the value-redistribution theory* we regress target firm shareholders' short-run abnormal returns and premium on post-takeover workforce and wage changes, controlling for other relevant variables. The results do not show that high shareholder gains (CARs and premium) cause subsequent workforce reductions and wage cuts. Instead, while a high premium is associated with faster pay rises, higher CARs are associated with employment growth. However, the results also show some evidence supporting the wealth transfer hypothesis: in cash acquisitions high CARs are associated with lower wage growth, while in hostile takeovers a high premium is associated with lower wage growth. At the same time, in related acquisitions a high premium leads to slower employment growth.

The WFG sub-sample acquirers' long-run share price performance does not differ from the non-merging firms' performance, while the WFR sub-sample acquirers significantly underperform their non-merging matching counterparts. The regression results indicate a significant positive relationship between BHARs and post-takeover workforce changes as well as between BHARs and wage changes. This means that post-takeover workforce and wage changes depend on acquirers' performance: if shareholders' long-run abnormal returns are low, workforce growth and wage growth are low. Thus, wage growth does not depend on the rent expropriating behaviour of shareholders, but depends on how managers promote the success of their company. This means that if shareholders gain from takeovers, then employees earn higher salaries; if shareholders suffer from the acquisitions, then employees also suffer from them.

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