University of York
The York Management School
Working Paper No. 57/Part I
ISSN Number: 1743-4041
August 2010

Causes of post-merger workforce adjustments

Azimjon Kuvandikov
University of York

This paper is circulated for discussion purposes only and its contents should be considered preliminary

Causes of post-merger workforce adjustments

1.1 Introduction

1.1.1 Research motivation

It is well known that mergers and acquisitions lead to substantial workforce reductions. However, systematic empirical evidence on the causes of post-takeover workforce reductions is inconclusive. In contrast to the common expectation that workforce reductions are undertaken to improve firm performance, some commentators argue that such reductions are undertaken to create shareholder value and to regain premiums paid to targets. This chapter provides new empirical evidence on the causes of post-merger employee layoffs. Empirical evidence on this question would contribute to an understanding of whether post-merger labour management decisions are influenced by market-based mechanisms of corporate governance or whether such decisions are made on the basis of independent managerial judgements for the purpose of achieving success for the company, as required by company law.

This chapter empirically investigates the factors underlying post-merger employee layoffs. Prior research suggests several conflicting factors that may prompt such layoffs. On the one hand, it is argued that efficiency improvement through management disciplining and elimination of duplicative activities may reduce demand for labour, which may trigger workforce reductions. This argument is supported by recent empirical research, which concludes that mergers lead to improvements in efficiency. For example, O'Shaughnessy and Flanagan (1998) report that low labour efficiency in acquired firms leads to a high probability of post-merger job losses. Using sophisticated econometric models, a number of recent studies have shown that mergers reduce labour demand, leading to significant rationalisations in the use of labour and

thereby increasing efficiency (Conyon et al., 2002a, 2002b; Gugler and Yurtoglu, 2004; Amess et al., 2008). Labour demand may decline due to synergy or better labour management post-merger.

On the other hand, post-merger workforce reductions could be undertaken to achieve higher returns on capital and/or to cover high premiums paid to target firm shareholders (Shleifer and Summers, 1988; Froud et al., 2000; Sirower, 2000). In support of this view, the Krishnan et al. (2007) results indicate that managers make post-merger employee layoffs to regain high premiums. So, the need for performance improvement, management disciplining, synergy and high premiums have all been suggested as possible explanations for post-takeover workforce adjustments, implying that there may be different causes of post-merger layoffs[1]. However, no one study has investigated the role of these competing factors in explaining post-merger workforce adjustments.

Identifying factors associated with layoffs may give some insights into causes of such layoffs. This chapter not only investigates factors leading to post-merger workforce reductions, but also factors that may prompt workforce growth. Therefore, in addition to the full sample analysis, we undertake further analysis, splitting the full sample into two sub-samples according to post-takeover changes in the number of workers: 'the workforce reduction' sub-sample ('WFR' hereafter), where post-merger combined employment levels decline relative to the pre-merger combined employment level, and 'the workforce growth' sub-sample ('WFG' hereafter), where post-merger employment levels grow relative to the pre-merger employment level.

[1] Other factors that may lead to a higher level of workforce adjustments include post-merger asset divestments and cash payments during acquisitions.

Comparing the performance of these two sub-samples provides further evidence on the factors that prompt post-takeover workforce changes.

First, to investigate the causes of post-merger workforce adjustments, the chapter compares pre-takeover operating performance of the WFR and WFG sub-samples using a univariate analysis. Next it uses a regression technique to examine the role of target firm under-performance, hostility, relatedness and a high premium in explaining post-takeover workforce changes in the full sample as well as in the sub-samples.

1.1.2 Brief results and contributions

The results show that post-merger employee layoffs are undertaken in under-performing target firms, where there is a need and scope for efficiency improvement. Univariate analysis provides weak evidence of under-performance of the WFR sub-sample firms in comparison to the WFG sub-sample firms.

Regressions show that acquired firms' prior performance explains both post-takeover workforce reductions and workforce growth, while acquirers' prior performance only explains workforce growth. The full sample regressions show that related acquisitions lead to a higher level of workforce adjustments than unrelated acquisitions do. Hostile and related acquisitions lead to slower workforce growth in comparison to friendly and unrelated acquisitions. Furthermore, the results show that high premiums are associated with lower workforce reductions. At the same time, high premiums are associated with slower workforce growth, possibly due to a higher level of synergy resulting from expensive acquisitions. The results imply that managers undertake employee layoffs when there is a need for efficiency improvement.

The chapter contributes to the literature by clarifying the reasons for post-merger workforce adjustments. Overall the results suggest that managers undertake post-merger employee layoffs for efficiency improvement purposes, not to create shareholder value at the expense of labour, as suggested by prior research (Shleifer and Summers, 1988). There may be several different reasons for efficiency improvement: the need to stop further performance deterioration, the realisation of synergy or the disciplining of inefficient management. In the long run, such efficiency improvements should also benefit employees. Therefore it can be concluded that one of the main governance mechanisms for restructuring to maximise shareholder value – corporate takeovers – does not necessarily negatively affect labour.

1.2 Theoretical background and hypothesis development

There is growing evidence on the employment losses post-merger. For example, Black et al. (2007) show that higher levels of mergers and acquisitions activity leads to shorter job tenure, which means that such transactions involve employee layoffs. Deakin and Slinger (1997) and Lehto and Böckerman (2008) conclude that almost all changes in ownership lead to job losses. Conyon et al. (2001, 2002a, 2002b) show that mergers significantly reduce the *absolute* number of workers. However, the factors that lead to post-takeover employee layoffs are not well understood. On the basis of the literature reviewed in the previous chapter, we identify several factors that help to explain post-merger employee layoffs. These include: pre-takeover poor performance of merging firms, the disciplinary role of takeovers, synergy created by mergers and the high premium paid to targets.

Within the active MCC acquirers target under-performing firms to create shareholder value by re-allocating resources to the most efficient users and by improving firm performance

(Manne, 1965). Efficient use of resources may also include enhancing labour efficiency through workforce reductions. Therefore it is expected that takeovers of under-performing targets may lead to workforce reductions. There are several reasons for workforce reductions after such efficiency improving takeovers.

First, employee layoffs may occur when firms already have declining business opportunities and related financial problems, as recovering from poor operating performance may require cost savings. In such cases, poor performance may also be associated with more traditional factors leading to employee layoffs, such as a decline in product demand, arising as a result of general business cycle conditions, technological or other industry-wide changes (Cappelli, 2000). The extant evidence suggests poor operating performance as one of the main antecedents of employee layoffs (Coucke et al., 2007; Hillier et al., 2007). Furthermore, there is some evidence showing significant improvement in firm performance after downsizing (Elayan et al., 1998; Espahbodi et al., 2000; Chen et al., 2001). Second, low labour productivity may precede employee layoffs. Froud et al. (2000) argue that labour cost cuts provide relatively easy and unproblematic gains when firms are in a difficult position. Therefore layoffs may be to enhance undertaken labour efficiency. O'Shaughnessy and Flanagan (1998) report that post-merger employee layoffs are made to improve labour efficiency. Lichtenberg and Siegel (1992) show that acquisitions involve job losses, while at the same time they improve labour productivity. McGuckin and Nguyen (1995b) and McGuckin et al. (1998) report that ownership change causes further improvement in labour productivity. Conyon et al. (2004) show that mergers cause significant improvement in employee profitability.

In sum, the need for performance improvement may necessitate post-merger employee layoffs, because when firms perform poorly shareholders expect managers to undertake some

restructuring activities (Morck et al., 1989). There may be different reasons for poor performance, such as decline in product demand or technological change. This means that takeovers undertaken by profit-maximising managers could lead to employee layoffs in the short-run, although long-run employee wealth concessions depend on the success of mergers. Therefore the extent of the employee layoffs should be a function of acquired firms' pre-takeover performance. On the basis of this discussion, the following hypothesis will be tested:

Q1-H1: *The pre-takeover performance of both acquired firms and acquiring firms is positively associated with post-takeover workforce adjustments.*

It is suggested that synergetic gains are more likely to motivate friendly mergers, whereas gains from replacing inefficient management motivate hostile takeovers (Morck et al., 1990).

This means that hostile takeovers occur to discipline under-performing managers, who may avoid corporate downsizing even if it is required for efficiency improvement. If takeovers are motivated by disciplinary reasons, then profit-maximizing managers may undertake higher cost cuts after hostile takeovers than after friendly mergers. Therefore the extent of workforce reductions should depend on the mode of takeovers.

Similarly, hostile takeovers may occur to discipline managers who have just opted for a 'quiet life' enjoying managers, who may have increased employment levels above the optimal level or may not have exerted enough control to monitor labour efficiency. In other words, employment levels may have been sub-optimal due to the behaviour of the incumbent management, who may have entrenched themselves and may have been applying inefficient labour management practices, leading to performance deterioration. Bertrand and Mullainathan (2003) show that when takeover threat is weak, managers may not exert enough effort to monitor

workers and to shut down inefficient plants, but instead avoid difficult labour management decisions. They prefer to lead a 'quiet life', increasing staffing levels and paying high wages. These arguments imply that workforce reductions do not take place, even in under-performing firms, when managers are not monitored by external corporate governance mechanisms, such as the MCC. Thus, removal of such managers through takeovers should lead to workforce adjustment and to acquirers' undertaking workforce reductions in under-performing firms.

Although the primary purpose of hostile takeovers is to discipline inefficient management, there is growing evidence showing that targets of hostile takeovers are not always under-performing firms. This means that hostile takeovers may occur for other reasons. Therefore some commentators argue that hostile takeovers do not necessarily occur to correct for managerial failure (Franks and Mayer, 1996; Agrawal and Jaffe, 2003). Instead, hostility may arise because incumbents expect staff cost cuts and therefore oppose such takeovers to protect workers. In other words, hostility may arise due to the incumbents' disagreement with the proposed restructuring measures, such as employee layoffs (Franks and Mayer, 1996).

At the same time, hostile takeovers are more likely to facilitate wealth transfer from employees to shareholders and therefore they are more likely to reduce employment levels (Shleifer and Summers, 1988; Pagano and Volpin, 2005). Hostile takeovers provide high premiums (Franks and Mayer, 1996) and generate significantly higher positive abnormal returns for both target and bidder shareholders (Goergen and Renneboog, 2004; Sudarsanam and Mahate, 2006). Such gains may come from reneging on implicit contracts between shareholders and employees.

Hostile takeovers may lead to excessive senior-level staff dismissal (Franks and Mayer, 1996) and higher levels of workforce reductions (Conyon et al., 2001). However, supporting the

efficiency enhancement role of hostile takeovers, Conyon et al. (2002a) show that such takeovers also cause greater reductions in labour demand: hostile takeovers reduce labour demand by 17%, while the decline is 9% after friendly mergers. Similarly, Gugler and Yurtoglu (2004) report that tender offers (hostile in nature) produce significantly different labour demand effects than other mergers. The Conyon et al. (2001) results indicate that both hostile and friendly takeovers are associated with a similar decrease in labour demand, averaging 7.5%, after controlling for output and wage changes. On the basis of these results, the authors suggest that a steep decline in the *absolute* number of workers after hostile takeovers is mainly due to large asset divestment and the resulting output decline after such takeovers.

All of these theories imply that a new management team may undertake the required corporate downsizing, meaning that employment reductions should be greater in hostile takeovers than in friendly mergers:

Q1-H2: *Hostile takeovers are associated with (i) greater workforce reductions and (ii) lower workforce growth than friendly takeovers.*

According to Cappelli (2000) corporate downsizing occurs as a result of the search for new operational efficiencies in the use of labour. Synergy created by mergers may lead to such rationalisations in the use of labour. Synergy may arise due to the elimination of duplicative activities. Thus, employee layoffs could be undertaken to materialise operational synergies, arising from economies of scale and scope. The extent of workforce reductions should depend on the level of synergies arising as a result of combining two businesses. In this regard synergy has been suggested as one of the main rationales for mergers and acquisitions (Sirower, 2000). In support of this view, McGuckin and Nguyen (1995a, 2001) conclude that synergy is the main motive of takeovers.

As the scope for integrating two businesses is greater in related acquisitions than in unrelated acquisitions, the former should provide higher synergy: the scope for elimination of duplicative activities and other cost cuts should be greater in such cases. Rumelt (1974) argues that related diversifications provide superior performance to unrelated diversifications. Thus, related acquisitions should lead to higher levels of workforce reductions than unrelated acquisitions. In fact, prior empirical evidence shows that acquirers determine optimal employment levels taking into consideration synergy resulting from mergers and the required level of workforce to produce the combined output. O'Shaughnessy and Flanagan (1998) find that the probability of layoff announcements is higher in related acquisitions than in unrelated acquisitions. Furthermore, more recent research shows that related acquisitions reduce labour demand more than unrelated acquisitions do (Conyon et al., 2002a, 2002b; Gugler and Yurtoglu, 2004).

In sum, as a result of the elimination of duplicative activities, mergers may reduce demand for labour: the combined firm may be able to produce the combined product with a lower level of labour. Decline in labour demand may be greater in related acquisitions than in unrelated acquisitions (Conyon et al., 2002a). On the basis of this discussion, the following hypothesis will be tested:

Q1-H3: *Related acquisitions are associated with (i) greater workforce reductions and (ii) lower workforce growth than unrelated acquisitions.*

A growing body of research provides evidence showing that managers pay a high premium for acquired firms. Such high premiums require higher returns, which could be achieved through labour cost cuts, when other options are limited (Froud et al., 2000). Therefore a high

premium was suggested as one of the main reasons for post-merger workforce reductions (Shleifer and Summers, 1988; Krishnan et al., 2007).

Acquiring firm managers may pay high premiums as a result of *over-optimism*: they may systematically over-estimate their managerial capabilities and expected synergies (Roll, 1986; Malmendier and Tate, 2005). In fact, due to information asymmetries and difficulties in estimating synergies, even rational managers may overpay for targets. Hayward and Hambrick (1997) empirical work shows a strong relationship between size of premium and CEO hubris, measured with several variables, such as acquiring firms' recent performance and recent media praise for the CEO. Sirower (2000) claims that many of these premium payments have created a requirement for performance improvements that are virtually impossible to realize, even by the best executives in the best of industry conditions. Thus, one available option for managers is to cut costs. Froud et al. (2000) argue that labour cost is the largest cost component that can be easily cut. Krishnan et al. (2007) argue that high premiums are the main factor leading to post-merger workforce reductions and that there is a positive association between premiums paid and the number of workers laid off post-merger, as their results show.

However, under strong pressure from the MCC to maximise shareholder value, managers may pay low premiums for under-performing businesses and subsequently undertake wide-scale restructuring to turn these businesses around. Similarly, managers may increase shareholder value by acquiring better performing firms with growing business opportunities, which may require higher levels of premium. Franks and Mayer (1996) study indicates that target firms were not poorly performing firms. Many authors argue that acquirers target better performing firms (Ravenscraft and Scherer, 1987; McGuckin and Nguyen, 2001). In such acquisitions, incumbents reject offers in order to secure high premiums. The following hypothesis will be tested:

Q1-H4: *The higher the premium, (i) the higher the workforce reductions and (ii) the lower the workforce growth.*

1.3 Data and methodology

1.3.1 Econometric model specification

To test the above hypotheses, the following model will be estimated:

$$\Delta E = \alpha + \beta_1 ROA_T^{pre} + \beta_2 ROA_A^{pre} + \beta_3 H + \beta_4 R + \beta_5 Prem + \beta_6 Size + \beta_7 Lev + \beta_8 Board + \varepsilon \quad (1)$$

where ΔE is the change in the number of employees from t-1 to t+3, ROA_T^{pre} and ROA_A^{pre} represent the average industry-adjusted performance, for acquired and acquiring firms respectively, for the two years prior to takeovers; *H* is a hostility dummy, which takes 1 if the initial offer was rejected and 0 otherwise; *R* is a relatedness dummy, which takes 1 if both target and acquiring firms are in the same industry and 0 otherwise; *Prem* is the premium, measured as the excess amount of bid price over share price one month prior to takeover announcement; *Size* is the ratio of acquiring firm size to the transaction value (target firm size); *Lev* is the debt-to-equity ratio at the end of the takeover completion year; *Board* is the ratio of non-executive directors to the total number of directors, and ε indicates the error term. In extended models we also include the interactions of the *R* and *H* dummies with pre-takeover performance of target firms (ROA_T^{pre}).

In the model we control for relative size, leverage and board structure on the basis of prior research findings. First, the integration of larger firms may create a greater challenge as well as more synergy than the integration of smaller firms. In this respect, McGuckin and Nguyen (2001)

and Conyon et al. (2002a, 2004) find that the impact of acquisitions depends on the size of acquisition. Therefore we control for the relative size, measured as the ratio of acquired firm size (transaction value) relative to acquirers' market value at the end of t-1. Ofek (1993) argues that higher leverage following poor performance increases the probability of corporate restructuring, including employee layoffs. Therefore in the takeover context higher leverage may also force acquirers to cut costs by reducing the workforce. We measure leverage as the ratio of debt to total assets at the beginning of the relevant year. Finally, a higher number of non-executives on the Board of Directors may force managers to undertake restructuring activities that maximise shareholder value and prior research suggests that higher the number of non-executive directors, the more effective the Board (Cosh et al., 2006; Yawson, 2006). Therefore we control for the Board composition of the acquiring firms.

1.3.2 Data

A sample of takeovers of UK public companies occurring during the period 1990-2000 was hand-collected from the *Acquisitions Monthly* journal. Subsequent transactions undertaken by multiple acquirers were excluded from the sample: i.e. only one acquisition per acquirer within any consecutive five years was included in the sample. After the exclusion of mergers involving financial institutions, property companies and utility companies, the sample consists of 235 mergers and acquisitions. Furthermore, we required availability of financial data for at least one year for both acquired and acquiring firms during the pre-takeover period and for at least one

year for the acquiring firms during the post-takeover period[2]. Financial data was obtained from *Datastream*, and in some cases complemented with data from sample firms' Annual Reports, downloaded from the *Nexis*® database.

One month premium is usually used to control for 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 price 30 days before takeover, divided by the price 30 days before takeover (Hayward and Hambrick, 1997; Sirower, 2000).

Data on acquirer boards' composition has been collected from *Hemmington-Scott Corporate Registers*. Following Cosh et al. (2006) and Yawson (2006), the collected data includes the size of board (total number of directors) and composition of boards (number of executive and non-executive shareholders).

Table 1 reports summary descriptive statistics for the variables. Panel A shows employment and annual average wage rate for acquired firms and their matched firms, while Panel B reports similar data for acquiring firms and their matching firms. The average number of employees in the acquiring firms is nearly four times higher than the average number of employees in the acquired firms. The data also reveals that the WFR sub-sample firms are larger than the WFG sub-sample firms. Panel C of the table reports other variables used in this thesis.

Table 1 Descriptive statistics

[2] We collect data for the period of three years before the takeover completion year and three years after the takeover completion year. In most cases we have data for all three of the pre-takeover years and the three-year post-takeover periods.

		Full sample	Matched firms' sample	WFR sub-sample	WFG sub-sample
Panel A: Acquired firms' employment data					
Number of employees	Mean	3,313	2,088	4,485	1,586
	Median	770	706	1,096	623
	Std. Dev.	9,067	4,729	11,068	4,295
Panel B: Acquiring firms' employment data					
Number of employees	Mean	13,088	9,214	16,427	8,167
	Median	2,975	2,661	3,285	2,903
	Std. Dev.	27,036	16,740	32,413	15,000
Panel C: Other variables					
Hostility dummy (1=hostile, 0=friendly)	number	52		34	18
Relatedness dummy (1=in the same industry, 0=otherwise)	number	136		72	64
Premium	%	39		38	40
Relative size of acquired and acquiring firms	ratio	0.60		0.67	0.50
Leverage	ratio	0.47		0.48	0.45
Board composition (ratio of non-executive directors to total number of directors)	ratio	0.44		0.44	0.43
Number of observations	number	235	470	111	95

Notes: In 29 observations there is no data for the second and/or third post-takeover year; these are excluded from the sample when the sample is divided into the WFR and WFG sub-samples. Therefore the total number of observations in the WFR and WFG sub-samples differs from the full-sample observations. Appendix 9.2 provides the definitions of the variables.

1.3.3 Measuring post-takeover workforce adjustments

A firm's workforce is measured by the number of employees, using *Datastream* data, which represents the average number of both full and part-time employees of the firm. The pre-takeover pro-forma combined employment level is computed by summing the target and bidder's workforce at the end of *t-1*. Then the post-takeover employee change variable is created by deducting this pro-forma number of employees from the acquirers' number of employees at the end of the third post-takeover year.

Following Yawson (2006) we divide the full sample into the WFG and WFR sub-samples on the basis of the percentage change in the number of employees over a three-year period after the takeover completion year:

$$\%\Delta E = \log(E_{t+3}) - \log(E_{t-1}),$$

(3) where $\%\Delta E$ denotes the percentage change in employment, E denotes the number of employees. If, for an acquirer, the employment percentage change is positive, then this acquirer is

included in the WFG sub-sample; if negative, then the acquirer is included in the WFR sub-sample.

1.4 Results

1.4.1 Univariate analysis of merging firms' pre-takeover performance

This section reports the results of univariate analysis of acquired and acquiring firms' pre-takeover operating performance. Operating performance is measured using Earnings before Interest, Taxes, Depreciation and Amortization (EBITDA), divided by Total Assets, (hereafter 'Returns On Assets', (ROA)). This performance measure is adjusted using two benchmarks: industry-median firm and industry-, size- and performance-matched firm benchmarks. Barber and Lyon (1996) argue that in detecting abnormal operating performance non-parametric Wilcoxon test statistics are more powerful than parametric t statistics. Therefore the significance of the adjusted performance is tested using the Wilcoxon matched-pairs signed-ranks test, while the significance of the difference between the WFG and WFR sub-groups is tested using the two-sample Wilcoxon rank-sum (Mann-Whitney) test.

As Panel A of Table 2 shows, the WFG sub-sample acquired firms' performance does not differ significantly from their industry-median performance, while they outperform their matched firms in year t-1. The WFR acquired firms' performance does not differ from their industry-median performance either, while they outperform their matched firms only three years before takeovers. This suggests that the WFR acquired firms' performance declines immediately before takeovers and this performance decline may require some restructuring activities. However, both

benchmarks show that there is no significant difference between the performance of acquired firms in the WFG and WFR sub-samples.

Table 2. Pre-takeover performance of the acquired and acquiring firms, split into WFG and WFR sub-samples

Pre-takeover years	Unadjusted performance	z-stat	Industry median firm adjusted performance	z-stat	Matched firm adjusted performance	z-stat
Panel A: Acquired firms' pre-takeover performance						
A-1: Full sample acquired firms						
t-3	0.1942		-0.0084	0.07	0.0125	1.94
t-2	0.1913		-0.0030	-0.08	0.0121	0.35
t-1	0.1724		-0.0076	-0.56	0.0030	1.73
A-2: The WFG sub-sample acquired firms						
t-3	0.1848		-0.0133	-0.28	-0.0036	0.55
t-2	0.1912		0.0010	0.07	-0.0132	-0.70
t-1	0.1691		-0.0076	-0.51	0.0064	2.01
A-3: The WFR sub-sample acquired firms						
t-3	0.2044		0.0000	0.37	0.0177	2.11
t-2	0.2000		-0.0046	-0.14	0.0191	1.09
t-1	0.1787		-0.0049	-0.36	0.0008	0.63
A-4: Difference between the WFG and the WFR sub-samples acquired firms' performance						
t-3	-0.0196	-1.10	-0.0133	-0.58	-0.0213	-0.89
t-2	-0.0088	-0.21	0.0057	0.13	-0.0323	-1.25
t-1	-0.0097	-0.26	-0.0027	-0.21	0.0055	1.09
Panel B: Acquiring firms' pre-takeover performance						
B-1: Full sample acquiring firms						
t-3	0.2422		0.0158	2.90	0.0152	0.52
t-2	0.2303		0.0209	4.32	0.0105	1.06
t-1	0.2307		0.0432	6.42	0.0053	2.84
B-2: The WFG sub-sample acquiring firms						
t-3	0.2578		0.0592	3.95	0.0030	-0.13
t-2	0.2576		0.0522	4.25	0.0063	0.63
t-1	0.2488		0.0632	5.75	0.0066	2.54
B-3: The WFR sub-sample acquiring firms						
t-3	0.2313		0.0032	0.39	0.0206	0.78
t-2	0.2146		0.0094	1.96	0.0170	0.89
t-1	0.2149		0.0270	3.59	0.0038	1.68
B-4: Difference between the WFG and the WFR sub-sample acquiring firms' performance						
t-3	0.0265	1.43	0.0560	3.01	-0.0175	-0.67
t-2	0.0430	1.78	0.0428	2.59	-0.0108	-0.12
t-1	0.0339	1.30	0.0363	2.08	0.0028	0.80

Notes: This table reports the median performance.

As Panel B reports, the WFG acquirers outperform their industry-median firms during all three pre-takeover years and outperform their matched firms in year t-1. Similarly, the WFR

acquirers outperform their industry-median firms during two pre-takeover years and outperform their matched firms in year t-1, although it is only significant at the 10% level. Furthermore, the results show that the WFG acquirers perform significantly better than those WFR acquirers in all three pre-takeover years, when the industry-median firm benchmark is used. However, acquirers' pre-takeover performances in these two groups do not differ from each other, when the matched firm benchmark is used.

Several important points emerge from this analysis. In general it is believed that acquired firms are not underperforming firms (Franks and Mayer, 1996, 1997). However, our analysis provides some evidence showing that the WFR acquired firms' performance declines immediately prior to takeovers. In contrast, the WFG acquired firms outperform their matched firms before the takeover event year, whereas the WFR acquired firms perform similarly to their matched firms. At the same time, the WFG acquirers' performance is significantly better that the WFR acquirers' performance. These two factors together suggest that managers undertake post-merger employee layoffs in underperforming firms. Another point is that acquirers outperform both industry-median firms and matched firms immediately prior to acquisitions. This confirms the view that acquirers undertake mergers during or immediately after high performance years.

This analysis suggests that managers make post-merger workforce reductions to stop further performance deterioration or to improve efficiency in labour usage. Workforce reductions could be undertaken to discipline those managers who enjoy a 'quiet life', removing such managers through hostile takeovers. At the same time layoffs could be undertaken to achieve synergies through the elimination of duplicative activities, even though the performance has not been poor. On the other hand, employee layoffs could be undertaken to achieve higher levels of

cost-savings to cover high premiums paid for acquisitions. The next section investigates these reasons for post-merger employee layoffs in the multiple regression contexts.

1.4.2 Multivariate analysis of the causes of post-takeover employment adjustments

As previously discussed, there may be several reasons for post-merger workforce adjustments. This section reports the results of regressions of post-takeover workforce adjustments on merging firms' pre-takeover performance, hostility (a management disciplining measure), relatedness (a measure of synergy created by mergers) and premium. We run separate regressions for the full sample, as well as for the WFR and WFG sub-samples. The extended models include the interactions of the hostility (relatedness) dummy variable with the pre-takeover performance of acquired firms.

As Table 3 shows, acquired firms' pre-takeover performance is positively related to the post-takeover workforce changes. In the full sample, a one unit higher performance of acquired firms leads to 0.53% higher employment growth. The WFR sub-sample regression indicates that there is a negative association between the pre-takeover target performance and post-takeover workforce reductions, meaning that the poorer the acquired firms' performance, the greater the post-merger workforce reductions[3]. Specifically, a one unit lower performance causes a 0.38%

[3] Equation (3) determines the percentage workforce reductions in negative numbers. However, in the WFR sub-sample dataset, the percentage workforce reductions are entered in absolute terms. So, in this sub-sample, the workforce reductions are given with positive signs, although in the full sample they have negative signs.

greater workforce reduction. The positive coefficient of the target firm pre-takeover performance variable in the WFG sub-sample regression confirms this association: the higher the performance, the higher the workforce growth. Therefore the results support the hypothesis that post-takeover adjustments are positively associated with the pre-takeover performance of acquired firms.

The full sample regression shows that acquirers' prior performance does not explain the changes in employment levels, though this variable is only significant in the WFG sub-sample. Thus, acquirers' prior performance only explains employment growth rather than employment reductions. In contrast, in the WFR sub-sample, there is no association between acquirers' prior performance and subsequent workforce change. This provides partial support for the hypothesis that post-takeover workforce adjustments are positively associated with the pre-takeover performance of acquiring firms: better performing acquirers further increase their workforce.

Table 3. Regressions explaining post-takeover workforce adjustments.

Independent variables	Full sample	WFR	WFG	Full sample	WFR	WFG
Acquired firm pre-takeover performance	0.528***	- 0.380***	0.334**	0.230	- 0.145	0.989***
Acquiring firm pre-takeover performance	0.353	0.145	0.371***	0.195	0.133	0.412
Hostility dummy	- 0.021	- 0.048	- 0.060	- 0.007	- 0.035	- 0.105*
Relatedness dummy	0.133***	- 0.009	- 0.094*	0.176***	- 0.026	- 0.041
Premium	0.001	- 0.107*	- 0.165**	0.059	- 0.078	- 0.049
Relative size	- 0.017	0.017	0.014	- 0.021	0.023	0.001
Leverage	- 0.687***	0.150	- 0.020	- 0.649***	0.314**	0.041
Board structure	- 0.203	0.068	0.075	- 0.238	0.114	0.123
Hostility dummy · Acquired firm performance				- 0.509	0.055	- 3.088***
Relatedness dummy · Acquired firm performance				0.251	- 0.247	- 0.772**
Constant	0.266**	0.240***	0.401***	0.188	0.143	0.235*
F-stat	7.12	4.38	4.34	5.75	2.87	7.20
Adjusted R-square	0.21	0.16	0.20	0.18	0.13	0.21
Number of observations	180	89	86	180	89	83

Notes: Dependent variables are workforce change in the full sample, workforce reduction in the WFR sub-sample and workforce growth in the WFG sub-sample. 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.

Although the signs of the hostility dummy regressor are negative, the coefficients are not significant[4]. In the models that include interaction terms, the results show that workforce growth is significantly lower after hostile takeovers relative to workforce growth after friendly acquisitions. So, only one model provides support for the hypothesis that hostility leads to lower workforce growth. In the WFG sub-sample the interaction term between hostility and target pre-takeover performance enter the model with significant negative coefficient, meaning that there is a significant difference in the effect of pre-takeover performance on workforce growth in hostile versus friendly takeovers. In hostile acquisitions a one point higher pre-takeover target performance causes 2.1% [= 0.989 – 3.088] slower employment growth. Previous research shows that hostile takeovers involve high levels of asset divestment during post-merger years, which may result in lower employment growth.

The full sample regressions show that related acquisitions lead to higher level workforce change during a post-takeover period than unrelated acquisitions, as shown by the significant and positive coefficient of the relatedness dummy regressor[5]. However, although the relatedness

---

[4] This may be due to a small number of hostile takeovers in the WFR and WFG sub-samples. Another argument is that after controlling for under-performance, hostile takeovers may not be able to explain workforce adjustments.

[5] In this regression the intercept shows the expected post-merger workforce change for unrelated acquisitions, when the relatedness dummy takes 0. When the relatedness dummy takes 1, the sum of the intercept and the relatedness dummy shows the expected post-merger workforce change.

dummy regressor coefficient is negative in the WFR sub-sample, it is not significant. The WFG regression shows that related acquisitions cause a significantly lower increase in the number of workers than unrelated acquisitions. These results are consistent with prior research. For example, O'Shaughnessy and Flanagan (1998) report that the probability of employee layoffs is higher in related acquisitions than in unrelated acquisitions. Similarly, decline in labour demand is greater in related acquisitions than in unrelated acquisitions due to the existence of synergy in such mergers. In contrast, in the WFG sub-sample the interaction term between the relatedness dummy and acquired firm pre-takeover performance enters the model with significant negative coefficient, meaning that there is a significant difference in the effect of pre-takeover performance on employment growth in related versus unrelated takeovers. For example, in unrelated acquisitions a one point higher pre-takeover performance causes 1% higher employment growth, while in related acquisitions this effect is 0.2% [= 0.989 – 0.772].

The negative coefficient of the premium implies that highly paid acquisitions lead to lower levels of workforce reductions. This result supports the view that acquirers pay lower premiums for under-performing firms, but subsequently undertake employee layoffs as a part of corporate restructuring to turn around acquired businesses. In contrast to this, the WFG regression shows that there is an inverse relationship between premium and workforce growth. This negative association suggests that acquirers pay high premiums for the targets with high

---

The positive coefficient in the relatedness dummy indicates a higher level of post-takeover workforce change in the case of related acquisitions, after controlling for other relevant variables.

expected synergy arising from merging the human resources of two businesses. One of the sources of synergy may be the scope for elimination of duplicative activities, as a result of which there will be high cost savings. This higher scope for synergy results in lower employment growth in such acquisitions where high premium have been paid.

Among the control variables, only leverage is significantly associated with post-takeover workforce change: higher leverage leads to lower employment growth. The other two control variables – relative size and board structure – do not significantly affect workforce change.

In sum, the regression results indicate that acquired firms' performance explains both the extent of workforce reductions and workforce growth, while acquirers' pre-merger performance explains only workforce growth. There is some evidence showing that hostile takeovers cause lower workforce growth, while related acquisitions lead to higher workforce adjustments. At the same time, the premium is inversely related to both workforce reduction and workforce growth. This means that a higher premium is associated with lower workforce reductions. At the same time, a higher premium is also associated with lower workforce growth. Thus, the results of this chapter show that high premiums do not cause excessive post-merger employee layoffs, which contradicts prior research results.

1.5 Discussion

The chapter investigates prior performance of acquired and acquiring firms, hostility, relatedness and high premiums as possible explanations for post-takeover workforce adjustments.

The results support the hypothesis that both acquired and acquiring firms' prior performance determines post-takeover workforce adjustments (Q1-H1). Univariate analysis shows that workforce reductions are undertaken in under-performing acquired firms. Regression

analyses indicate that in the WFR sub-sample acquired firms' low performance is associated with higher post-takeover workforce reduction, while in the WFG sub-sample acquired firms' higher performance is associated with faster post-takeover workforce growth. Furthermore, univariate analysis shows that the WFR sub-sample acquirers' performance does not differ from their industry and control firms' performance, while the WFG sub-sample acquirers outperform non-merging firms. Regressions show that acquirers' prior performance only explains post-takeover workforce growth.

There is some evidence supporting the hypothesis that hostility leads to higher levels of employee layoffs (Q1-H2). The WFG sub-sample regressions show that hostile acquisitions lead to slower workforce growth in comparison to friendly acquisitions. However, although it is negative, the coefficient of this dummy regressor is not significant in the WFR sub-sample.

The full sample regressions show that post-takeover workforce adjustment in related acquisitions is higher than in unrelated acquisitions. The WFG sub-sample regressions also show that related acquisitions also lead to slower workforce growth in comparison to unrelated acquisitions (Q1-H3). This is consistent with prior research conclusions suggesting that related acquisitions lead to a higher level of rationalisation in the use of labour than unrelated acquisitions do (Conyon et al., 2002a, 2004).

However, the results do not support the hypothesis that high premiums lead to higher post-merger employee layoffs (Q1-H4). This result contradicts prior research conclusions. The results show that high premiums are associated with lower workforce reductions, but are also associated with slower workforce growth, possibly due to the wider scope for synergy arising from good acquisitions. In brief, the results show that managers do not undertake employee layoffs to cover high premiums, as suggested by prior empirical evidence (Krishnan et al., 2007).

The inverse relationship between premium and workforce reduction implies that acquirers do not pay high premiums for under-performing targets or for businesses with declining product demand that require corporate restructuring, including downsizing. But acquirers may pay high premiums for acquisitions that create a wider scope for synergy. In support of this view, the results show that the premium negatively affects workforce growth. Overall, the results imply that post-merger labour management decisions are not affected by the shareholder value creation requirements of the market model of corporate governance. Instead, management decisions are made on the basis of independent managerial judgments to provide success and viability for their businesses through efficiency enhancement, as suggested by Gospel and Pendleton (2003) and Pendleton (2009).

One limitation of this study is that we do not control for asset divestments, which may be one of the main reasons for workforce reductions. Workforce levels may also decline due to divestments and asset sales, while employment growth could be due to new acquisitions. Although we controlled for multiple acquisitions, it was not possible to control for divestment activities due to data limitations.

1.6 Conclusions

Although it is generally agreed that takeovers lead to workforce reductions, the reasons for such workforce reductions and their effect on operating performance is debatable. Indeed, while some authors argue that mergers reduce labour demand and consequently managers undertake workforce reductions to improve labour efficiency and to derive operating synergy (Conyon et al., 2002a), other authors argue that managers undertake excessive employee layoffs to cover high premiums paid for acquisitions and that these negatively affect operating

performance (Krishnan et al., 2007). This chapter empirically investigates the factors leading to post-takeover workforce changes.

The results of this chapter imply that managers do not undertake employee layoffs to create shareholder value, but they do so to improve firm performance. The results do not support the view that takeover premiums lead to excessive job losses. Instead, a high premium is associated with lower workforce reductions and slower workforce growth. Layoffs are undertaken on the basis of acquired firms' pre-takeover performance: the poorer the targets' performance, the greater the reduction in employment, and the higher the target performance, the higher the growth in post-takeover employment levels. Furthermore, related acquisitions cause higher levels of workforce adjustments. Therefore it can be concluded that the optimal employment-related decisions are usually made to achieve the corporate success rather than to maximise shareholder returns.

References

Agrawal, A. and Jaffe, J. (2003) Do Takeover Targets Under-perform? Evidence from Operating and Stock Returns. *Journal of Financial and Quantitative Analysis* 38, 721-46.

Amess, K., Girma, S. and Wright, M. (2008) What are the Wage and Employment Consequences of Leveraged Buyouts, Private Equity and Acquisitions in the U.K.? *Nottingham University Business School Research Paper No. 2008-01*

Barber, B. and Lyon, J. (1996) Detecting abnormal operating performance: The empirical power and specification of test statistics. *Journal of Financial Economics*, 41, 359-99.

Bertrand, M. and Mullainathan, S. (2003) Enjoying the Quiet Life? Corporate Governance and Managerial Preferences. *Journal of Political Economy*, 111, 1043-75.

Black, B., Gospel, H. and Pendleton, A. (2007) Finance, corporate governance, and the employment relationship. *Industrial Relations*, 46, 643-50.

Cappelli, P. (2000) Examining the incidence of downsizing and its effect on establishment performance. In Neumark, D. (Ed.) *On the job: Is long-term employment a thing of the past.* New York, Russell Sage Foundation, 463–516.

Chen, P., Mehrotra, V., Sivakumar, R. and Yu, W. W. (2001) Layoffs, shareholders' wealth, and corporate performance. *Journal of Empirical Finance*, 8, 171-99.

Conyon, M. J., Girma, S., Thompson, S. and Wright, P. W. (2001) Do hostile mergers destroy jobs? *Journal of Economic Behavior and Organization*, 45, 427-40.

Conyon, M. J., Girma, S., Thompson, S. and Wright, P. W. (2002a) The impact of mergers and acquisitions on company employment in the United Kingdom. *European Economic Review*, 46, 31-49.

Conyon, M. J., Girma, S., Thompson, S. and Wright, P. W. (2002b) The productivity and wage effects of foreign acquisition in the United Kingdom. *Journal of Industrial Economics*, 50, 85-102.

Conyon, M. J., Girma, S., Thompson, S. and Wright, P. W. (2004) Do Wages Rise or Fall Following Merger? *Oxford Bulletin of Economics and Statistics*, 66, 847-62.

Cosh, A., Guest, P. M. and Hughes, A. (2006) Board Share-Ownership and Takeover Performance. *Journal of Business Finance and Accounting*, 33, 459-510.

Coucke, K., Pennings, E. and Sleuwaegen, L. (2007) Employee layoff under different modes of restructuring: exit, downsizing or relocation. *Industrial and Corporate Change*, 16, 161-82.

Deakin, S. and Slinger, G. (1997) Hostile takeovers, corporate law, and the theory of the firm. *Journal of Law and Society*, 24, 124-51.

Elayan, F. A., Swales, G. S., Maris, B. A. and Scott, J. R. (1998) Market Reactions, Characteristics, and the Effectiveness of Corporate Layoffs. *Journal of Business Finance & Accounting*, 25, 329-51.

Espahbodi, R., John, T. A. and Vasudevan, G. (2000) The Effects of Downsizing on Operating Performance. *Review of Quantitative Finance and Accounting*, 15, 107-26.

Franks, J. and Mayer, C. (1996) Hostile takeovers and the correction of managerial failure. *Journal of Financial Economics*, 40, 163-81.

Franks, J. and Mayer, C. (1997) CORPORATE OWNERSHIP AND CONTROL IN THE U. K., GERMANY, AND FRANCE. *Journal of Applied Corporate Finance*, 9, 30-45.

Froud, J., Haslam, C., Johal, S. and Williams, K. (2000) Restructuring for shareholder value and its implications for labour. *Cambridge Journal of Economics*, 24, 771-97.

Goergen, M. and Renneboog, L. L. R. (2004) Shareholder Wealth Effects of European Domestic and Cross-border Takeover Bids. *European Financial Management*, 10, 9-45.

Gospel, H. and Pendleton, A. (2003) Finance, Corporate Governance and the Management of Labour: A Conceptual and Comparative Analysis. *British Journal of Industrial Relations*, 41, 557-82.

Gugler, K. and Yurtoglu, B. B. (2004) The effects of mergers on company employment in the USA and Europe. *International Journal of Industrial Organization*, 22, 481-502.

Hayward, M. L. A. and Hambrick, D. C. (1997) Explaining the Premiums Paid for Large Acquisitions: Evidence of CEO Hubris. *Administrative Science Quarterly*, 42, 103-27.

Hillier, D., Marshall, A., McColgan, P. and Werema, S. (2007) Employee Layoffs, Shareholder Wealth and Firm Performance: Evidence from the UK. *Journal of Business Finance and Accounting*, 34, 467-94.

Krishnan, H. A., Hitt, M. A. and Park, D. (2007) Acquisition Premiums, Subsequent Workforce Reductions and Post-Acquisition Performance. *Journal of Management Studies*, 44, 709-32.

Lehto, E. and Böckerman, P. (2008) Analysing the employment effects of mergers and acquisitions. *Journal of Economic Behavior & Organization*, 68, 112-24.

Lichtenberg, F. R. and Siegel, D. (1992) Productivity and changes in ownership of manufacturing plants. In Lichterberg, F. R. (Ed.) *Corporate Takeovers and Productivity.* Cambridge, Mass, MIT Press,

Malmendier, U. and Tate, G. (2005) CEO Overconfidence and Corporate Investment. *The Journal of Finance*, 60, 2661-700.

Manne, H. G. (1965) Mergers and the Market for Corporate Control. *The Journal of Political Economy*, 73, 110-20.

McGuckin, R. H. and Nguyen, S. V. (1995a) Exploring the Role of Acquisition in the Performance of Firms: Is the "firm" the Right Unit of Analysis? In Biffignandi, S. (Ed.) *Micro- and Macrodata of Firms.* New York, Physica-Verlag,

McGuckin, R. H. and Nguyen, S. V. (1995b) On productivity and plant ownership change: New evidence from the Longitudinal Research Database. *The RAND Journal of Economics*, 26, 257-76.

McGuckin, R. H. and Nguyen, S. V. (2001) The impact of ownership changes: a view from labor markets. *International Journal of Industrial Organization*, 19, 739-62.

McGuckin, R. H., Nguyen, S. V. and Reznek, A. P. (1998) On the impact of ownership change on labor: Evidence from food manufacturing plant data. In Haltiwanger, J., C., Manser, M., Topel, H., R., (Ed.) *Labor Statistics Measurement.* Chicago, University of Chicago Press, 207-46.

Morck, R., Shleifer, A. and Vishny, R. W. (1989) Alternative mechanisms for corporate control. *American Economic Review*, 79, 842-52.

Morck, R., Shleifer, A. and Vishny, R. W. (1990) Do managerial objectives drive bad acquisitions? *Journal of Finance*, 45, 31-48.

O'Shaughnessy, K. C. and Flanagan, D. J. (1998) Determinants of Layoff announcements following M & As: An empirical investigation. *Strategic Management Journal*, 19, 989-99.

Ofek, E. (1993) Capital structure and firm response to poor performance: An empirical analysis. *Journal of Financial Economics*, 34, 3-30.

Pagano, M. and Volpin, P. F. (2005) Managers, Workers, and Corporate Control. *The Journal of Finance*, 60, 841-68.

Pendleton, A. (2009) The liberal market model of finance, ownership, and governance: An evaluation of its effect on labour. *Asia Pacific Journal of Human Resources*, 47, 133-49.

Ravenscraft, D. J. and Scherer, F. M. (1987) *Mergers, Sell-Offs, and Economic Efficiency,* Washington, DC, Brookings Institution Press.

Roll, R. (1986) The Hubris Hypothesis of Corporate Takeovers. *Journal of Business*, 59, 197-216.

Rumelt, R. P. (1974) *Strategy, Structure, and Economic Performance*, Harvard Business School Press.

Shleifer, A. and Summers, L. (1988) Breach of Trust in Hostile Takeovers. In Auerbach, A. J. (Ed.) *Corporate Takeovers: Causes and Consequences.* Chicago, University of Chicago Press, 33-56.

Sirower, M. L. (2000) The Synergy Trap: How Companies Lose the Acquisition Game, Free Press.

Sudarsanam, P. and Mahate, A. A. (2006) Are friendly acquisitions too bad for shareholders and managers? Long-term value creation and top management turnover in hostile and friendly acquirers. *British Journal of Management*, 17, S7-S30.

Yawson, A. (2006) Evaluating the characteristics of corporate boards associated with layoff decisions. *Corporate Governance: An International Review*, 14, 75-84.