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HOSTILE TAKEOVERS AND EXPROPRIATION OF EXTRAMARGINAL WAGES: A TEST

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ABSTRACT

We construct a prediction model for testing the hypothesis that firms with employees earning extramarginal wages--perhaps owing to long-term implicit contracts--were more likely to experience hostile tender offers from 1979-1989. Firms on the Compustat (active) file in 1979 comprise the domain from which targets were identified. The 1980 Census of Population is used to estimate wage equations by two-digit (SIC) industry and extract both industry wage premia as well as age-earnings profiles and age distributions of employees by industry. Firm-level estimates of employee characteristics are then constructed using the Compustat breakdown of firm sales by industry segment. Finally, event probabilities are estimated using logit and multinomial logit models. Variables related to proxies for the magnitude of extramarginal wages payments, plus other firm characteristics such as the extent of diversification across industries, are found to raise the likelihood of being a hostile takeover target, relative to other corporate control events.

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I. Introduction

The impact on labor of corporate restructurings generated a great deal of political and academic debate as the restructuring wave of the 1980s progressed. Some commentators charged that the windfalls accruing to shareholders from such takeovers reflected, at least in part, future losses to be incurred by target company employees. In a statement before the Senate banking committee, for example, the American Federation of Labor and Congress of Industrial Organization (1985) argued that employees "often involuntarily finance the costs of takeover battles by job losses or pay cuts." Moreover, even when job losses do not immediately follow, hostile takeovers threaten "the quality of employment; expectations of long-term employees that have been committed and nurtured by the target are simply cast aside."

The implications of corporate restructurings for long-term employment relationships may be most acute in the case of hostile takeovers. Shleifer and Summers (1988) argued, for example, that "hostile takeovers may facilitate opportunistic behavior at the expense of workers" by making possible the removal of "entrenched" managers who would otherwise uphold implicit contracts with employees. Their reasoning was based upon the hypothesis that, owing to management loyalty--an ingredient necessary to make implicit contracts feasible in the first place--a longtime manager tends to avoid breaking implicit contracts with employees even when doing so would benefit shareholders.

In this paper, we empirically test the hypothesis that targeted firms during the 1979-1989 period were firms whose employees were earning extramarginal wages. The approach in this paper is novel in that we test the hypothesis that hostile acquirers targeted

extramarginal wages dispensed to employees, either as rents or under long-term implicit contracts. We consider two alternative characterizations for extramarginal wage payments, each based upon attributes of the industry wage structures for those industries in which sample firms operate.

First, we use industry effects, or "industry wage premia" estimated from a standard wage equation for individuals, to proxy for labor market rents. This approach amounts to a joint test of the (employee) stakeholder expropriation hypothesis and the interpretation of industry wage differentials as labor market rents. Second, we consider extramarginal wages generated by implicit long-term incentive contracts of the type studied by Lazear (1979). In industries where such contracts are used, age-earnings profiles will be steeper than age-productivity profiles, creating circumstances potentially conducive to opportunistic behavior by firm owners.¹ Furthermore, the incentive for opportunistic behavior will be stronger the greater the proportion of older or more tenured workers. We test whether targeted firms were those in which (i) age-earnings profiles were relatively steep and (ii) older workers accounted for a relatively large proportion of the labor force. This approach thus provides a joint test of the stakeholder expropriation hypothesis and the interpretation of steep age-earnings profiles as reflecting Lazear contracts, or experience-related premia more generally.

Several previous studies have examined the proximate impact of hostile takeovers on employees by comparing compensation and

1. Strictly speaking, the Lazear model should explain rising wages with company tenure, rather than experience more generally. Our data set, however, contains no measures of tenure. We use age, rather than potential experience (age-schooling-6) to avoid problems of interpretation of the latter measure when individuals do not work continuously.

employment before and after takeovers. In a couple of detailed small-sample studies, Bhidé (1989) and Bhagat, Shleifer and Vishny (1990) find that substantial layoffs are frequently reported at target firms following such events. Bhagat, et al. conclude, however, that layoffs can explain only a small fraction of the takeover premium for their firms. Rosett (1989) examines union wage contract settlements surrounding takeovers accompanied by CEO changes and finds such events to have little discernible impact on settlements.²

None of these studies, however, looks at wage or employment patterns that may be associated with extramarginal wage payments; clearly, it is specifically such payments that ought to be the target of any opportunistic behavior. Also, identification of impacts on labor with this event-study approach may be plagued by several obstacles. First, measuring event-related changes in the distribution of rents generated by target companies tends to be complicated by the fact that hostile takeovers are quite often followed by divestitures or other restructurings. Second, post-takeover plans to extract rents from employees are likely to meet resistance, perhaps enough in many cases to block or delay intended changes. Similarly, acquirers may have intended to implement such changes only over a period of several years. Perhaps the full implications for employee welfare became apparent in some cases only after the economy entered the 1990 recession.

An alternative avenue of research that focuses more explicitly on expropriation of extramarginal compensation or breaches

2. Rosett's findings, of course, say nothing about the impact on wages of professional and managerial staff. These results for hostile takeovers appear consistent with those found in studies of the impacts of leveraged buyouts. Lichtenberg and Siegel (1991) find LBOs to have negative effects on nonproduction workers, but positive effects on the employment and wages of production workers, who are more likely to be covered by union contracts.

of implicit contracts is that concerned with defined benefit pension plan terminations and reversions of excess assets from overfunded plans. Terminations can result in losses to employees because the explicit sponsor's obligation to current employees upon termination is based only on wages at that point in time rather than wages at retirement and, in addition, because sponsors of non-terminated plans often index post-retirement benefits to inflation.³

Pontiff, Shleifer and Weisbach (1990) find that pension plan terminations with asset reversions are more common following hostile, compared to non-hostile, takeovers, but conclude such reversions are relatively unimportant as a source of the gains from hostile takeovers. Mittelstaedt (1991) finds that the likelihood of excess asset reversion is greater after a hostile takeover, and that the fraction of the takeover premium potentially attributable to wealth transfers (induced by plan termination) is greater following hostile takeover attempts. He argues, however, that termination and reversion of excess assets appears to be motivated more by the financing needs associated with takeovers than by a desire to transfer wealth from labor. Corroborating this, plan terminations associated with hostile takeovers are not found to exhibit a significantly lower frequency of reinstatement (with original explicit terms intact) subsequent to removal of excess assets. Ippolito and James (1992) present evidence suggesting that takeover threats are more likely to occur at firms with overfunded pensions but, again, find no evidence to suggest that

3. When a pension plan is terminated, the firm has the option of buying annuities with a value equal to the explicit pension obligations, based upon current salaries, or replacing the plan with one of at least that value. In cases where the plan is overfunded, the firm can keep all the assets left over after the annuities are purchased.

takeover targets are less likely to reinstate the defined benefit plan after taking the excess assets.⁴

Our study is unique in that it focuses on extramarginal wage payments; in addition, it avoids the difficulties of the event-study approach by attempting to identify potentially extractable employee rents *ex ante*.⁵ In short, we estimate the likelihood that a firm became a hostile takeover target between 1979 and 1989, as a function of our proxies for the burden of "above-market" wage payments as well as other variables as of the beginning of the sample period. Our methodology thus follows that suggested by Palepu (1986) for estimating predictive models identifying takeover targets. Firms listed on the New York or American Stock Exchanges, and carried on the Compustat active file in at least one year from 1979-1983, comprise the domain from which target firms are identified.

We also examine the relationship between our proxies for employee rents or extramarginal wages and the incidence of other takeover and restructuring events. As suggested by Perotti and Spier (1991), increases in financial leverage perhaps play a crucial role in helping to shift bargaining power away from non-capital firm stakeholders in any corporate restructuring. In fact they argue that,

4. Of course, it is quite possible that excess assets would have otherwise been used to finance future inflation indexation.

Ippolito and James use the dataset of Lehn and Poulsen (1989), originally used to study motivations for going private transactions (LBOs). Lehn and Poulsen create a dummy variable which identifies a subset of their LBO firms for whom an outside takeover attempt was rumored (in the *Wall Street Journal*) around the time of the buyout. The study of Ippolito and James is also focused on LBOs, but uses this dummy variable to make hostile takeover-related inferences. With respect to LBOs, they find that terminations are more likely but, again, their overall results do not point toward breach of contract.

5. Opler (1992) also estimates the impact of various *ex ante* firm characteristics on hostile takeover incidence; those used to test for the expropriation hypothesis--the ratio of employees to sales, pension expense per employee, and frequency of unionization--are found to have no explanatory power.

for purposes of expropriating stakeholder rents, the form of financing--the leveraging--is perhaps more important than the change in control. Thus, the other event categories highlighted in our tests include non-hostile going-private (LBO) transactions, garden-variety mergers and acquisitions, and leveraged restructurings in which no change in control occurs. This final inquiry provides a more detailed perspective on differences between hostile takeovers and other corporate restructuring events, particularly insofar as the likely impact on employees is concerned.

An alternative hypothesis regarding hostile takeovers that has garnered some empirical support is the view that they primarily served to break up firms whose managers had sacrificed equityholder value for the sake of expansion. The most likely offenders are thought to be firms that had expanded by acquiring other firms whose lines of business were unrelated to their own "core" businesses. Bhagat, *et al.* (1990), for example, argue that "hostile takeovers represent the deconglomeration of American business and a return to corporate specialization," achieved through hostile breakups via selective divestiture or liquidation of the entire target.⁶ In order to control for and perhaps even expand upon this motivation, we construct two measures of intra-firm diversity. Similar to others, we

6. Bhide (1989) and Bhagat, *et. al* (1990) both document a tendency for the targets' lines of business to be sold off piecemeal after large hostile takeovers. Morck, Shleifer and Vishny (1990) find diversifying acquisitions during 1980-87 to be associated with negative abnormal bidder returns, and argue that hostile bust-up takeovers were an attempt to undo these "bad acquisitions". Mitchell and Lehn (1990) find negative abnormal bidder returns to be associated with acquisition announcements by firms that subsequently become hostile takeover targets, whereas announcements by firms that do not become targets on average display positive abnormal returns. In addition, they find negative abnormal returns to be associated with acquisitions that are subsequently divested. Finally, takeover targets--both hostile and friendly--display a greater rate of divestment of previous acquisitions than nontargets.

measure diversification based upon the SIC industries in which a firm operates. Our first proxy, similar to that of others, is a measure of dispersion of firm activity across 4-digit industry segments.

We construct, in addition, a novel proxy for intrafirm diversity intended to isolate a specific source of potential stockholder gains from busting up diversified firms while perhaps relevant to the expropriation hypothesis as well. Specifically, we construct a measure of the diversity of the extramarginal wages paid in the various industries in which each sample firm operates. If, for example, a firm's segments encompassed both industries in which employees tend to be paid "high" wages as well as some in which they are not, then breaking up the firm may facilitate wage cost control in the segments with positive extramarginal wages. First, poor operating results in high extramarginal wage divisions are no longer sheltered by profitability of other divisions and, thus, the ability to pay the high wages is reduced by breaking up the firm. Moreover, perceptions with regard to fairness might otherwise make it more difficult to lower or keep down the wages of one subset of employees--those earning rents--when wages in other divisions are not under the same pressure. If interindustry differences in extramarginal wage payments were associated with Lazear contracts, then renegeing on contracts with older workers in one segment would likely impact the manager's credibility in other segments. It would be particularly damaging, for example, to violate such contracts in one segment if in another segment the firm had a lot of young workers for whom the optimal compensation arrangements involved long-term incentive contracts.

In short, we find some evidence suggesting that, by either of our two measures, hostile takeover targets were making higher extramarginal wage payments; the extent of such payments thus helps to

"predict" which firms were targeted. This result is most robust when comparing hostile takeover targets only with those firms involved in some other type of merger or buyout. Indeed, our estimates imply that firms involved in non-hostile buyouts pay significantly lower extramarginal wage payments than other firms. We also find corporate focus to have substantial predictive power; by either of our two measures, hostile takeover targets display greater intra-firm diversity compared to other firms. Furthermore, of the two measures, that based upon the diversity of extramarginal wage payments appears to be the more influential factor; this latter finding may imply that the de-diversification and employee expropriation hypotheses are not entirely independent.

II. Conceptual Framework

In this section we begin with a brief review of some of the research in labor economics on the existence of, and explanations for, extramarginal wages. This phenomenon is, of course, at odds with a simple marginal productivity theory of wages. Reflecting this, the existing literature attempts to document evidence of extramarginal wages and to reconcile the empirical observations with alternative candidate theories of labor compensation. We also discuss why hostile takeovers are a plausible path for reducing extramarginal wage payments to labor.

1. Extramarginal Rents

The documentation and explanation of industry wage premia has recently been an active area of research in labor economics. In wage regressions that control for variables that economic theory suggests

should determine wages, substantial industry wage differentials persist; for example, Krueger and Summers (1988) show that one- or two-digit industry dummy variables account for nearly as much of the variation in wages as do human capital controls. Various explanations of these industry wage differences, according to which such industry effects reflect something other than rents, have been considered and rejected. These include: compensating differentials (Murphy and Topel, 1987); unobserved ability (Gibbons and Katz, 1989; Blackburn and Neumark, forthcoming); and demand or supply shifts (Krueger and Summers, 1988)

The combined weight of this evidence, as well as additional considerations, has led some researchers to conclude that industry wage premia reflect rents paid to workers in some industries (e.g., Dickens and Katz, 1987a and 1987b).⁷ One model consistent with such rent sharing is the gift-exchange model of Akerlof (1982), in which workers receive above-market-clearing wages in return for exerting more than minimal effort. Such rent sharing is also emphasized in research arguing that firms base wages partly on ability-to-pay, perhaps out of equity concerns (Levine, 1991, provides a review).⁸

A second labor market model that leads to the paying of extramarginal wages, although only to a subset of workers, is the incentive contract model of Lazear (1979). The essential feature of this model is that firms can only imperfectly monitor workers, who

7. An additional piece of evidence reported in Dickens and Katz is that industry wage premia are highly correlated across occupations within industries. This makes it difficult to reconcile industry wage premia with the shirking model of Shapiro and Stiglitz (1984), because monitoring difficulties should vary substantially across occupations.

8. Another model in which industry wage differentials could reflect rents is the union threat model. Neumark and Wachter (1991) present evidence against this model as an explanation of these differentials.

therefore have some incentive to shirk on the job. To eliminate or reduce shirking, firms pay workers less than their marginal products when young, or when their tenure is low, and more than their marginal products when they are old. In this deferred compensation scheme, employees essentially post a "bond" which is forfeited if they are caught shirking. They are willing to accept the deferred compensation implicit contract *ex ante* because it results in greater output, and hence higher present value of earnings, relative to the spot market outcome which entails more shirking.⁹

Empirical research on Lazear contracts seeks to distinguish the deferred compensation explanation of rising wages from the general human capital investment explanation (Mincer, 1974). In particular, this research asks whether wages rise faster than marginal product, consistent with Lazear's model, or rise in concert with marginal product. Numerous researchers have concluded that there is evidence consistent with the existence of Lazear-type implicit contracts (Medoff and Abraham, 1981; Lazear and Moore, 1984; Kotlikoff and Wise, 1985), although others have argued to the contrary (Brown, 1989). Overall, the evidence and theory suggest the possibility that firms in some industries may use Lazear-type contracts, and thus, may be paying extramarginal wages to their older or more tenured workers.

Based on these two avenues of research, we construct two sets of proxies for extramarginal wages paid to labor (described in greater

9. An alternative hypothesis under which workers receive less than their marginal product when young, and more when old, is that workers prefer rising wage profiles (Frank and Hutchens, 1992; Loewenstein and Sicherman, 1991). In this case, however, workers sacrifice present value of earnings in order to receive deferred compensation. Also, Carmichael (1983) offers a human capital investment model in which wages rise faster than marginal product. In all of these models, as in the Lazear model, older workers are still paid extramarginal wages; thus, our test cannot actually differentiate between these theories. Evidence regarding the validity of one bears equally on the other.

detail in section III). First, to capture the type of rents discussed in the literature on industry wage differentials, we construct a measure of the *industry wage premia* paid to workers in the industries in which our sample firms conduct business. Second, to capture the excess wage payments resulting from Lazear contracts, we construct estimates of the *slopes of age-earnings profiles* and the *relative employment of older workers* in each industry. Since, in this case, it is older workers whose wages are thought to exceed their marginal product, our proxy for the extramarginal wage payment is equal to the age-earnings slope interacted with the relative employment of older workers. The values of our proxies are then assigned to the firms in our sample based upon the proportion of each firm's business conducted in each industry.

2. Hostile Takeovers as a Means of Reducing Extramarginal Wages

Both types of extramarginal wages paid to workers may create an incentive for employers to renege on what are effectively implicit contracts that give rise to these wage payments. According to the gift-exchange or rent-sharing models, such behavior would appear myopic since extramarginal payments made to workers in each period represent efficiency wages in the sense described in Solow (1979). It is conceivable, of course, that outsiders view the rent-productivity relationship differently from current management, and therefore perceive gains from reducing wages. The ability-to-pay hypothesis provides a stronger argument for the unique role of hostile takeovers. The increases in debt that often accompany hostile takeovers (as well as perhaps other restructurings) may reduce the firm's perceived ability to pay, and thus perhaps lead to lower wages without a concomitant drop in effort or productivity. Moreover, hostile

takeovers may be unique among leverage-increasing transactions because they also involve a change in management. Notwithstanding the argument of Perroti and Spier (1991), workers may react more negatively if existing management simply increases leverage and then claims to be unable to continue paying high wages.

In the Lazear model, it is often argued that firms avoid renegeing on their long-term contracts because renegeing would damage the firm's reputation for upholding such contracts, and preclude entering into them with workers in the future.¹⁰ In order for this construct to support the contract-breaking view of the hostile takeover, it must be the case that the reputation really accrues to the manager. In this case, when a company is acquired and broken up, it may only be the "takeover artist" who bears the brunt of any adverse reputation effects from wage or employment cuts among older workers, leaving the original, and more importantly the new, management's reputation unscarred.

Shleifer and Summers (1988) are more skeptical of the strength of the formal reputation argument as an explanation for why hostile takeovers may be needed to reduce or eliminate extramarginal wages. They argue, instead, that incumbent managers are more loyal to their employees--traits that enabled these implicit contracts to be used in the first place. Hostile takeovers thus may help to reduce wage costs by ridding firms of managers loyal to their older employees. Of course, the flip side of this supposition is simply

10. Cornwell, et al. (1991) provide evidence that, in general, firms do not behave opportunistically. In particular, older workers with pensions are not more likely to be discharged than otherwise similar workers without pensions, even though discharging such workers would reduce pension liabilities. However, they find evidence that unanticipated increases in pension costs, owing to inflation (with at least partial indexation), do increase the likelihood of such discharges, suggesting that firms behave opportunistically when damage to their reputation is likely to be small.

that bad managers pay wages that are too high; hostile takeovers aim to throw out bad managers and reduce extramarginal payments. In this study, we do not attempt to distinguish between these alternative explanations of why hostile takeovers might lead to reductions in extramarginal wages. At the same time, this precludes us from drawing normative judgements with regard to the efficiency of hostile takeovers. If the postulated relationship between extramarginal wage payments and hostile takeovers is found, one might only choose to conclude that, *ex post*, these payments may be viewed as rents.

III. Data Construction

The data are drawn from several sources. The three categories of data include firm-level financial data, data on hostile takeover attempts and other corporate restructuring activity, and information for estimating wage profiles and wage premia applicable to the workers in that firm. The three primary sources employed to obtain this information were: the Compustat data base; W.T. Grimms & Co. annual *Mergerstat Review*; and U.S. Census data. Compustat contains financial data at the firm level and, to a limited extent, at the level of the firm's business, or industry, segments.¹¹ It also contains some information on corporate restructuring/merger activity. Further details about the nature of acquisition activity--the

11. Compustat Industry Segment Files contain annual data for up to 10 industry segments, which are divisions of the firm by principal products sold.

Lichtenberg finds evidence to suggest that firms became less diligent about reporting their financials by SIC business segment during the 1980s, probably due to lack of enforcement. Since we use data from the years closely following the passing of the segment reporting requirement (mostly from 1979), our measurement of firm operations by business segment ought to be largely unhampered by the underreporting problem.

identification of hostile takeover attempts in particular--was collected from *Mergerstat Review* and supplemented using the *Wall Street Journal Index*.

Data on worker characteristics and the wage structure are difficult to obtain at the firm level. Compustat does report Labor and Related Expenses, Pension and Retirement Expenses, and Number of Employees for certain firms, but these three variables are not available for a large percentage of the companies on Compustat. As mentioned earlier, others have already explored the implications of the expropriation hypothesis with respect to pensions. Because of the limited availability of labor force data at the firm level, variables describing the wage structure and composition of the labor force for 77 detailed industries were computed using 1980 Census data.

Industry wage premia and the slopes of the industry-specific wage profiles were estimated from standard log wage regressions. Industry averages of other variables relating to worker characteristics were also computed using Census data. The slopes, wage premia and other industry level data were matched to the corresponding industry segments in which the firm operates. These variables were then estimated at the firm level by computing the weighted average of each variable over the firm's industry segments, using industry segment sales to compute the weights.¹²

The final sample of 1898 firms used for this study consists of all NYSE or ASE listed firms (excluding financials and utilities) on the Compustat data base file for which data were available at both

12. It turns out that the sum of industry segment sales often adds up to less than firm-level sales, even for firms with less than ten segments. As long as underreporting of segment sales is proportional (or random) across segments, the underreporting will not bias these estimates.

the firm and industry segment level at any time from 1979-1983.¹³ Most of the Compustat data were obtained from 1979; however, some could only be obtained for later years. Firms were dropped if they were deleted from the Compustat "active" file for any reason prior to 1980.¹⁴

1. Matching of Compustat and Census Industry Categories

In order to apply the Census industry level data to the Compustat firms, Census industry codes and the segment-level SIC codes reported on Compustat were matched at the 2-digit level. Because the Census industry codes are not the same as the SIC codes (which Compustat uses), a mapping between the two codes was developed. Appendix H of the Technical Documentation for the 1980 Census was used to determine the relationship between Census industry codes and SIC codes. The goal of matching the Census industry codes to the Compustat SIC codes at the two-digit SIC code level was complicated by the fact that the Census industry codes are not directly comparable to any particular level of SIC codes. Certain Census categories

13. The sample was restricted to the New York and American stock exchanges because of the expense of purchasing industry segment data from Standard and Poors. Also, financial and utilities industries are excluded from the study because of heavy regulation of mergers and operating activities in these industries.

14. The industry segment data were only available for the previous seven years on the regular Compustat data base; segment data going back to 1979 were obtained by a special purchase from Standard and Poors.

Compustat keeps company data on two files, an "active" file and a "research" file. Company data are moved to the research file if their financial data are no longer publicly available, most often due to being acquired. A code indicates whether a firm has been deleted from the active file due to the firm's being acquired or taken private, as well as the date of deletion. Compustat identifies reasons for deletion as: Acquisition or merger, Bankruptcy, Liquidation, Reverse acquisition, No longer fits original file format, Leveraged buyout, Now a private company, or Other.

represent aggregations of two-digit level codes used in Compustat.¹⁵ These latter categories, as well as eight categories for which no comparable SIC code is reported ("not specified" is indicated) are included as extra industries in computing the Census wage equation estimates, but do not ultimately match up with the Compustat data. Many Census industry codes are reported at the three- or four- digit level, and thus, were aggregated to the two-digit level. Industries for which there were less than three people sampled and Industry 4300 (U.S. Postal Service) were deleted. The resulting mapping matches 220 Census Industry codes with 77 two-digit level SIC codes and 812 Compustat segment (four-digit level) SIC codes with 63 two-digit level SIC codes.

2. Census Data and Extramarginal Wage Proxies

The slope and intercept of each industry's wage profile, the overall industry wage premium, and the percentage of all workers in an industry aged 40 or over are derived from data obtained from the 1980 Public Use "A" Sample of the U.S. Census. The 77 industry wage premia are obtained from a regression of the log of the average hourly wage on age, and a set of dummy variables reflecting sex, race, marital status, education, year of immigration, region, rural/urban residence and sex/marital status interactions, plus 76 industry dummy

15. The two-digit aggregations are Coal Mining (1100 and 1200), Construction (1500, 1600 and 1700), Security and Commodity Brokerage and Investment Companies (6200 and 6400), Insurance (6300 and 6400) and Real Estate (6500 and 6600). Census industry categories not represented in Compustat include Banking (6600), Legal Services (8100), Social Services (8300), Museums, Art Galleries and Zoos (8400), Religious and Membership Organizations (8600) and Works in Private Household (8800).

variables.¹⁶

The slopes and intercepts of industry-level wage profiles are obtained from a similar regression in which, additionally, the age variable is interacted with each of the industry dummy variables. The slopes are thus the coefficients on these 77 interaction terms. Industry intercepts from this regression gauge industry differences in wages of young workers. The industry-level estimates of the slopes, intercepts, overall premia, and the percent of workers aged 40 or over are presented in Appendix Table A1.¹⁷

3. Corporate Restructuring Data

Identification of the targets of hostile takeover attempts from 1979 through 1989 is largely based upon data provided in the W.T. Grimms & Co. annual *Mergerstat Review*. Grimms classifies a "hostile" tender offer for public stock as one in which the initial tender offer of the "suitor" (acquirer) is "contested" (rejected) by the target company. The outcomes of hostile takeover attempts are classified as "successful" when the target is eventually acquired by the initial suitor, usually with a "sweetened" offer; "unsuccessful" when the target remains independent; or a "white knight" when the target is acquired by a corporate suitor that "the target company feels is more compatible with its own business philosophy and corporate

16. Observations were deleted from the Census sample if the individual was younger than 16, did not work for a private-sector company, reported weeks worked, average hours of work per week or income as zero, reported data that implied an hourly wage of under one dollar, or failed to report an occupation or industry.

17. In measuring the "age" of the workforce, we focus on the proportion of workers over 40 because workers over 40 are the protected class under the Age Discrimination in Employment Act. Thus, any evidence concerning the role of worker age speaks to the disparate impact of hostile takeovers on older workers as defined by the Act.

objectives."¹⁸

Grimms' publication listed all targets and their suitors from 1984-1989. Prior to 1984, while a tally of the outcomes of all hostile takeover attempts is reported, only a partial listing of the actual targets is identified specifically.¹⁹ We thus supplemented the pre-1984 lists with the *Wall Street Journal Index* over the period 1979-1983 using a keyword search as well as by looking up each of the firms in our final sample that, according to Compustat, were acquired or taken private during this period. About 20 of our hostile takeover targets were identified using this source.

Some takeover and restructuring information is also drawn or generated from the Compustat database. For purposes of comparing characteristics with our hostile takeover sample, Compustat designations (the reason-for-deletion code for companies on the research file) were used to label firms that were acquired or merged from 1979-1989, as well as those taken private via LBO or other means. The Compustat and *Mergerstat* classifications are summarized in Table 1.²⁰

We also compute an indicator for the incidence of a substantial leveraged restructuring during the 1979-1989 period similar to that used by Blair and Schary (1992). Specifically, for

18. While Bhagat, et al. discuss separate results for white knight, successful, and unsuccessful targets, this distinction is not particularly useful for this paper since it is purely an *ex ante* study of the event of being a hostile tender offer target.

19. Furthermore, a telephone inquiry revealed that Grimms & Co. kept no convenient historical record of the other hostile tender offers.

20. Perhaps somewhat surprisingly, as can be seen in Table 1, there is no overlap between firms labeled as hostile takeover candidates and firms labeled by Compustat as having been involved in a going private/LBO transaction. This is probably because *Mergerstat* only identifies firms actually receiving tender offers as hostile targets, and because Compustat does not include in its LBO category any firm that was delisted and merged into another firm, perhaps even some of those merged into shell organizations established by LBO sponsors.

each of the firms during this period we compute the maximum single-year change in the leverage ratio--total debt over total debt plus stockholder equity. Book value is used in these calculations in order to avoid flagging changes in leverage that are merely due to changes in stock market valuation.²¹

4. Additional Variables

Two types of proxies for intrafirm diversity are constructed. One, intended to capture corporate "focus," is the Herfindahl dispersion index of firm sales across reported business segments (the sum of squared shares of sales across industry segments). It may range from 1.0 for an undiversified firm to 0.1 for one that is equally diversified across ten segments. If targets were chosen, in part, because of lack of "focus," this variable should have a negative impact on the probability of being a target.²² The second type of proxy involves one of two measures of the standard deviation, across a firm's industry segments, of extramarginal wages. Specifically, we compute the standard deviation of the industry wage premium across firm segments as a measure to be associated with the industry-wage-premium characterization. For the long-term contract formulation, we compute the standard deviation of the proportion aged over forty

21. For each firm, the change in the leverage ratio is calculated in each of the years for which the required data are available; our restructuring variable is taken to be the maximum change. Admittedly, this is a crude measure, but is perhaps a better indicator than the total change over the period, since some firms (whether or not they are taken over) are not in the dataset for the entire period. This measure may be particularly appropriate for flagging firms that conducted major leveraged restructurings as a preemptive defensive action against possible hostile offers.

22. This perspective on the role of takeovers is also supported by Lichtenberg (1990), who finds that more diversified firms have lower total factor productivity. Lichtenberg also finds that publicly held firms, on average, were substantially less diversified in 1989 than in 1985, and argues that this can be attributed, in part, to the recent takeover wave.

across the firm's industry segments, multiplied by the age-earnings slope.

Several additional control variables are constructed using Compustat financial data from 1979 (or the first year in which the firm's financials are available). Firm size is measured by book value of assets. Other variables that may impact the likelihood of a takeover are the firm's income taxes, tax-loss carry forwards, and cash flow measured by operating earnings before depreciation. All are deflated by book asset value. Cash flow is a commonly used proxy for the free-cash-flow takeover motivation hypothesized by Jensen (1986); as argued by Opler and Titman (1991), however, the interpretation of any cash flow effect is somewhat ambiguous. Income taxes proxy, of course, for the tax-reducing motivation for debt-financed takeovers (Lowenstein, 1985). Since the transferability of loss carry forwards is limited by tax law, the presence of a substantial carry forward is likely to be a discouraging factor for takeovers involving a change in control.

Finally, we include a measure of the firm's selling, general, and administrative (SG&A) costs relative to 2-digit industry. This variable is meant to proxy for the firm-level component of inefficiency or payment of rents. It is computed as the residual from a regression of the ratio of firm SG&A expenses to sales on the proportions of firm sales in each of our 2-digit industries as well as dummy variables for the year of observation. Of course, this measure may also be related to extramarginal wages at the firm level; by construction, however, it should be largely uncorrelated with our proxies for extramarginal wages based on characteristics of the wage structure in the industries in which the firms operate. In accordance with the wealth-creation view of hostile takeovers as well as the

expropriation view, this "inefficiency" variable is expected to have a positive impact on the probability of being a takeover target.²³

IV. Empirical Findings

1. Review of Hypotheses to be Tested

In summary, in testing the hypothesis that hostile takeovers were motivated by a desire to expropriate employee stakeholder claims, we test whether their incidence was related to the pattern of extramarginal wage payments. Two alternative sets of estimates are used as a proxy of extramarginal wage payments, both of which are based upon the industries in which our sample firms conduct business. First, we test for the influence of "industry wage premia" paid to workers. Second, we test for the influence of excess wage payments resulting from long-term implicit contracts, using industry-based estimates of the slopes of age-earnings profiles, as well as the relative employment of older workers.

Several auxiliary hypotheses are also tested. We examine whether corporate diversification, as measured by the dispersion of firm sales across business segments, increases the likelihood that the firm is targeted. We also examine the more specific hypothesis that firms diversified across industries which tend to pay very different extramarginal wages are targeted. The idea here is that managerial reputation is more easily preserved in low extramarginal wage divisions if their management is not cutting the wages of employees in other divisions. Alternatively, poor operating results in high extramarginal wage divisions are no longer sheltered by profitability

23. Opler and Titman (1991) find that selling and administrative costs have a positive affect on the probability that a manufacturing firm is involved in an LBO between 1985 and 1989.

of other divisions and, thus, the ability to pay the high wages is reduced by breaking up the firm. Finally, we examine whether a firm's administrative (SG&A) costs relative to its industries, which may be an indicator of firm-level inefficiency, affects the likelihood of being targeted.

These tests are carried out by first estimating the likelihood of being a hostile takeover target, relative to the full sample. What may be a more pointed hypothesis, though, concerns the difference between hostile takeovers and other types of corporate control events during this period. Therefore, we also estimate the impact of our proxies on the likelihood of being a hostile target for the subset of firms involved in some kind of control event during this period. Finally, we estimate a multinomial logit model for all of the alternative forms of corporate restructurings, allowing a more thorough comparison of the *ex ante* characteristics of firms involved in those various types of events.

2. Descriptive Statistics

Descriptive statistics for the full sample and selected subsamples are given in Table 2. The category of "all other firms"--those that were not a hostile target--is further subdivided into three groups: firms involved in garden variety merger/acquisitions, those taken private via LBO or otherwise, and those experiencing neither of these events.

The industry wage premium, shown in the first row, displays an interesting pattern across subsamples.²⁴ In particular, the industry wage premium is 1.3% higher (1.489-1.476) for the average

24. The absolute level is uninteresting because it includes the intercept from the wage regression.

firm in the hostile takeover subsample as compared to all other firms.²⁵ Clearly, this difference is not statistically significant in a two-tailed test. A similar pattern is apparent for components of our experience-premium measures of extramarginal wage payments, which are proxies for payments under long-term incentive contracts. Both the age-earnings slope and the proportion of older workers appear higher at hostile takeover targets compared with all other firms; but again, the estimates in each case do not differ statistically at standard significance levels. The .853 estimate of the age-earnings slope for hostile target employees implies that their hourly wage is about 8.5% higher for each ten years of additional experience they have, all else equal. In comparison, workers at all other firms were paid an average premium of 8.3% for each decade of experience. This implies, all else equal, that the wage bill for a hostile takeover target would be about .6 percentage point higher for employees averaging about thirty years of experience.

The "intercept"--the industry-based intercept from the wage equation in which slopes vary by industry can be interpreted as the relative wage for workers with no experience. Its value is about one percent higher for the hostile target subsample, an amount which is statistically insignificant. In our prediction models, we want to compare the slopes of age-earnings profiles, holding constant this intercept. If the steeper slope arises entirely because of general human capital investment rather than because of long-term incentive contracts, then theory suggests this intercept should be negatively correlated with the slope, reflecting foregone wages owing to

25. These premia measure percentage differences because they are estimated from log wage regressions.

investment. Thus, steep profiles are more arguably the result of experience- or age-related premia once we control for this intercept.

It is worth noting that the contrasts in extramarginal wage payments appear to be greater when comparing hostile takeover targets to firms involved in other corporate control events, particularly going private transactions. For example, the industry wage premium paid by hostile takeover targets is nearly 9% higher than for firms involved in going private transactions.

Among the other variables, perhaps the most interesting is the diversification index. Consistent with the conclusions of previous studies, hostile takeover targets are more highly diversified; here we find a significantly lower dispersion index than for other firms in our sample. Hostile takeover targets also appear to be somewhat larger on average than other firms in the sample.

3. Hostile Targets versus Other Firms

Logit model estimates of being a hostile takeover target versus not being a target--for the full sample--are given in Table 3. Standard errors appear below coefficient estimates, and the implied change in the probability of a hostile takeover, given a one-standard deviation change in the explanatory variable, is provided in brackets for variables of greatest interest. Specifications (1)-(4) give estimates of the probability of being a target as a function of the industry wage premium, with each specification using a progressively larger set of control variables. In all cases, this measure of extramarginal employee claims is found to have no impact on the probability of being a target. In contrast, the coefficient on the diversification index is found to be statistically significant and of the hypothesized sign; firms with greater sales dispersion across

segments (less "focus") are more likely to be hostile takeover targets. This effect diminishes somewhat but remains statistically significant when firm size is controlled for. Coefficients on the size controls indicate that book asset value is a positive factor in the likelihood of being a takeover target, though only up to a point (about \$1.2 billion). Finally, our measure of firm idiosyncratic selling & administrative expense has a positive but insignificant coefficient.

Estimates using our alternative characterization of extramarginal wage payments--or the age-earnings profile interacted with the proportion of workers over 40--are given in (5)-(8). This variable is meant to be a proxy for the burden of extramarginal wage payments owing to long-term (implicit) incentive contracts. This measure is also found to have a positive but insignificant impact on the probability of being a target. The control variables are found to have effects quite similar to those in the industry-wage-premium specification.

4. Hostile Takeovers versus Other Corporate Control Events

As shown in Table 4, our proxies for extramarginal wages have a stronger impact on the likelihood of being a hostile takeover target when the domain is restricted to firms involved in some kind of takeover or change in control during the period. The results are most striking in the uncontrolled specifications. The coefficient of 1.85 on the industry wage premium implies that a one-standard deviation increase would raise the probability of being a target by about .03. Clearly, relative to the unconditional probability of a hostile takeover (within this subsample) of .18, this is a substantial influence. This effect diminishes and is no longer significant once

we control for firm size in (3): book asset value, which has a positive impact on the likelihood of a takeover being hostile, appears to explain much of the industry wage premium effect.²⁶ Finally, the negative significant coefficient on the diversification index in (2)-(4) suggests that, among firms involved in some kind of control change are more diversified firms more likely to be hostile targets.

Specifications (5)-(8) employ the long-term implicit contract proxy for extramarginal wage payments--the slope-age interaction--and the results are somewhat stronger. In (6), for example, the coefficient of 2.28 implies that a one-standard deviation increase in this proxy raises the probability of being a target by .02. While the magnitude of this coefficient declines as additional variables are added, it remains significant at the 10% level in (7), where we control for firm size.

5. Firm Diversification

Given the relatively important role diversification seems to play in predicting hostile takeovers, it is worth considering more carefully our characterization of intrafirm diversity. In each specification in Table 5, we add the standard deviation of our proxies for extramarginal wage payments across industries in which the firm operates, computed across a firm's industry segments. In specifications that use the level of the industry wage premium

26. One potential problem with including the firm-size proxy is that, if larger firms are prone to pay extramarginal wages, then controlling for firm size may be overcontrolling. Brown and Medoff (1989) document that larger firms pay higher wages, but cannot reject the hypothesis that this firm size-wage effect is partly attributable to labor quality. If so, introducing firm size should be interpreted as, at least to some extent, controlling for omitted labor quality captured in the industry wage premium. (A better approach would be to control for firm size in the first-stage Census wage regressions. However, this variable is unavailable in that data set.)

((1),(2),(5),(6)), we add the standard deviation of the industry wage premium; in those using the long-term contract formulation ((3),(4),(7),(8)), we add the standard deviation of the proportion over 40, multiplied by the age-earnings slope. To provide a more powerful test of the role of these diversity proxies, the original diversification index is included in each regression as well.

When the industry wage premium is used and the domain is comprised of all firms ((1) and (2)), the wage dispersion measure is found to have a positive effect on the probability of being a hostile target. The effect is statistically significant both with and without controls. In the long-term contract specification for extramarginal wage payments, the coefficient on the dispersion measure is positive though often only marginally significant. In most of the specifications, relative to the comparable specifications in Tables 3 and 4, the effect of the original diversification index declines only slightly, and often remains marginally significant.²⁷

6. Wage Structures of Executives and Managers

As noted previously, much of the discussion and findings in the literature suggests that those who appeared most likely to suffer the consequences of unsolicited takeovers were the professional staff and middle management at these firms. To test our hypothesis solely with respect to managerial compensation, we reestimate the first-stage

27. Finally, since a high proportion (42%) of the sample firms have only one business segment, it could be that either of the diversification variables is serving to differentiate between single- and multiple-segment firms. As an additional robustness check on the interpretation of the two diversification proxies, these equations are reestimated with the addition of a dummy for single-segment firms, the results of which are reported in Appendix Table A2. In each case, the effects of the original diversification proxies are found to be quite robust, suggesting that they can be interpreted as measuring differences among multiple-segment firms.

Census wage regressions over the subset of survey respondents classified as executives or managers and construct analogous proxies for managerial extramarginal wages and age distributions. Logits similar to those in Table 5 are then reestimated using extramarginal wage proxies for managerial employees only. The results, paralleling those for all workers and reported in Table 6, indicate that the level of managerial compensation is unrelated to the incidence of takeover. On the other hand, the standard deviations of managerial extramarginal wage payments (both those associated with industry wage premia and with long-term contracts) are a positive factor in some specifications.

7. Multinomial Logit Analysis

To shed more light on the differences in extramarginal wages and other characteristics of firms that experienced a major restructuring, either by choice or otherwise, we estimate a multinomial logit model for the four mutually exclusive events (versus a non-event): being a hostile takeover target, being acquired or merged, going private in a non-hostile buyout, or doing a leveraged restructuring.²⁸ Results are presented in Table 7, where, again, the first specification uses the industry wage premium, and the second

28. Firms are defined as being involved in a leveraged restructuring if they display a one-year change in book-value leverage exceeding thirty percent, and are not involved in a takeover of any kind. Since all events must be mutually exclusive in such a model, only firms that are not hostile targets fall in any of the other categories. Appendix Table A3 replicates the results using twenty- and forty-percent thresholds for defining restructurings. The estimates are similar. The thirty-percent threshold yields the highest Pseudo-R² value.

uses the slope-age interaction.²⁹ These regressions confirm that (when controlling for size) hostile takeover targets were not making higher average extramarginal wage payments relative to firms that experience no event; however, the coefficients on both of the dispersion measures indicate that these firms were more diversified. The standard deviation of extramarginal wages, in particular, has a positive effect on the likelihood of hostile takeover attempt, which is statistically significant for the industry wage premia.

What stands out most, perhaps, is the coefficient of -4.53 on the industry wage premium for firms that went private, which is significant at the .01 level. This result indicates that firms that went private were paying negative extramarginal wages relative to firms not involved in any restructuring event. A drop in the industry wage premium by just one standard deviation raises the probability of being taken private by .02, which is substantial relative to the unconditional probability of .05. This strongly suggests that non-hostile leveraged buyouts were not motivated by the desire to reduce wage payments. To the contrary, these firms seem to have been blessed with low wages prior to the buyout. The negative and significant

29. Two points with respect to the multinomial logit estimates deserve further comment. First, in the multinomial logit model, the choice of omitted reference category is irrelevant with respect to the estimated effects of the variables on the relative probabilities of each of the events. However, conclusions with respect to the statistical significance of coefficients are sensitive to this choice, since the null hypothesis in each case is that an estimated coefficient for a particular event has no effect on the probability of that event relative to the omitted reference category or event.

Second, the multinomial logit model produces inconsistent estimates if the assumption of "Independence of Irrelevant Alternatives" (IIA) is violated. In essence, this assumption requires that the effect of some variable on the relative probability of, say, events A and B, would be the same whether or not event D is included as a possible outcome. In the present context, we test whether this assumption is violated by looking at the probabilities of each change in control or restructuring event relative to no change. As reported in the last row of Table 7 (on the second page), the IIA assumption is not rejected by our data.

coefficient on the slope interaction term (as well as the intercept term) for firms taken private, similarly suggests that older workers at firms that went private were also earning low wages relative to the market, again inconsistent with the view that such transactions were motivated by expropriation from labor.

Among the coefficient estimates from the multinomial logit regressions, a couple of additional results are worth noting. First, both measures of diversification have a significant impact only upon the likelihood of being a hostile takeover target. Moreover, administrative expense in these specifications has a positive and marginally significant impact on the likelihood of being a hostile target, but no effect on any other event probability.

Finally, we split the sample of events into two time periods, 1979-1984 and 1985-1989 and estimated a multinomial logit model for each subsample.³⁰ As shown by Kaplan and Stein (1991), going private transactions carried out in the latter half of the 1980s carried higher prices relative to cash flow, suggesting that the debt in these later transactions might not be serviceable without reducing the claims of stakeholders. Relatedly, in their studies of the incidence of corporate leveraging over the 1980s, Titman (1991) and Blair and Schary (1992) find empirical support for the free-cash-flow motivation for private buyouts and leveraged restructurings only in the earlier years.

If a similar pattern held for hostile takeovers, perhaps due to the targeting of employee claims only in later years, then one might expect extramarginal wage payments to be more important in

30. The earlier period is estimated while leaving those firms involved in events in the later period in the sample; for purposes of the early period estimation, these firms are labeled as being involved in no event.

later-period hostile attempts. The coefficients, shown in Appendix Table A4, suggest that the effects of extramarginal wages are somewhat higher for the second subsample, though not significantly so. They also show that the standard deviation of extramarginal wages, as well as the diversification index, only help predict hostile takeover attempts in the latter subperiod. In contrast, the finding that taken private-firms display negative extramarginal wages is robust across subperiods.

V. Conclusions

Our principal findings are that the likelihood of being a hostile takeover target between 1979-1989 was weakly related to our estimates of the level of extramarginal wages paid by firms. This holds whether extramarginal wage payments are proxied by industry-related wage premia, or by experience premia associated with the slope of the age-earnings profile and the age distribution of employees. Once we control for firm size, however, the effect of industry-related premia is diminished. On the other hand, we find that hostile attempts were positively and significantly related to firm diversification, particularly when this is measured in terms of intrafirm variation in extramarginal wage payments, especially those associated with industry wage premia. This is consistent with a view that busting up firms may improve profitability by taking away "fairness" constraints against "recontracting" with employees earning extramarginal wages.

One can interpret these results as the outcome of a joint test of two hypotheses; first, that industry wage premia (or, alternatively, experience premia) represent rents paid to workers; and

second, that hostile takeovers were motivated at least in part by a desire to expropriate employee stakeholder claims. Our findings provide some weak support for both of these hypotheses. In fact, though, some research in labor economics is quite supportive of the view that industry wage premia, or relatively high experience-related premia, represent extramarginal wage payments to employees. In this light, one might consider these results as providing some evidence in favor of the simple hypothesis that hostile takeovers were motivated in part by the desire to redistribute stakeholder claims, and in particular, the rents being paid out to employees.

We find, in contrast, that the incidence of nonhostile going private transactions is negatively related to the magnitude of extramarginal wage payments. This result suggests that the expected gains from non-hostile buyouts were not likely to come from wage cuts. It also indicates that hostile takeovers and non-hostile LBOs were driven by quite different considerations. One interpretation of the negative relationship between extramarginal wage payments and the incidence of LBOs is suggested by the results in Krueger (1991); he finds that owner-managed establishments tend to pay lower wages than those run by hired management. The inference there is that owner-managers are perhaps better monitors (or have better incentives to do so), and therefore do not need to pay higher wages to discourage shirking. Following this line of argument, to the extent that monitoring is used more extensively at those firms (in our sample) paying "low" wages, these are the firms that would benefit the most by going private and having managers take a large ownership stake.

Of course, all this begs the usual question as to why LBO, as well as the hostile takeover, activity became so prevalent when it did. The usual answer involves the argument that transactions on such

a scale amounted to a technological innovation, perhaps connected with the innovation of a large liquid market for the junk bonds used to finance them. Similarly, it may be that argued that the recent development of more complete financial markets has made conglomeration obsolete as an efficient means for allocating capital. Blair and Liten (1990) point to the high opportunity cost of capital created by high real interest rates as one of the primary driving forces. With specific application to our main hypothesis, it could also be argued that the increasingly competitive labor market, spurred by expanding foreign competition, raised the opportunity costs of paying extramarginal wages.

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Table 1
 Classification of Takeovers in Compustat and Mergerstat

<u>Compustat classification:</u>		<u>Mergerstat hostile takeover classifications:</u>		
		<u>Successful</u>	<u>White Knight</u>	<u>Unsuccessful</u>
Acquisition or merger	566	47	42	2
Leveraged buyout ¹	27	0	0	0
Taken private	53	0	0	0
Other (not deleted)	1252	8	1	20
Total	1898	55	43	22

1. Coded only beginning in 1983.

Table 2
Descriptive Statistics for Compustat-Mergerstat-Census Data Set¹

	All Firms (N=1898) (1)	Hostile Takeover Targets (N=120) (2)	All Other Firms (N=1778) (3)	Merger/Acquisition ² (N=475) (4)	LBO/ Taken Private ³ (N=60) (5)	No Change In Control (N=1223) (6)
Industry wage premium ³	1.476 (.003)	1.489 (.011)	1.476 (.003)	1.471 (.006)	1.406 (.014)	1.482 (.003)
Age-earnings slope × 100 ⁴	.833 (.005)	.853 (.018)	.832 (.005)	.827 (.010)	.765 (.025)	.837 (.006)
Intercept ⁴	1.445 (.002)	1.450 (.009)	1.445 (.002)	1.442 (.004)	1.398 (.008)	1.449 (.006)
Proportion of workers aged 40 or over	.377 (.001)	.383 (.004)	.377 (.001)	.372 (.002)	.366 (.006)	.380 (.001)
Slope × proportion of workers aged 40 or over	.316 (.002)	.328 (.008)	.315 (.002)	.309 (.004)	.284 (.011)	.320 (.006)
Administrative expenses/sales × 100 ⁵	-.374 (.272)	.070 (.666)	-.405 (.288)	-.403 (.485)	.224 (1.109)	-.452 (.369)
Diversification index ⁶	.713 (.007)	.602 (.027)	.721 (.007)	.727 (.013)	.716 (.031)	.718 (.008)
Cash flow/assets ⁷	.174 (.003)	.171 (.009)	.174 (.003)	.168 (.004)	.157 (.008)	.177 (.010)
Corporate income taxes/ assets	.053 (.001)	.050 (.004)	.053 (.001)	.048 (.002)	.045 (.004)	.056 (.001)
Tax-loss carryforward/ assets	.029 (.004)	.016 (.009)	.030 (.005)	.013 (.002)	.008 (.003)	.038 (.027)
Debt/(debt + equity) ⁸	.346 (.005)	.350 (.017)	.345 (.005)	.364 (.010)	.368 (.025)	.336 (.006)
Log assets ⁹	4.645 (.043)	5.395 (.147)	4.595 (.044)	4.457 (.069)	4.659 (.151)	4.644 (.058)

1. Standard errors of estimates of means are reported in parentheses. Because of missing data, for the variables administrative expenses, cash flow, corporate income tax, tax-loss carryforward, and debt variables there are 1705 observations; for these variables, sample sizes corresponding to columns (2)-(6) are 114, 1591, 430, 78, and 1083.

2. Mergerstat classifications were taken as authoritative.

3. Estimated from wage regression using industry dummy variables only.

4. Estimated from wage regression using industry dummy variables and industry-age interactions.

5. Standardized to provide measure relative to firms with identical distribution of sales across two-digit industries. Residual from regression of ratio on share of sales in each two-digit industry, and dummy variables for the year of observation, computed over all observations in merged sample with valid data for administrative expenses and sales.

6. Herfindahl index computed over shares of sales in industry segments.

7. Operating income before depreciation divided by book value of nominal assets.

8. Long-term debt and stockholders' equity are used.

9. Assets are nominal values for the year from which the observation was drawn, deflated by the producer's price index (100=1979) for total finished goods.

Table 1
 Logit Estimates: Hostile Takeover Targets vs. Other Firms, Wage Structure Characteristics for All Workers¹

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Industry wage premium	.92 (.80) [.01]	.47 (.86) [.00]	.10 (.86) [.00]	.10 (.92) [.00]	...	...	...	...
Slope x proportion of workers aged 40 or over	...	...	...	...	1.44 (1.04) [.00]	.72 (1.10) [.00]	.33 (1.10) [.00]	.06 (1.16) [.00]
Wage equation intercept	...	...	...	...	.41 (1.03) [.01]	.14 (1.09) [.00]	-.11 (1.08) [.00]	.12 (1.13) [.00]
Diversification index	...	-1.42 (.34) [.02]	-.94 (.36) [.01]	-1.01 (.37) [.02]	...	-1.40 (.34) [.02]	-.93 (.36) [.02]	-1.01 (.37) [.02]
Log assets	...	...	.94 (.32)	.85 (.33)	...	...	.94 (.32)	.85 (.33)
Log assets squared	...	...	-.07 (.03)	-.06 (.03)	...	...	-.07 (.03)	-.06 (.03)
Administrative expenses/sales	...	...	...	1.32 (.99)	...	...	...	1.32 (.99)
Cash flow/assets	...	...	...	1.26 (2.32)	...	...	...	1.26 (2.31)
Corporate income taxes/ assets	...	...	...	-3.64 (5.04)	...	...	...	-3.64 (5.04)
Tax-loss carryforward/ assets	...	...	...	.19 (1.04)	...	...	...	.19 (1.04)
Debt/(debt + equity)	...	...	...	-.31 (.63)	...	...	...	-.31 (.63)
Log-likelihood	-446.8	-437.7	-429.5	-399.7	-446.3	-437.6	-429.4	-399.7
Pseudo-R ²	.001	.022	.040	.045	.003	.022	.040	.045
N	1898	1898	1898	1705	1898	1898	1898	1705
Hostile takeovers	120	120	120	114	120	120	120	114

1. Dependent variable is coded as one for hostile takeover targets, and zero for all other firms. Asymptotic standard errors of estimates are reported in parentheses. The coefficient of the intercept is not reported. See footnotes to Table 2 for variable definitions. Pseudo-R² is defined as $1 - \log(L_0)/\log(L_1)$, where L_0 is the likelihood evaluated at the parameter estimates, and L_1 is the likelihood with all parameters but the constant (or, in the multinomial logit model, constants) constrained to zero. It equals 0 if the regressors do not increase the likelihood at all (i.e., $L_1 = L_0$), and equals 1 if the regressors provide a perfect fit ($\log(L_1) = 0$). Partial derivatives of probability of hostile takeover with respect to control variables of key interest, for one-standard-deviation changes, are shown in square brackets.

Table 4
 Logit Estimates: Hostile Takeover Targets vs. Mergers or Acquisitions/LBO/Taken Private, Wage Structure Characteristics for All Workers¹

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Industry wage premium	1.85 (.84) [.03]	1.67 (.89) [.03]	.79 (.90) [.01]	.62 (.99) [.01]	...	...	...	...
Slope x proportion of workers aged 40 or over	...	...	...	...	2.79 (1.20) [.04]	2.28 (1.25) [.01]	1.93 (1.26) [.02]	1.79 (1.35) [.02]
Wage equation intercept	...	...	...	...	1.19 (1.16) [.02]	1.10 (1.21) [.01]	-.04 (1.22) [-.00]	-.10 (1.32) [-.00]
Diversification index	...	-1.45 (.36) [-.06]	-.81 (.39) [-.03]	-.94 (.41) [-.04]	...	-1.39 (.36) [-.06]	-.74 (.39) [-.03]	-.87 (.42) [-.03]
Log assets	...	...	.30 (.07)	.38 (.08)	...	...	.31 (.08)	.39 (.08)
Administrative expenses/sales	...	...	...	1.19 (1.23)	...	...	...	1.17 (1.22)
Cash flow/assets	...	...	...	2.35 (2.44)	...	...	...	2.42 (2.44)
Corporate income taxes/assets	...	...	...	-4.61 (5.15)	...	...	...	-4.37 (5.17)
Tax-loss carryforward/assets	...	...	...	4.40 (1.93)	...	...	...	4.37 (1.93)
Debt/(debt + equity)	...	...	...	-1.19 (.71)	...	...	...	-1.12 (.72)
Log-likelihood	-313.4	-305.0	-296.6	-271.0	-312.0	-304.3	-295.7	-270.3
Pseudo-R ²	.008	.034	.061	.085	.012	.037	.064	.088
N	675	675	675	622	675	675	675	622
Hostile takeovers	120	120	120	114	120	120	120	114

1. Dependent variable is coded as one for hostile takeover targets, and zero for other changes in control. Asymptotic standard errors of estimates are reported in parentheses. The coefficient of the intercept is not reported. See footnotes to Table 2 for variable definitions. Pseudo-R² is defined as $1 - \log(L_0) / \log(L_1)$, where L_0 is the likelihood evaluated at the parameter estimates, and L_1 is the likelihood with all parameters but the constant (or, in the multinomial logit model, constants) constrained to zero. It equals 0 if the regressors do not increase the likelihood at all (i.e., $L_1 = L_0$), and equals 1 if the regressors provide a perfect fit ($\log(L_0) = 0$). Partial derivatives of probability of hostile takeover with respect to control variables of key interest, for one-standard-deviation changes, are shown in square brackets.

Table 5
 Logit Estimates for Hostile Takeover Targets Incorporating Dispersion of Extramarginal Wage Proxies,
 Wage Structure Characteristics for All Workers²

	Vs. All Other Firms				Vs. Mergers or Acquisitions/TBO/Taken Private			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Industry wage premium	.17 (.86) [.00]	.18 (.92) [.00]	... ...	... ...	.86 (.90) [.01]	.73 (.99) [.01]	... ...	... ...
Standard deviation ²	2.84 (1.42) [.01]	3.27 (1.42) [.01]	... ...	... ...	1.69 (1.61) [.01]	2.16 (1.65) [.02]	... ...	... ...
Slope x proportion of workers aged 40 or over	......	......	.27 (1.10) [.00]	-.01 (1.17) [.00]	... ...	... ...	1.87 (1.27) [.02]	1.67 (1.35) [.02]
Slope x standard deviation ² of proportion of workers aged 40 or over x 100	... ...	... ...	6.68 (5.10) [.01]	8.76 (5.16) [.01]	... ...	... ...	4.09 (5.81) [.01]	8.03 (5.94) [.02]
Wage equation intercept	... ...	... ...	-.03 (1.08) [-.00]	.25 (1.14) [.00]	... ...	... ...	.01 (1.22) [.00]	.01 (1.32) [-.00]
Diversification index	-.67 (.39) [-.01]	-.71 (.40) [-.01]	-.70 (.41) [-.01]	-.71 (.42) [-.01]	-.65 (.42) [-.03]	-.73 (.44) [-.03]	-.60 (.44) [-.02]	-.60 (.47) [-.02]
Log assets	.93 (.32)	.84 (.33)	.94 (.32)	.85 (.33)	.30 (.08)	.38 (.08)	.30 (.08)	.38 (.08)
Log assets squared	-.07 (.03)	-.05 (.03)	-.07 (.03)	-.06 (.03)	... ...	... ...	... ...	... ...
Administrative expenses/sales	... ...	1.47 (.96)	... ...	1.40 (.97)	... ...	1.31 (1.23)	... ...	1.29 (1.23)
Cash flow/assets	... ...	1.30 (2.30)	... ...	1.25 (2.30)	... ...	2.34 (2.44)	... ...	2.38 (2.43)
Corporate income taxes/ assets	... ...	-3.52 (5.01)	... ...	-3.57 (4.99)	... ...	-4.64 (5.15)	... ...	-4.51 (5.17)
Tax-loss carryforward/ assets	......	.21 (1.03)	... ...	.20 (1.03)	... ...	4.37 (1.93)	... ...	4.40 (1.93)
Debt/(debt + equity)	... ...	-.36 (.63)	... ...	-.38 (.64)	... ...	-1.22 (.71)	... ...	-1.17 (.72)
Log-likelihood	-427.7	-397.4	-428.6	-398.4	-296.0	-270.2	-295.5	-269.4
Pseudo-R ²	.044	.050	.042	.048	.063	.088	.065	.091
N	1898	1705	1898	1705	675	622	675	622
Hostile takeovers	120	114	120	114	120	114	120	114

1. See footnotes to Tables 2, 3 and 4 for further details.

2. Calculated across up to ten two-digit industries identified from Compustat segment files.

Table 6
 Logit Estimates for Hostile Takeover Targets Incorporating Dispersion of Extramarginal Wage Proxies,
 Wage Structure Characteristics for Executives and Managers²

	Vs. All Other Firms				Vs. Mergers or Acquisitions/LBO/Taken Private			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Industry wage premium	-.22 (.98) [-.00]	-.02 (1.08) [-.00]	...	...	.44 (1.06) [.01]	.78 (1.21) [.01]	...	...
Standard deviation	2.21 (1.45) [.01]	2.77 (1.47) [.01]	...	...	1.56 (1.63) [.01]	2.50 (1.71) [.02]	...	...
Slope x proportion of workers aged 40 or over	...	...	-.44 (.54) [-.01]	-.52 (.59) [-.01]	...	...	-.07 (.58) [-.00]	-.17 (.65) [-.00]
Slope x standard deviation of proportion of workers aged 40 or over x 100	...	...	.44 (.91) [.00]	.59 (.90) [.00]	...	...	1.27 (1.23) [.02]	2.48 (1.29) [.03]
Wage equation intercept	...	...	-.90 (.71) [-.01]	-.91 (.75) [-.01]	...	...	-.19 (.76) [-.00]	.18 (.85) [.00]
Diversification index	-.76 (.39) [-.01]	-.78 (.41) [-.01]	-.89 (.41) [-.01]	-.95 (.43) [-.01]	-.65 (.42) [-.03]	-.69 (.45) [-.03]	-.54 (.47) [-.02]	-.43 (.51) [-.02]
Log assets	.92 (.32)	.83 (.33)	.93 (.32)	.84 (.33)	.31 (.07)	.39 (.08)	.32 (.07)	.40 (.08)
Log assets squared	-.07 (.03)	-.06 (.03)	-.07 (.03)	-.06 (.03)	...	...	...	...
Other financial controls included	No	Yes	No	Yes	No	Yes	No	Yes
Log-likelihood	-428.0	-397.6	-428.5	-398.7	-296.5	-270.1	-296.4	-269.3
Pseudo-R ²	.044	.050	.042	.047	.061	.088	.062	.091
N	1898	1705	1898	1705	675	622	675	622
Hostile takeovers	120	114	120	114	120	114	120	114

1. See footnotes to Tables 2, 3 and 4 for further details. Wage structure characteristics for this table were computed from Census regressions for executive and managerial workers only.

2. Calculated across up to ten two-digit industries identified from Compustat segment files.

Table 7
 Multinomial Logit Estimates: Hostile Takeovers Targets, Mergers/Acquisitions, Taken Private/LBO, and Restructurings vs. Other Firms,
 Wage Structure Characteristics for All Workers¹

	Hostile Takeover (1)	Merger/ Acquisition (1')	LBO/Taken Private (1'')	Restructuring ² (1''')	Hostile Takeover (2)	Merger/ Acquisition (2')	LBO/Taken Private (2'')	Restructuring ² (2''')
Industry wage premium	-.03 (.95) [-.00]	-.14 (.53) [-.00]	-4.53 (1.05) [-.02]	.54 (.71) (.01)	...	...	...	...
Standard deviation	3.46 (1.55) (.01)	1.06 (1.48) (.01)	1.62 (2.56) (.00)	-4.21 (2.85) [-.03]	...	...	...	...
Slope x proportion of workers aged 40 or over	...	...	...	...	-.65 (1.20) (.00)	-1.18 (.69) [-.01]	-2.69 (1.40) [-.01]	-.94 (.89) [-.01]
Slope x standard deviation of proportion of workers aged 40 or over x 100	...	...	...	...	8.04 (5.35) (.01)	-1.24 (4.53) [-.00]	-3.93 (9.06) (-.00)	-3.51 (6.55) [-.01]
Intercept	...	...	...	...	.26 (1.17) (.00)	.27 (.71) (.01)	-5.33 (1.67) [-.02]	1.28 (.87) (.01)
Diversification index	-.64 (.41) [-.01]	.16 (.26) (.01)	-.10 (.54) [-.00]	-.12 (.37) [-.00]	-.69 (.43) [-.01]	-.01 (.28) [-.01]	-.41 (.56) [-.00]	.04 (.37) (.00)
Log assets	.90 (.33)	.80 (.18)	1.35 (.48)	-.47 (.15)	.91 (.33)	.80 (.18)	1.35 (.47)	-.47 (.15)
Log assets squared	-.07 (.03)	-.10 (.02)	-.14 (.05)	.03 (.02)	-.07 (.03)	-.10 (.02)	-.14 (.05)	.03 (.02)
Administrative expenses/sales	1.58 (1.00)	-.10 (.62)	-.14 (1.29)	.03 (.63)	1.49 (1.00)	.29 (.62)	.82 (1.26)	-.23 (.63)
Cash flow/assets	.92 (2.37)	-.29 (1.28)	-1.96 (2.85)	-.81 (1.36)	.85 (2.36)	-.28 (1.28)	-2.15 (2.83)	-.74 (1.36)
Corporate income taxes/ assets	-4.47 (5.17)	-3.32 (2.84)	-2.66 (6.26)	-2.72 (3.11)	-4.61 (5.14)	-3.40 (2.84)	-2.80 (6.27)	-3.03 (3.10)
Tax-loss carryforward/ assets	.08 (1.23)	-2.14 (.97)	-4.42 (3.15)	.84 (.45)	.07 (1.23)	-2.15 (.97)	-4.36 (3.14)	.86 (.45)
Debt/(debt + equity)	-.36 (.65)	.28 (.35)	-.09 (.74)	-.68 (.43)	-.41 (.65)	.23 (.35)	-.11 (.74)	-.78 (.43)

Table 7 (continued)

	Hostile Takeover (1)	Merger/ Acquisition (1')	LBO/Taken Private (1'')	Restructuring ² (1''')	Hostile Takeover (2)	Merger/ Acquisition (2')	LBO/Taken Private (2'')	Restructuring ² (2''')
Log-likelihood			-2067.5				-2067.7	
Pseudo-R ²			.050				.051	
N	114	430	78	217	114	430	78	217

Specification test:

Coefficient of *inclusive value* from nested logit model ³	1.15 (.39)	.98 (.41)
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1. There are 1705 observations. The coefficients of the intercepts are not reported. No change in control is the reference category. See footnotes to Table 2 for variable definitions, and footnotes to Table 3 for further details.

2. Maximum single-year change in leverage ratio $\geq .3$, which is the mean of this value for targets of unsuccessful hostile takeover attempts.

3. The nested logit model is set up with one branch with outcomes including changes in control or restructuring, and the other branch with the outcome of no change in control and no restructuring. A coefficient $\neq 1$ implies that the IIA assumption implicit in the multinomial logit specification is violated with respect to the probabilities of each of the changes in control (or restructuring) relative to no change. The nested logit model was estimated with a two-step procedure. The standard error treats the inclusive value as known, rather than stochastic, and is therefore downward biased; a larger standard error would not change the statistical conclusion.

Appendix Table A1
 Industry Estimates from Micro-Level Census Wage Regressions¹

SIC Code	Industry	Slope	Intercept	Industry Wage		Observations
				Premium	Over 40	
100	Ag. Prodn - Crops	.0025 (.0013)	1.32 (.057)	1.16 (.037)	.30	763
200	Ag. Prodn - Livestock	.0013 (.0022)	1.24 (.082)	1.03 (.036)	.32	351
700	Ag. & Horti- cultural Services	.0095 (.0023)	1.22 (.083)	1.28 (.035)	.28	396
800	Forestry	.011 (.0088)	1.25 (.29)	1.36 (.12)	.22	23
900	Fishing, Hunting, & Trapping	.0043 (.0056)	1.68 (.20)	1.58 (.090)	.28	40
1000	Metal Mining	.0053 (.0037)	1.82 (.14)	1.74 (.051)	.35	144
1100, 1200	Coal Mining	.0070 (.0030)	1.82 (.11)	1.80 (.030)	.36	289
1300	Crude Petroleum & Nat. Gas Extract	.012 (.0023)	1.45 (.084)	1.59 (.032)	.3	509
1400	Non-metallic Mining & Quarrying, exc. Fuel	.0013 (.0034)	1.74 (.14)	1.50 (.050)	.45	146
1500, 1600, 1700	Construction	.011 (.0014)	1.42 (.05)	1.55 (.022)	.32	5085
2000	Mfg - Food & Kindred Products	.0086 (.0016)	1.41 (.060)	1.45 (.024)	.41	1662
2100	Mfg - Tobacco	.012 (.0043)	1.41 (.19)	1.60 (.064)	.55	85
2200	Mfg - Textile Mill Products	.0050 (.0017)	1.46 (.067)	1.37 (.027)	.40	1021
2300	Mfg - Apparel	.0067 (.0016)	1.33 (.062)	1.30 (.025)	.44	1435
2400	Mfg - Lumber & Wood Products, exc. Furniture	.0064 (.0019)	1.45 (.073)	1.41 (.029)	.37	723
2500	Mfg - Furniture & Fixtures	.0080 (.0021)	1.33 (.079)	1.35 (.032)	.34	568
2600	Mfg - Pulp & Allied Products	.010 (.0020)	1.45 (.081)	1.55 (.030)	.47	711

Appendix Table A1 (continued)

SIC Code	Industry	Slope	Intercept	Industry Wage		Observations
				Premium	Over 40	
2700	Mfg - Printing, Publishing & Allied Industries	.012 (.0016)	1.27 (.060)	1.42 (.025)	.37	1637
2800	Mfg - Chemicals & Allied Products	.012 (.0017)	1.40 (.066)	1.58 (.026)	.42	1333
2900	Mfg - Petroleum & Coal Products	.0075 (.0030)	1.71 (.12)	1.71 (.042)	.41	237
3000	Mfg - Rubber & Misc. Plastic Products	.0091 (.0020)	1.44 (.077)	1.50 (.030)	.37	729
3100	Mfg - Leather & Leather Products	.0060 (.0027)	1.32 (.10)	1.27 (.039)	.32	287
3200	Mfg - Stone, Clay, Glass & Concrete Products	.0077 (.0020)	1.50 (.078)	1.51 (.029)	.41	690
3300	Mfg - Metal Industries	.011 (.0017)	1.51 (.066)	1.63 (.025)	.46	1375
3400	Mfg - Hardware & Metal Products	.0088 (.0017)	1.43 (.063)	1.47 (.025)	.40	1436
3500	Mfg - Machinery, exc. Electrical	.0080 (.0015)	1.50 (.056)	1.52 (.023)	.39	2853
3600	Mfg - Electrical Machinery, Equipment & Supplies	.0083 (.0016)	1.47 (.059)	1.50 (.024)	.41	2129
3700	Mfg - Transporta- tion Equipment	.0085 (.0015)	1.60 (.058)	1.63 (.023)	.43	2645
3800	Mfg - Professional Photography Equipment & Watches	.0091 (.0021)	1.42 (.78)	1.48 (.029)	.37	724
3900	Mfg - Misc.	.0065 (.0021)	1.46 (.80)	1.42 (.031)	.37	593
4000	Railroads	.0074 (.0022)	1.71 (.088)	1.70 (.031)	.47	573
4100	Bus, Taxis & Urban Transit	.0044 (.0026)	1.43 (.10)	1.31 (.037)	.37	324
4200	Trucking, Ware- housing & Storage	.0073 (.0017)	1.55 (.064)	1.54 (.025)	.40	1544
4400	Water Transportation	.013 (.0031)	1.43 (.13)	1.65 (.047)	.45	174

Appendix Table A1 (continued)

SIC Code	Industry	Slope	Intercept	Industry Wage		Observations
				Premium	Over 40	
4500	Air Transportation	.014 (.0024)	1.55 (.093)	1.78 (.032)	.36	509
4600	Pipelines, exc. Natural Gas	.018 (.0074)	1.26 (.33)	1.70 (.11)	.48	25
4700	Services Incidental to Transportation	.0059 (.0031)	1.44 (.12)	1.38 (.044)	.35	209
4800	Communications	.012 (.0018)	1.51 (.066)	1.67 (.025)	.36	1430
4900	Utilities & Sanitary Services	.010 (.0019)	1.51 (.073)	1.62 (.027)	.42	943
5000	Wholesale Trade - Durable Goods	.0090 (.0015)	1.40 (.057)	1.46 (.024)	.35	2160
5100	Wholesale Trade - Nondurable Goods	.0065 (.0016)	1.46 (.059)	1.42 (.024)	.40	1811
5200	Retail Trade - Lumber, Bldg. Material, Hardware, Nurseries, & Mobile Homes	.0043 (.0018)	1.37 (.070)	1.25 (.029)	.40	717
5300	Retail Trade - Department, Variety, General Merchandise	.0063 (.0015)	1.30 (.054)	1.26 (.024)	.34	2310
5400	Retail Trade - Food Stores	.0059 (.0015)	1.41 (.053)	1.36 (.023)	.26	2537
5500	Retail Trade - Motor Vehicle & Supply Stores, Gas Stations	.0074 (.0016)	1.32 (.057)	1.31 (.024)	.28	1829
5600	Retail Trade - Apparel, Accessories & Shoes	.0045 (.0017)	1.32 (.62)	1.22 (.027)	.33	974
5700	Retail Trade - Furniture, Home Furnishing, & Appliances	.0037 (.0019)	1.43 (.070)	1.30 (.029)	.30	730
5800	Retail Trade - Eating & Drinking Places	.0046 (.0014)	1.24 (.050)	1.16 (.022)	.18	4738
5900	Retail Trade - Other	.0060 (.0015)	1.30 (.055)	1.25 (.024)	.33	2172
6000 ²	Banking	.0086 (.0016)	1.36 (.059)	1.40 (.024)	.31	1778
6100	Savings & Loans & Credit Agencies	.012 (.0023)	1.25 (.086)	1.43 (.032)	.30	521

Appendix Table A1 (continued)

SIC Code	Industry	Slope	Intercept	Industry Wage		Observations
				Premium	Over 40	
6200, 6700	Security, Commodity, Brokerage & Investment Co.'s	.0047 (.0026)	1.71 (.10)	1.61 (.037)	.35	326
6300, 6400	Insurance	.0094 (.0016)	1.40 (.061)	1.47 (.024)	.35	1791
6500, 6600	Real Estate	.0031 (.0017)	1.51 (.066)	1.33 (.026)	.51	1143
7000	Hotels, Motels & Lodging Places	.0026 (.0017)	1.40 (.062)	1.22 (.027)	.35	1070
7200	Other Personal Services	.0034 (.0018)	1.40 (.067)	1.25 (.027)	.34	949
7300	Business & Repair Ser- vices, exc. Automotive & Electrical	-.0062 (.0015)	1.43 (.055)	1.39 (.023)	.34	2521
7500	Automotive Services	.0081 (.0020)	1.29 (.073)	1.31 (.020)	.22	701
7600	Repair Services, exc. Automotive	.0043 (.0025)	1.46 (.098)	1.35 (.038)	.36	304
7800	Theaters & Motion Pictures	.011 (.0025)	1.30 (.090)	1.43 (.038)	.28	293
7900	Other Entertainment & Services	.0064 (.0018)	1.26 (.066)	1.22 (.029)	.28	752
8000	Health Care	.0057 (.0014)	1.45 (.051)	1.39 (.022)	.34	5677
8100 ²	Legal Services	.0069 (.0022)	1.52 (.082)	1.49 (.032)	.27	526
8200	Educational Services	.0082 (.0016)	1.24 (.058)	1.26 (.024)	.35	1950
8300 ²	Social Services	.0074 (.0020)	1.20 (.074)	1.20 (.030)	.33	688
8400 ²	Museums, Art Galleries & Zoos	-.0059 (.0056)	1.71 (.023)	1.21 (.095)	.33	36
8600 ²	Religious & Membership Organizations	.0041 (.0017)	1.31 (.067)	1.17 (.027)	.49	1033
8800 ²	Private Household	.0040 (.0017)	1.24 (.072)	1.09 (.029)	.63	739
8900	Other Professional & Related Services	.011 (.0019)	1.32 (.070)	1.45 (.027)	.31	952

Appendix Table A1 (continued)

SIC Code	Industry	Slope	Intercept	Industry Wage Premium	Over 40	Observations
10122 ²	Mfg - Food Industries (not spec.)	.0097 (.0062)	1.53 (.24)	1.61 (.080)	.37	51
10301 ²	Mfg - Metal Industries (not spec.)	.0048 (.0071)	1.55 (.31)	1.43 (.10)	.50	32
10332 ²	Mfg - Machinery (not spec.)	.017 (.0058)	1.16 (.25)	1.52 (.09)	.49	41
10350 ²	Mfg - Electrical Equipment & Supplies (not spec.)	.015 (.0035)	1.15 (.13)	1.43 (.050)	.37	166
10392 ²	Mfg - (not spec.)	.0062 (.0026)	1.47 (.10)	1.42 (.40)	.44	289
10472 ²	Utilities (not spec.)	.032 (.011)	.60 (.40)	1.42 (.12)	.38	21
10571 ²	Wholesale Trade (not spec.)	.0086 (.0034)	1.35 (.14)	1.40 (.050)	.44	148
10691 ²	Retail Trade (not spec.)	.0085 (.0029)	1.24 (.11)	1.28 (.045)	.38	197

1. Coefficients (standard errors) are reported from two different log wage regressions using the 1980 Public Use "A" Sample of the U.S. Census. "Slope" and "Intercept" are estimated from a log wage regression including industry dummy variables and interactions between these dummy variables and age. "Industry Wage Premium" is estimated from a log wage regression including industry dummy variables only. Other variables included in the wage regression include: dummy variables for sex, race, marital status, region, and urban residence, as well as education, year of immigration, and sex-marital status interactions. The dependent variable is the log of the average hourly wage. Percent over 40 is the proportion of workers over age forty in the industry.

2. These categories are not matched with Compustat data. The last three digits of categories 10122 through 10691 represent the Census industry code for categories which do not correspond to an SIC code.

Appendix Table A2
 Logit Estimates for Hostile Takeover Targets Incorporating Dispersion of Extramarginal Wage Proxies,
 Including Dummy Variable for One-Segment Firms, Selected Coefficients,
 Wage Structure Characteristics for All Workers^a

	Vs. All Other Firms				Vs. Mergers or Acquisitions/LEO/Taken Private			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Industry wage premium	.23 (.86)	.26 (.92)	...	...	.91 (.90)	.79 (.99)	...	...
Standard deviation ²	3.01 (1.43)	3.40 (1.43)	...	...	1.90 (1.64)	2.34 (1.69)	...	...
Slope x proportion of workers aged 40 or over	...	...	.23 (1.11)	-.04 (1.17)	...	...	1.73 (1.27)	1.55 (1.35)
Slope x standard deviation ² of proportion of workers aged 40 or over x 100	...	...	7.42 (5.11)	9.41 (5.18)	...	...	4.96 (5.89)	8.82 (6.04)
Wage equation intercept	...	...	.09 (1.08)	.39 (1.14)	...	...	.18 (1.22)	.19 (1.32)
Diversification index	-1.47 (.67)	-1.44 (.68)	-1.47 (.68)	-1.44 (.69)	-1.48 (.70)	-1.44 (.72)	-1.37 (.71)	-1.27 (.74)
One-segment dummy variable	.61 (.42)	.57 (.43)	.60 (.42)	.58 (.43)	.65 (.43)	.56 (.45)	.60 (.43)	.53 (.45)

1. Specifications correspond to those in Table 5. Only selected coefficients are shown. See footnotes to Tables 2, 3 and 4 for further details.

Appendix Table A1
 Multinomial Logit Estimates: Hostile Takeovers Targets, Mergers/Acquisitions, Taken Private/LBO, and Restructurings vs. Other Firms:
 Alternative Thresholds for Defining Restructuring (Financial Controls Included in All Specifications)¹

Panel A. Restructuring=1 if Maximum Single-Year Change in Leverage Ratio $\geq .2$

	Hostile Takeover (1)	Merger/ Acquisition (1')	LBO/Taken Private (1'')	Restructuring (1''')	Hostile Takeover (2)	Merger/ Acquisition (2')	LBO/Taken Private (2'')	Restructuring (2''')
Industry wage premium	.31 (.96)	.22 (.56)	-4.18 (1.07)	1.18 (.58)	...	...	...	...
Standard deviation	4.81 (1.79)	2.48 (1.69)	3.01 (2.68)	2.20 (1.72)	...	...	...	...
Slope x proportion of workers aged 40 or over	...	...	...	...	-.54 (1.21)	-1.21 (.73)	-2.62 (1.41)	-.45 (.73)
Standard deviation x 100 workers aged 40 or over	...	...	...	...	3.74 (2.86)	-2.27 (2.24)	6.07 (3.88)	1.18 (2.13)
Diversification index	-.61 (.42)	.18 (.28)	-.07 (.54)	.04 (.28)	-.76 (.46)	-.24 (.29)	.19 (.61)	-.08 (.30)
Log-likelihood	-2247.3				-2245.6			
Pseudo-R ²	.049				.049			
N	114	430	78	434	114	430	78	434

Panel B. Restructuring=1 if Maximum Single-Year Change in Leverage Ratio $\geq .4$

Industry wage premium	-.09 (.94)	-.21 (.52)	-4.59 (1.05)	.33 (.92)	...	...	...	...
Standard deviation	3.76 (1.56)	1.41 (1.47)	1.95 (2.54)	-2.05 (3.56)	...	...	...	...
Slope x proportion of workers aged 40 or over	...	...	...	...	-.42 (1.18)	-1.09 (.68)	-2.51 (1.39)	-.67 (1.17)
Standard deviation x 100 workers aged 40 or over	...	...	...	...	2.94 (2.76)	-3.13 (2.09)	5.24 (3.79)	-5.19 (3.99)
Diversification index	-.63 (.41)	.16 (.26)	-.09 (.53)	-.02 (.49)	-.75 (.45)	-.23 (.27)	.20 (.60)	-.26 (.49)
Log-likelihood	-1896.5				-1894.3			
Pseudo-R ²	.048				.049			
N	114	430	78	434	114	430	78	434

1. Specifications correspond to those in Table 6. Estimates of other coefficients are not reported.

Appendix Table A4
 Multinomial Logit Estimates: Hostile Takeovers Targets, Mergers/Acquisitions, Taken Private/LBO, and Restructurings vs. Other Firms,
 Wage Structure Characteristics for All Workers, 1979-1984 and 1985-1979 Subperiods Analyzed Separately¹

	1979-1984				1985-1979			
	Hostile Takeover (1)	Merger/ Acquisition (1')	LBO/Taken Private (1'')	Restructuring (1''')	Hostile Takeover (2)	Merger/ Acquisition (2')	LBO/Taken Private (2'')	Restructuring (2''')
Industry wage premium	- .83 (1.60) [-.00]	-1.27 (.63) [-.02]	-5.09 (1.38) [-.01]	.65 (1.09) [.00]	...	...	...	...
Standard deviation	-.73 (4.11) [.00]	1.65 (1.43) [.01]	.67 (3.29) [.00]	-2.70 (4.58) [-.01]	...	...	...	...
Slope x proportion of workers aged 40 or over	...	...	...	...	-3.36 (2.63) [-.01]	-2.53 (.82) [-.02]	-2.90 (1.82) [-.01]	-1.08 (1.39) [-.00]
Slope x standard deviation of proportion of workers aged 40 or over x 100	...	...	...	...	6.35 (10.00) [.00]	-1.77 (5.44) [-.00]	2.36 (10.48) [-.00]	4.56 (9.86) [.00]
Intercept	...	...	...	...	.91 (1.72) [.00]	-.31 (.83) [-.00]	-5.10 (2.18) [-.01]	1.88 (1.28) [.01]
Diversification index	-.55 (.72) [-.00]	.18 (.31) [.01]	-.16 (.70) [-.00]	.45 (.62) [.00]	-.41 (.74) [-.00]	-.09 (.33) [-.00]	-.11 (.73) [-.00]	.77 (.62) [.01]
Log assets	1.24 (.61)	.98 (.24)	1.52 (.66)	-.35 (.22)	1.29 (.61)	.97 (.24)	1.52 (.66)	-.36 (.22)
Log assets squared	-.10 (.06)	-.11 (.03)	-.16 (.07)	.02 (.02)	-.10 (.05)	-.10 (.02)	-.16 (.07)	.02 (.02)
Administrative expenses/sales	1.59 (1.77)	.54 (.74)	-.50 (1.78)	.08 (.76)	1.75 (1.79)	.48 (.75)	-.44 (1.73)	.14 (.76)
Cash flow/assets	-1.55 (4.37)	.04 (1.52)	-.93 (3.59)	-2.75 (2.02)	-1.60 (4.24)	-.02 (1.52)	-1.28 (3.53)	-2.64 (2.03)
Corporate income taxes/ assets	7.48 (9.16)	-4.25 (3.40)	-7.21 (7.85)	-4.48 (4.67)	7.03 (8.90)	-4.31 (3.40)	-6.87 (7.80)	-4.66 (4.67)
Tax-loss carryforward/ assets	-.49 (2.84)	-.73 (.88)	-3.55 (4.48)	.38 (.56)	-.48 (2.91)	-.74 (.89)	-3.57 (4.51)	.39 (.57)
Debt/(debt + equity)	-.97 (1.17)	-.35 (.42)	-1.66 (.99)	-2.40 (.68)	-1.24 (1.16)	-.43 (.42)	-1.68 (.99)	-2.45 (.67)
Pseudo-R ²			.050				.053	
N	35	238	43	75	35	238	43	75

Appendix Table A4 (continued)

1985-1989

	Hostile Takeover (1)	Merger/ Acquisition (1')	LBO/Taken Private (1'')	Restructuring (1''')	Hostile Takeover (2)	Merger/ Acquisition (2')	LBO/Taken Private (2'')	Restructuring (2''')
Industry wage premium	.19 (1.13) [.00]	1.05 (.73) [.02]	-4.18 (1.51) [-.01]	.36 (.85) [.00]	...	...	...	...
Standard deviation	3.62 (1.53) [.01]	-1.39 (2.40) [-.01]	1.62 (3.42) [.00]	-4.76 (3.39) [-.02]	...	...	...	...
Slope x proportion of workers aged 40 or over	...	...	...	...	.75 (1.42) [.00]	.60 (.91) [.01]	-2.26 (2.02) [-.01]	-.72 (1.05) [-.01]
Slope x standard deviation of proportion of workers aged 40 or over x 100	...	...	...	...	8.23 (5.86) [.01]	-.87 (6.19) [-.00]	-15.65 (15.34) [-.01]	-8.08 (8.05) [-.01]
Intercept	...	...	...	...	-.54 (1.49) [.00]	.80 (.95) [.01]	-6.13 (2.46) [-.01]	.79 (1.03) [.01]
Diversification index	-.85 (.49) [-.01]	-.01 (.37) [-.00]	-.20 (.37) [-.00]	-.38 (.43) [-.01]	-.90 (.52) [-.01]	.08 (.37) [.01]	-.98 (.82) [-.01]	-.31 (.43) [-.01]
Log assets	.76 (.40)	.60 (.24)	1.25 (.67)	-.47 (.17)	.78 (.40)	.60 (.24)	1.25 (.67)	-.47 (.17)
Log assets squared	-.06 (.04)	-.09 (.03)	-.13 (.07)	.03 (.02)	-.06 (.04)	-.09 (.03)	-.13 (.07)	.03 (.02)
Administrative expenses/sales	1.84 (1.36)	-.08 (.85)	2.25 (1.75)	-.75 (.92)	1.66 (1.34)	-.09 (.85)	1.99 (1.72)	-.85 (.94)
Cash flow/assets	1.89 (2.74)	-.90 (1.77)	-3.23 (4.27)	.36 (1.55)	1.77 (2.72)	-.81 (1.77)	-3.49 (4.32)	.38 (1.55)
Corporate income taxes/ assets	-9.94 (6.17)	-1.09 (3.86)	3.20 (9.35)	-2.01 (3.55)	-10.11 (6.15)	-1.29 (3.85)	2.74 (9.56)	-2.21 (3.55)
Tax-loss carryforward/ assets	.28 (1.19)	-4.13 (1.98)	-4.67 (4.24)	.67 (.45)	.27 (1.18)	-4.07 (1.97)	-4.53 (4.18)	.70 (.45)
Debt/(debt + equity)	-.08 (.75)	.78 (.46)	1.33 (1.03)	.07 (.50)	-.04 (.76)	.76 (.47)	1.36 (1.06)	-.03 (.50)
Pseudo-R ²			.048				.047	
N	79	192	35	142	79	192	35	142

1. There are 1705 observations for 1979-1984, and 1314 observations for 1985-1989. In the 1979-1984 analysis, firms with changes in control or restructurings in 1985-1989 were treated as firms with no changes. The coefficients of the intercepts are not reported. No change in control is the reference category. See footnotes to Table 2 for variable definitions, and footnotes to Table 3 for further details.