Worker Uncertainty in the "New Risk Economy": The Context of Perceived Job Insecurity around a Merger Announcement

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ABSTRACT

This study investigates job insecurity among employees in an information technology unit around the announcement of an upcoming merger, with 58% of the sample interviewed prior to and 42% interviewed following the announcement. Using survey responses from 633 employees and their managers nested in 142 work teams, we investigated whether employees' social context (team and manager characteristics) has direct effects on job insecurity or moderates the association of the merger announcement with job insecurity. We find managers' own job insecurity to be associated with higher employee insecurity, while working in different locations from managers and having Asian managers were associated with employees' lower job insecurity. We also find managers' tenure and job insecurity moderate the association between the merger announcement and employees' job insecurity.

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Introduction

Changes in the employment relationship over the last forty years have produced a rise in precarious work and a decline in the attachment between workers and their employer (Kalleberg 2011; 2009), reflecting a rise in employment insecurity and instability in the "new economy" (Hollister 2011; Smith 1997, 2002). Factors such as intensified global competition and the changing employment contract have led to heightened job insecurity in the labor force. Using the Current Population Survey from 1973-2006, Farber (2008) finds that for men in the private sector, there has been a decline in tenure, decreases in long-term employment, and an increase in "churning" for workers as they enter their thirties and later, leading to decreased job stability. Additionally, a study drawing on data from the General Social Survey, from 1977 to 2002 shows an overall downward trend in perceived job security for all workers in the U.S. (Fullerton and Wallace 2007).

Job insecurity is a critical work stressor, a source of anxiety in the anticipation of an unfavorable event (Lazarus and Folkman 1984). Importantly, scholars find evidence of a relationship between perceived job insecurity and health and well-being (Burgard, House and Brand 2009; D'Souza et al. 2003; Ferrie et al. 2005, 2003, 2002, 2001, 1998; Laszlo et al. 2010; Lau and Knardahl 2008; Rugulies et al. 2008) and job attitudes (DeWitte 2005; Hellgren and Sverke 2003; Kalil et al. 2010; Scott-Marshall 2010). Individuals may experience a sense of powerlessness as a result of job insecurity (Dekker and Schaufeli 1995, Greenhalgh and Rosenblatt 1984) and a corollary breach in the psychological contract in light of expectations for continuous employment (Moen and Roehling 2005).

Although job insecurity is an issue of growing social importance, it has generally been studied in the organizational literature as an individual issue, focusing on characteristics such as gender, age or worker's education as predictors of perceived likelihood of job loss (cf. Farber 2008; Shapiro 1977; Tolbert and Moen 1998). This paper extends that literature and addresses two questions: 1) what is the relationship between various characteristics of the micro-level *work context* and individuals' perception of job insecurity; and 2) which workers are likely to report higher subjective insecurity when there is an objective threat to their job? More specifically, which characteristics of employees and their most proximal work context might moderate the relationship between exposure to organizational change – in this case, knowing about an upcoming merger – and perceived job insecurity?

Taking advantage of a merger announcement that occurred unexpectedly in the middle of our data collection, we parse out how different characteristics at the individual and work-team levels might be associated with higher or lower job insecurity for those interviewed before and after the announcement. Studies examining job insecurity in the form of objective events (such as organizational restructuring, plant closure, and outsourcing of work) typically assume that the organizational change would impact all workers equally, and in the same direction (Ashford, Lee and Bobko 1989; Greenhalgh and Rosenblatt 1984; Kalil et al. 2010). While this may be true, we theorize that both individual-level characteristics (education, age, etc.) and characteristics of the immediate work context (work functions, manager characteristics) might moderate heightened job insecurity given an impending merger. This paper thus aims to promote understanding of the relationship between an objective uncertainty, in the form of a merger announcement, and differences in subjective assessments of job insecurity for workers in different team environments.

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Existing Research and Hypotheses

Subjective Job Insecurity: Personal and Job Characteristics

The bulk of the research on job insecurity has focused on individual-level characteristics. Perceived chances in the labor market, especially as driven by individuals' human capital are an especially important predictor of perceived job security (De Witte 1999; Fullerton and Wallace 2007; Greenhalgh and Rosenblatt 1984; Manski and Straub 2000). Individuals with less education, fewer years on the job and less income are more likely to feel that they will be laid off in the next year (Elman and O'Rand 2002). Conversely, job insecurity is lower for employees with higher levels of education (De Witte 1999; Greenhalgh and Rosenblatt 1984; Manski and Straub 2000). Workplace experiences of insecurity have been found to be shaped by employees' socio-demographic characteristics, including their gender, race/ethnicity, and age (Cheng and Chan 2008; De Witte 1999; Fullerton and Wallace 2007; Sverke, Hellgren and Näswall 2002). Non-whites are more likely to report higher insecurity, while mid-career workers tend to feel particularly vulnerable given implications for job loss (Fullerton and Wallace 2007; Newman 1999). Gender also plays a role in that men perceive higher insecurity given the salience of the bread-winner status (Charles and James 2003).

Occupational factors have also been found to explain differences in perceived job security (Fullerton and Wallace 2007). In particular, white-collar workers report less job insecurity than blue-collar workers, and workers in part-time jobs report more job insecurity than others (Fullerton and Wallace 2007). Cheng and Chan (2008) also find a negative relationship between one's job performance and job insecurity such that individuals with lower job performance have higher levels of job insecurity.

Contexts of Job Insecurity: Work Team and Manager Characteristics

While characteristics of the individual may be essential predictors of job insecurity, assessments of job insecurity are made within the context of employees' most proximal work environments, specifically the teams in which they work. In this study, we investigate workers embedded within specific work teams, asking whether and in what ways job insecurity may vary across different team contexts. For instance, scholars have developed a core-periphery model in considering how some workers are located in "core" jobs, while others are in "periphery" positions, leading to organizational insiders and outsiders that could translate into greater or lesser job insecurity (Atkinson 1984; Kalleberg 2003; 2009).

Laubach (2005) outlines three levels of informal stratification within work organizations: "the informal periphery", "the conventional core" and "the administrative clan". Stainback, Tomaskovic-Devey and Skaggs (2010) suggest that "workplaces contain technical and social divisions of labor (jobs, task groups, departments, etc.) that organize production and steer interaction" (Stainback, Tomaskovic-Devey and Skaggs 2010: 241). Some functions may be considered more central to the performance of the company. In turn, workers who perform these functions may feel more secure.

Generally, we might expect winners in the labor market (e.g. those with higher education) to be in core positions within a firm. However, we could also think of employees who would not fare well comparatively in the broader labor market, but yet have obtained important roles within a company through long tenure at the firm, or perhaps have strategically positioned themselves within a specific team. Another characteristic of work teams is their size, which may denote the amount of resources the organization is willing and able to devote to, and is needed to perform a specific function or task. In addition, one's team members can be a form of "social capital," (Coleman 1988), providing and transmitting information about the company. Hence we could

imagine larger teams translating into higher investment by the company in the specific work task, as well as providing workers a readily available social network that could share information about changes at the company, which may be even more important given an impending organizational change.

Scholars are also increasingly cognizant of the role managers play in shaping workers' experiences (Blair-Loy and Wharton 2002; Castilla 2011). Job security (as opposed to insecurity) has been theorized as a form of relative power at the workplace that may impact how employees behave as well as how employees are treated (Roscigno, Lopez, and Hodson 2009). We assume that differences in job insecurity reflect differences in workplace power, with those expected to do well in the labor market (i.e. those with higher education) also garnering more security and power. For instance, having a secure manager could be a source of workplace power for team members, with those who have a powerful manager feeling less threatened in the face of a merger announcement.

While to our knowledge there has not been any research examining whether managers play a role in influencing their employees' perception of job insecurity, we draw on studies that center on the role of manager to theorize how this relationship might operate. For example, a number of studies have shown that depending on managers' relative power at the workplace, they may be able to provide "air cover" for workers who participate in alternative work arrangements (Blair-Loy and Wharton 2002; Johnson, Lowe and Reckers 2008). Managers may be instrumental in shaping their employees' career outcomes, in influencing the evaluation of other managers on their job performance (Castilla 2011), while one's initial manager upon entry to an organization has been found to be particularly important for employee retention and performance-based pay, through access to subsequent reputation-building projects (Briscoe and

Kellogg 2011). While it is clear that managers have different levels of power and influence, these have been operationalized differently in studies. Blair-Loy and Wharton (2002) hypothesized that a manager with longer organizational tenure has more relative power. Therefore, employees may perceive a manager with longer tenure to be more established and also familiar with navigating organizational changes; in turn, these workers may report higher job security. Organizational power has also been linked to race and gender. Male managers in general amass more power in the workplace than their female counterparts (Kanter 1977; Maume 1999; Reskin and McBrier 2000). Similarly, white managers may have more power than their non-white counterparts overall, given studies which suggest that non-whites, on average, perceive greater job insecurity (Fullerton and Wallace 2007). However, within the context of an organization, the gender, racial and ethnic composition of the company may also play an important role in influencing the relative power of a particular group of workers (Gorman and Kay 2010; Hirsh and Kornrich 2008). For this study, we note a large presence of Asian employees and Asians in top management in the software development workforce at this company, in line with the disproportionately large percentage of Asians in IT occupations (Bureau of Labor Statistics 2011). According to the Bureau of Labor Statistics, Asians make up 5 percent of all employed workers in 2011, but comprise of 27% of software developers overall. We theorize that both being Asian and having an Asian manager may be related to a higher sense of job security. Moreover, managers' own job security or insecurity may also cross over to their employees (Carlson et al. 2010; Westman, Etzion and Danon 2001; Westman 2001). Similarly, managers who see themselves as better performers may also signal to subordinates that they work in a team with higher status; in turn, this could be associated with workers' own job security.

To summarize our hypotheses related to the first question, we theorize that both the function of work teams and the characteristics of team managers are associated with employees' perceptions of job insecurity. We hypothesize that working in a team that performs a core function, which we define as software development work at this IT division of a Fortune 500 company, as well as working in a larger team, would be associated with lower job insecurity. We also hypothesize that managers' demographic characteristics (e.g., gender and race) as well as managers' work characteristics (e.g. company tenure, level of job insecurity, level of self-rated performance, and whether working in a different location from their employees) are also associated with employees' job insecurity.

Hypothesis 1: Employees' work team characteristics are associated with their job insecurity, such that those in teams engaged in software development as well as larger teams are more likely to report lower job insecurity.

Hypothesis 2: Managers' characteristics are associated with employees' job insecurity, such that workers with a male manager, an Asian manager, a manager with longer tenure, a manager with lower job insecurity, a manager who rate themselves as a better performer, and/or a manager who works in the same vicinity as the worker are more likely to report lower job insecurity.

Objective Job Insecurity: Impending Organizational Change

Our second research question concerns which workers are likely to report higher (perceived) job insecurity when there is an objective threat to their job. Accordingly, we examine whether specific characteristics of employees and their work teams moderate the relationship between a merger announcement and employees' job insecurity. Seldom are scholars able to be "on the ground" when major organizational restructuring happens. The only exceptions have been large-scale longitudinal studies that followed workers in the workplace for a long time, but these have primarily been with public employees, and often take place in Western Europe, such as in the UK, Finland and the Netherlands (see for example, Ferrie et al. 1998, 2001; Kivimaki et al. 2000, 2001; Swaen et al. 2004); but there are important differences in the experience of job insecurity between private and public sector employees, as well as across national contexts (Clark and Postal-Vinay 2009; Sjoberg 2010).

Most researchers have studied workplaces that have undergone restructuring, but only after it occurred, therefore only capturing and primarily focusing on the survivors of the event (Davy, Kinicki and Scheck 1997; Grunberg, Moore and Greenberg 2001; Hellgren, Sverke and Isaksson 1999, Hellgren and Sverke 2003; Moore, Grunberg and Greenberg 2004; Probst and Brubaker 2001). Studies on mergers and organizational restructuring suggest that major changes within the work environment threaten an employee's sense of security (Ashford, Lee and Bobko 1989; De Cuyper et al. 2010); nevertheless, there is limited research examining an impending organizational change, such as a merger announcement. Additionally, existing studies have not explicated how workers with different individual characteristics and in different team contexts might perceive the consequences of an organizational change.

In this paper we use the announcement of a merger as a defining break in the company climate. In turn, we investigate whether individual characteristics (education, gender, age, etc.),

and/or characteristics of work teams might be even more strongly associated with higher job

insecurity during this period of uncertainty, compared with employees with the same

characteristics who were interviewed before the merger announcement. We theorize and test

whether those who are on the margin of this organization would report even higher insecurity

after a merger was announced.

> *Hypothesis 3:* Workers who usually would feel more job insecure (see Hypotheses 1 and
>
> 2 above) may report even higher insecurity if interviewed after the merger announcement.

Method

Data

The data for this paper comes from the Work, Family & Health Study, in the IT division

of a Fortune 500 company given the pseudonym Tomo. Survey data collection for the study was

rolled out at the work team level (a group of employees involved in ongoing projects reporting to

the same front-line manager). These individuals are guided by the same leadership principles

and work closely together on projects. In some instances, the manager is not in the same

location as his or her employees. The study began for employees in the first work teams in fall

2009, and continued for each additional work team about every 4-6 weeks over the next year,

ending for the last work team in fall 2010. 258 managers were invited to complete the survey

and 221 completed it for a 86.3% response rate. 1210 employees were also invited and 823

completed the survey for a 68.6% response rate. During the course of data collection, a merger

was announced. We restrict our analyses to employees for which we have response from 2 or

more workers from the same team and for which we also have survey responses from work team managers, resulting in an analytic sample of 633 individual nested in 142 work teams, each with a unique manager. Tests of differences between individuals in our analytic sample, and those excluded given missing response on any of the variables find that respondents in our analytic sample were more likely to have a college degree (80%) versus those excluded (70%). Respondents in our analytic sample also reported on average lower job insecurity (2.28 vs. 2.42), but likely because a smaller proportion of them (42%) were interviewed after the merger announcement, compared to proportion of individuals excluded due to missing data (63%).

Measures

Dependent Variable

Perceived Job Insecurity is based on one item that asks, "In the next twelve months, how likely are you to lose your job or be laid off?" with four responses from 4=very likely to 1=not at all likely.

Individual Level Variables

Demographic characteristics include: *Female*, *Age*, and *Age-Squared* to determine if the effect of age is non-linear. We test this given a prior study by Fullerton and Wallace (2007) which finds a curvilinear relationship with respect to age. *Parental Status* indicates whether respondent has a child living at home. *Marital Status* indicates whether respondent is married or living with a partner, with singles as reference. *Adult-Care Responsibility* indicates that a respondent has provided care for an adult relative for at least 3 hours per week during the past 6

months. *Race* includes dummy variables for individuals who are Asian; Hispanic, Black, or African-American; or White (reference category). *College Graduate* notes whether a respondent has a college degree. *Income Adequacy* uses a 4-category scale (1 = cannot make ends meet, 2 = just enough, no more, 3 = enough, with a little extra, 4 = always have money left over) in response to the question, "Which of the following four statements describes your ability to get along on your income?" We also have actual salary of respondents from administrative data from the company, permitting us to test whether objective income and subjective assessment of income adequacy are associated with job insecurity in a similar manner. Note that there is a low correlation between subjective reporting of income adequacy, and actual income (ρ=0.11; see Appendix A).

Job characteristics include: *Work Hours,* which is a self-reported number of hours the employee works in a typical week. *Schedule Type* identifies whether the employee works a regular daytime shift, or consistently work shifts other than a regular daytime schedule. *Self-Rated Performance* is a self-rating from 1-10 of overall performance in the past 4 weeks, with a greater score meaning higher performance.

Our focal variable has to do with whether individuals knew about the merger at the time they were surveyed. *Merger Announcement* indicates that the individual's interview was completed after the merger announcement was made.

Team-Level Variables

Work team-level variables include characteristics related to the primary function and size of the work team, as well as team manager characteristics. *Core IT Function* is a dummy variable that identifies whether an employee's work team is primarily involved in the core IT

task of software development. Non-core teams provide support through project management, quality assurance and operations tasks. *Team Size* is a variable from administrative data indicating the size of the work team that the employee belongs to. *Female Manager* is an indicator of whether one's manager is female. *Manager's Race/Ethnicity* indicates whether one's work-team manager is Asian, Hispanic/Black/African American, or White. *Manager's Tenure* identifies the length of time the manager has been employed at the company. *Manager's Job Insecurity* is a measure of how likely the manager feels that he or she will lose his or her job or be laid off in the next twelve months. *Location Mismatch* is a variable that identifies whether employee's manager works in a different metropolitan area than the employee. *Manager's Self-Rated Performance* is a self-rating from 1-10 of overall performance in the past 4 weeks, with a greater score meaning higher rated performance.

Descriptive Statistics

Table 1 describes our analytical sample. First, 266 (42%) of the employees in our sample were interviewed after the merger was announced. The average perceived job security overall is 2.28 on a scale of 1 to 4, located somewhere between not too likely to be laid off (= 2) and fairly likely to be laid off (= 3).

This is a sample of relatively older employees, with a mean age of 46, and a minimum of 24 to a maximum of 66. Consistent with this age profile, most of the respondents are married or partnered (79%) and the majority has children at home (56%). Three in five (60%) respondents are men, and most employees (80%) have a college degree. The average income is $87,231, and most report a sense of income adequacy; the average response to income adequacy (on a scale

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between 1 and 4) lies slightly above 3, "enough, with a little extra". About seven in ten (67%) of the sample are white, 23% are Asian, and 11% are Hispanic, Blacks or African American.

Respondents work on average 45.6 hours per week (with a standard deviation 5.73) and most have a regular daytime schedule (77%). On a self-rated performance scale ranging from 1 to 10, respondents rate themselves on average at 8.23. Respondents work in 142 teams where 37% of the managers are women, managers' average tenure at the company is 15.98 years and managers report a mean job insecurity of 2.17. Most managers are white (77%), though a sizable number are Asian (17%), and 6% are Hispanic, Blacks, or African American. 23% of the employees in our sample also report working in a different metropolitan area than their manager. Finally, in terms of work team function, 34% of the teams perform software development tasks, and the average team size is 8.4, though it ranges from 2 to 27 employees on any given team.

(Insert Table 1 about Here)

Analytic strategy

Drawing on data on employees and their managers nested within teams of 2 or more, we use multilevel models to examine the association of work team and individual characteristics with perceived job insecurity, controlling for the timing of the interview relative to the merger announcement. In addition, we test a number of interaction terms between the merger announcement and individual and work team characteristics, to determine whether the relationship between employees' individual characteristics, characteristics of their work context and workers' job insecurity may differ, depending on whether they were interviewed before or after the announcement.

Results

Associations of individual characteristics, work team characteristics and merger announcement with job insecurity

Results of the multilevel analysis for job security are presented in Table 2. Model 1 regresses employee's job insecurity on individual-level characteristics, and Model 2 regresses employee job insecurity on team-level characteristics. In Model 3 we add both individual- and team-level predictors simultaneously in order to estimate the net effect of predictors at both levels, after adjusting for the merger announcement on perceptions of job insecurity.

First, we describe briefly whether and how employees' demographic and job characteristics relate to their job insecurity. (Here, merger announcement is in the model as a control. We will examine later whether the merger has particularly negative association with certain groups of employees, in seeing whether their characteristics or the characteristics of the work teams moderate the association of the merger announcement with job insecurity.) We find a curvilinear relationship between age and job insecurity, with age associated with higher job insecurity until age 45.5, but with the older workers less likely to feel insecure. Previous studies using population-level data have reported similar results with regards to age (Farber 2008; Fullerton and Wallace 2007).

Compared with white employees, Hispanic, Black or African American employees report higher job insecurity (0.200, $p < 0.05$). This is also consistent with existing studies finding that black workers perceive employment as more precarious than whites (Fullerton and Wallace 2007; Wilson, Eitle and Bishin 2006). Work hours are positively related with job insecurity (0.011, $p <$

0.05). Workers who rate themselves as better performers also report lower perceived job insecurity (-0.079, $p < 0.01$).

We observed no gender difference in job insecurity; though this is in line with existing research findings (Elman and O'Rand 2002; Fullerton and Wallace 2007). Scholars have suggested that this may be due to the fact that expectations about future job security is "gender-centered", and ingrained in gender differences in expectations about careers (Fullerton and Wallace 2007) and that the relationship between job insecurity and stress may also differ given differences in gender ideology (Gaunt and Benjamin 2007). For instance, it has been suggested that women may not perceive higher job insecurity than men given that the role of work is not as central to their identity. However, workers also select themselves into particular occupations and industries, while also being selected by companies for specific positions. Therefore, women employees at this Fortune 500 Company are not the "average" employee, but those who have been selected to and have chosen work at this high performance company, with specific perceptions and expectations around job security. Neither do we find employees' marital status, parental status, or schedule type to be associated with job insecurity.

Adding team-level characteristics in Model 2, we observe an association between four different manager characteristics and employee job insecurity. Employees with Asian managers, as opposed to White managers, are likely to report lower job insecurity (-0.217, $p<0.01$). Contrary to our hypothesis, employees with managers who work in a different metropolitan area than themselves actually report lower job insecurity (-0.152, $p<0.05$). Lastly, managers' own job insecurity is a predictor of their subordinates' job insecurity (0.100, $p< 0.05$). Note that we find no relationship between either work team function or team size and employee job insecurity.

Adding individual-level characteristics in Model 3 attenuates the marginal effect of managers' gender, but all of the relationship between manager and individual characteristics and job insecurity remain significant. With the inclusion of individual characteristics, we also see the association between employees' income with job insecurity become significant, such that those with higher income also report lower job insecurity (-0.366, $p < 0.05$). Turning to the merger announcement, we find it to be a strong predictor of job insecurity. As shown in Model 1 which controls for individual-level characteristics, the effect of this predictor is strong, statistically significant, and in the expected direction. Consider two employees with the same background and work characteristics, the one who was interviewed after the merger announcement would have 0.361, or nearly half of a standard deviation, higher ($p < 0.001$) job insecurity. In Model 3, with predictors at both levels included in the model, we observe that employees who were interviewed after the merger announcement on average have 0.306 higher ($p < 0.001$) job insecurity. Note that this effect is somewhat reduced (from 0.361 to 0.306) compared to Model 1, which does not include team-level characteristics. Comparing the three models in Table 2, the BIC statistic indicates that Model 2, the one with team-level characteristics only, is the best fitting model, emphasizing the value of including team-level characteristics.

(Insert Table 2 about here)

Did the merger announcement have particularly negative job security implications for specific groups of workers?

Next, we estimated multilevel models with interaction terms between each individual and team characteristics and the merger announcement separately, putting in and taking out each

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interaction term one at a time. Our analysis reveals that the relationship between whether respondents were interviewed before or after the merger announcement and their job insecurity depends on specific individual and team characteristics; however, the results are not always in the expected direction (see Appendix B).

A somewhat surprising finding is that income adequacy, income and education, all important proxies for socio-economic position, do not serve as buffers; quite the contrary. For example, being interviewed after the merger announcement is associated with higher job insecurity generally and even more so for employees with higher income adequacy (see Figure 2). This contrasts with the negative (-0.120, $p < 0.05$; Appendix B, Model 1) main effect of income adequacy in the interaction model, which can be interpreted as the relationship between income adequacy and (lower) job insecurity among employees who were interviewed before the merger announcement. We also see this effect operating in a similar fashion for employees' income; workers earning a higher income report higher insecurity if they were interviewed after the merger announcement (see Figure 2).

Two manager characteristics also moderate the merger announcement with employee job insecurity. Compared to those interviewed before the merger was announced, we find managers' tenure associated with lower employee job insecurity if the employee was interviewed after the merger announcement (see Figure 3). In addition, compared to those interviewed before the merger was announced, managers' reporting of job insecurity is also associated with employees' job insecurity after the merger announcement, (0.195, p < 0.05, Appendix B, Model 6; see Figure 4).

(Insert Figures 1-4 about here)

Discussion

In this study we extend previous research focusing on individual predictors to provide evidence that characteristics of the work context are associated with one's job insecurity. Specifically, employees with Asian managers tend to report lower job insecurity, while employees working for managers who are more insecure about their jobs are likely to report higher job insecurity. Contrary to our expectation, employees reporting to managers who work in a different metropolitan area reported *lower* job insecurity.

Our results reveal that individual characteristics are also associated with job insecurity in this IT workforce. Employees who are middle-aged, Hispanic, Blacks or African American, and those who work more hours tend to report higher job insecurity. Indeed, scholars have shown that employees who are middle-aged are experiencing and reporting an increased sense of insecurity (Farber 2008; Fullerton and Wallace 2007; Mendenhall et al. 2008). Furthermore, mid-life professionals generally reach a peak in power and earnings; hence they may be particularly aware and sensitive to the dire implications for job loss at this life stage. Along the same line, Hispanic and African Americans may foresee more difficulties in the labor market, translating into more insecurity on the job. This is consistent with existing findings on job insecurity (Fullerton and Wallace 2007), while researchers have also found unequal costs of displacement along gender and racial/ethnic lines, as displaced workers reenter the labor market with different levels of success with White men in the front of the queue for reemployment once displaced, as compared to other groups (Spalter-Roth and Deitch 1999). In contrast, we also find those who earn a higher income and those who are better performers reported lower job insecurity, likely due to their competitiveness in the labor market.

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This paper also provides a nuanced investigation into how in the wake of a merger announcement, employees' job insecurity may vary across groups of workers. We take advantage of a unique opportunity in which a merger was announced in the middle of our survey data collection, among professional and technical employees nested in teams at an IT organization. Consequently, we are able to parse out the association between an objective uncertainty and employees' subjective perceptions of job insecurity, testing for potential moderators at both work team and individual levels. A major contribution of this paper is that we incorporate work team and manager characteristics to further elucidate how the most proximal work context may buffer or magnify the association of a merger announcement with greater insecurity, highlighting the importance of contextual characteristics in understanding individuals' assessment of job insecurity.

While we expected employees who were interviewed after the merger announcement to report higher job insecurity overall, our results indicates that the *differences* in perceived job insecurity between employees with the same level of income adequacy and income interviewed before and after the merger announcement to differ pronouncedly, but in an unexpected direction. Those with higher income adequacy as well as with higher actual income interviewed after the merger announcement seemed more insecure, while the relationship is in the opposite direction for those interviewed prior to the announcement. This perhaps reflects that those with higher income adequacy and income are cognizant of their costs to the company, a factor that employers are likely take into consideration when determining which workers to lay off during downsizing.

We also find two team-level factors, manager's tenure, and manager's job insecurity moderated the relationship between being interviewed after the merger announcement and higher job insecurity. This highlights the importance of considering the proximal work environment,

with managers an important component of that context. A study by Blair-Loy and Wharton (2002) find that powerful managers and colleagues seemed to facilitate employees' use of work-family policies, perhaps lessening employees' concern about negative consequences on using such policy on their career. We took from this that managers may provide "cover" for employees, finding that employees with powerful managers (characterized as those with longer company tenure) and managers who themselves feel more secure help buffer their subordinate's job insecurity given an impending merger. Clearly more research is needed to consider the role of manager during organizational restructuring, given their influence on employees' work experiences and career trajectories (Blair-Loy and Wharton 2002; Castilla 2011).

The absence of more buffering effects at the team level is surprising. However, we realize that we are only capturing a short period of time immediately after the merger announcement (approximately four months), a period when much is still uncertain regarding the plans for, and realized consequences of the restructuring; therefore studies that follow workers through actual change implementation would be highly valuable (Ferrie et al. 1998, 2001).

Implications

The notion of lifelong, continuous employment is increasingly a remnant of the past, described as a false "career mystique" (Moen and Roehling 2005) that nevertheless continues to permeate organizational and governmental policies and practices, as well as individual and family expectations about stable work, job security, and a steady stream of income. A population-level study on this topic has shown a steady downward trend in subjective job security from 1977 to 2002, in a nationally representative sample of US adults (Fullerton and Wallace 2007).

In this study we have demonstrated a relationship between a merger announcement and job insecurity; but regardless of such organizational changes, job insecurity is increasingly pervasive in contemporary work life. The existing literature has provided convincing reasons, ranging from the prevalence in the utilization of nonstandard workers, organizational restructuring in the form of mergers and layoffs, outsourcing and offshoring of peripheral and increasingly core work, and advancement in information technology that are replacing tasks once performed by workers (Kalleberg 2009, 2011; Hollister 2011; Smith 1997, 2002).

We parse out the fact that certain groups of workers tend to perceive themselves to be particularly vulnerable, while others seen more protected, even in the context of an impending organizational change; in doing so, we highlight that instability of the work environment may be associated with different perceptions by workers depending on their individual and workplace social location. Our focus has been on a group of already high-earning, professional workers, highlighting how even in this select sample, not only individual social position but also employees' structural position within work teams connotes different levels of security. One major contribution is finding manager characteristics are associated with the insecurity of employees reporting to them, suggesting the promise of future research situating employees within different work environments, including their assignment to different managers. This would build on and extend existing scholarship suggesting the buffering effects on job insecurity of factors at the macro-level of social policy (in terms of different types of welfare states) (Burchell 2009), at the meso-level of the organizational environment, such as organizational support and organization communication (Lee and Peccei 2007; Vander Elst et al. 2010), and at the micro-level of individuals, such as employability and personality characteristics (Green 2011; Naswall, Sverke and Hellgren 2005). We suggest that characteristics of work teams and of

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managers in different firms and different types of occupations offer a fruitful research direction for multilevel research examining job insecurity.

Research has also pointed to the inequality in security in today's risk society (Cooper 2008), such that individuals of different class background have different exposure to, as well as ability to navigate economic risks. Importantly, these may be advantages or disadvantages that accumulate over time, with middle or upper-middle class employees having better economic, social, and cultural capital which could help them plan ahead, and limit their exposure to risks in the future (Cooper 2008). We find that inequality of security also exists within the work environment, an issue of both scholarly interests and policy relevance. Existing research has already found inequality in wages as well as in wage increases predicts managerial turnover, individual and organizational performance, job satisfaction, productivity, and working collaboratively with others (Bloom 1999; Bloom and Michel 2002; Grund and Westergaard-Nielsen 2008; Pfeffer and Langton 1993). Yet job security is increasingly considered a component of the reward package that workers receive from their place of employment, while job security has also been incorporated into theoretical models of occupational health when considering multiple facets of job rewards (Siegrist 1996). Hence inequality in job security may also have similar negative consequences for employers; though this remains an empirical question to be answered. Lastly, given that job insecurity has been linked to a variety of well-being (Burgard, House and Brand 2009; D'Souza et al. 2003; Ferrie et al. 2005, 2003, 2002, 2001, 1998; Laszlo et al. 2010; Lau and Knardahl 2008; Rugulies et al. 2008) and job attitudes outcomes (DeWitte 2005; Hellgren and Sverke 2003; Kalil et al. 2010; Scott-Marshall 2010), studies of the contexts and *dynamics* of job security are key to understanding the nature of contemporary employment.

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Table 1: Individual and Work team-level Descriptive Statistics

	N	Mean/ %	Median	Std. Dev.	Min	Max
Employee Job insecurity	633	2.28	2	0.74	1	4
Organizational-level exogenous shock						
% Employee interviewed post-merger announcement	633	0.42	0	0.49	0	1
Employee background demographics						
Female	633	0.4	0	0.49	0	1
Age	633	45.64	46	8.94	24	66
Married/Partnered	633	0.79	1	0.4	0	1
Parent	633	0.56	1	0.5	0	1
Has adult care responsibility	633	0.22	0	0.42	0	1
Race/ethnicity						
White	633	0.67	1	0.47	0	1
Asian	633	0.23	0	0.42	0	1
Hispanic, Black or African American	633	0.11	0	0.31	0	1
College graduate	633	0.8	1	0.4	0	1
Income adequacy	633	3.09	3	0.75	1	4
Income	633	$87,231	$85,322	$15,989	$52,030	$155,000
Employee Work characteristics						
Work hours	633	45.6	45	5.73	30	78
Regular daytime schedule	633	0.77	0	0.42	0	1
Self-rated performance	633	8.23	8	1.03	3	10
Work team manager characteristics						
Female	142	0.37	0	0.48	0	1
Race/ethnicity						
White	142	0.77	1	0.42	0	1
Asian	142	0.17	0	0.38	0	1
Hispanic, Black or African American	142	0.06	0	0.24	0	1
Manager's Tenure	142	15.98	11.96	10.01	0.42	40
Manager and Employee in Different Work Location	142	0.23	0	0.42	0	1
Manager's Self-rated performance	142	8.04	8	1.11	3	10
Manager's Job insecurity	142	2.17	2	0.71	1	4
Work team characteristics						
Software development function	142	0.34	0	0.47	0	1
Work team size	142	8.42	7	5.41	2	27

Table 2. Hierarchical Linear Models of Individual and Team Characteristics on Employee Job Insecurity

	Model 1	Model 2	Model 3
A. Organizational-level exogenous shock			
employee interviewed after merger announcement	0.361***	0.268***	0.306***
	(0.058)	(0.059)	(0.058)
B. Employee background demographics			
Female	-0.050		-0.091
	(0.060)		(0.060)
Age	0.088**		0.091**
	(0.031)		(0.031)
Age-squared	-0.001*		-0.001*
	(0.000)		(0.000)
Married/Partnered[a]	-0.010		-0.028
	(0.073)		(0.072)
Parent[b]	0.002		-0.019
	(0.063)		(0.062)
Adult-care responsibility[c]	0.067		0.080
	(0.066)		(0.065)
Race/ethnicity[d]			
Asian	-0.015		0.029
	(0.076)		(0.076)
Hispanic, Black or African American	0.200*		0.194*
	(0.093)		(0.091)
College graduate	-0.113		-0.115
	(0.073)		(0.072)
Perceived income adequacy	-0.037		-0.031
	(0.037)		(0.037)
Log income	-0.312+		-0.366*
	(0.169)		(0.168)
C. Employee Work characteristics			
Work hours	0.011*		0.010*
	(0.005)		(0.005)
Schedule type[e]	0.074		0.074
variable, evening, or night schedule	(0.067)		(0.066)
Self-rated performance	-0.079**		-0.075**
	(0.027)		(0.026)
D. Work team manager characteristics			
Female		0.110+	0.091
		(0.065)	(0.063)
Race/ethnicity[f]			
Asian		-0.217**	-0.177*
		(0.083)	(0.081)
Hispanic, Black or African American		-0.032	-0.067
		(0.116)	(0.113)
Manager's Tenure		-0.001	-0.002
		(0.003)	(0.003)
Manager and Employee in Different Work Location		-0.152*	-0.168*
		(0.069)	(0.067)
Manager's Job Insecurity		0.100*	0.100*
		(0.042)	(0.041)
Manager's self-rated performance		0.031	0.029
		(0.027)	(0.026)

E. Work team structural characteristics

Work team function		-0.096	-0.016
Software development function		(0.065)	(0.065)
Work team size		-0.006	-0.009+
		(0.005)	(0.005)
Constant	3.689*	1.864***	4.036*
	(1.852)	(0.251)	(1.855)
Observations	633	633	633
Number of groups	142	142	142
team variance	0.00967	0	0
individual variance	0.454	0.484	0.443
deviance	1310	1337	1281
BIC	1426	1421	1455

Standard errors in parentheses

*** $p<0.001$, ** $p<0.01$, * $p<0.05$, + $p<0.1$

Note: reference group: [a]Not married or partnered; [b]Not a parent; [c]No adult care; [d]White; [e]Regular, daytime schedule; [f]White manager

Figure 1. Interaction of pre/post merger announcement interview with employee perceived income adequacy on perceived job insecurity

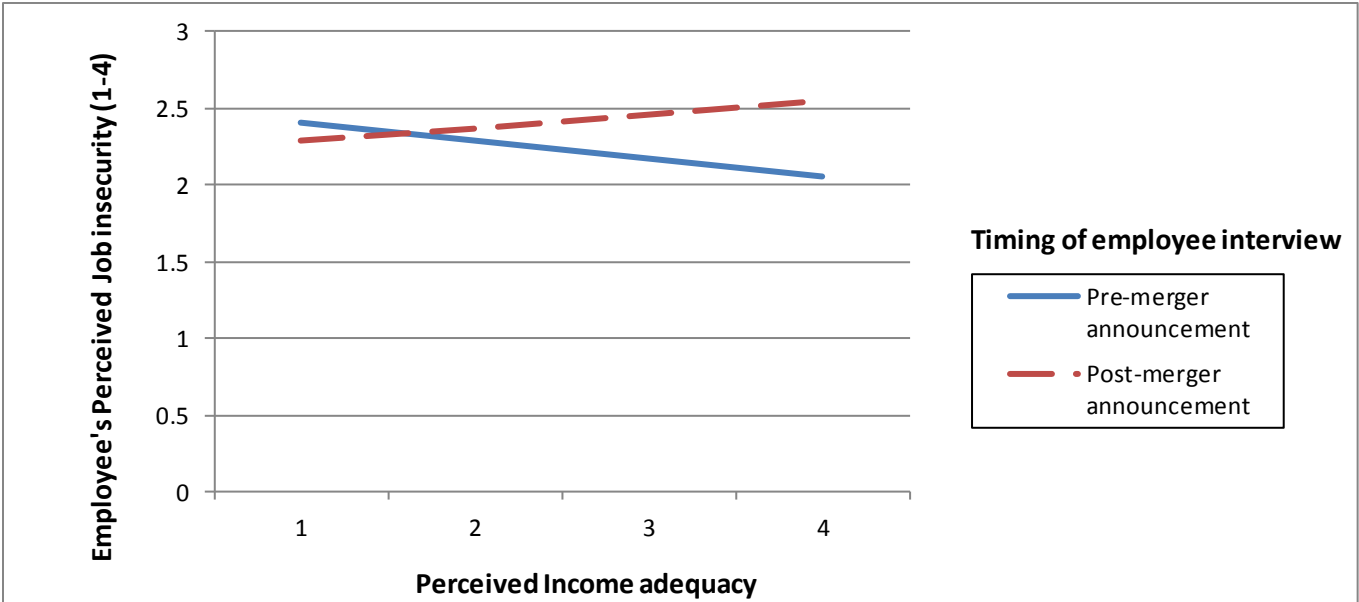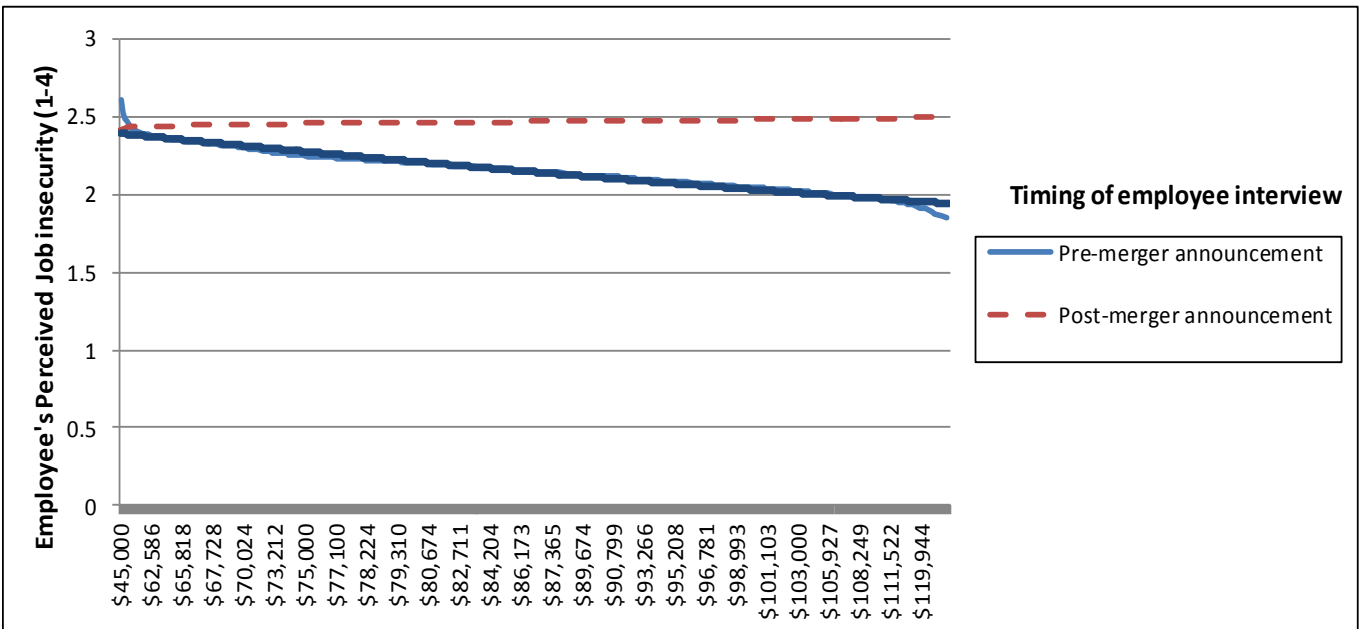**Figure 2. Interaction of pre/post merger announcement interview with employee log income on perceived job insecurity**
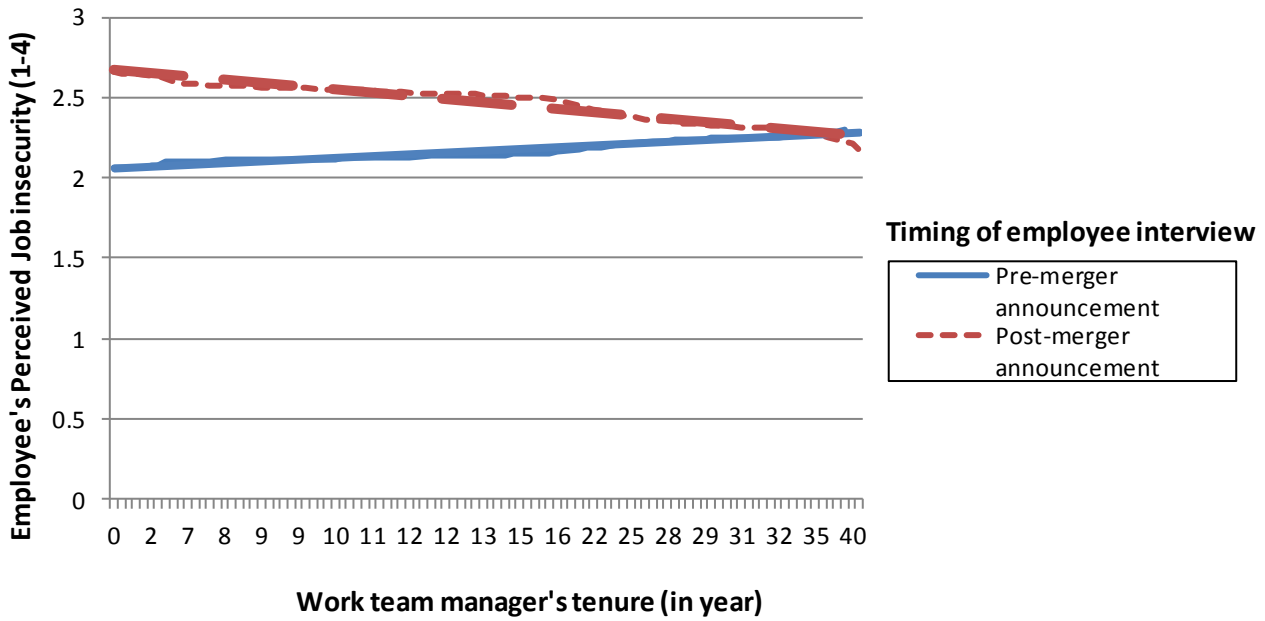
Figure 3. Interaction of pre/post merger announcement interview with work team manager's tenure on perceived job insecurity
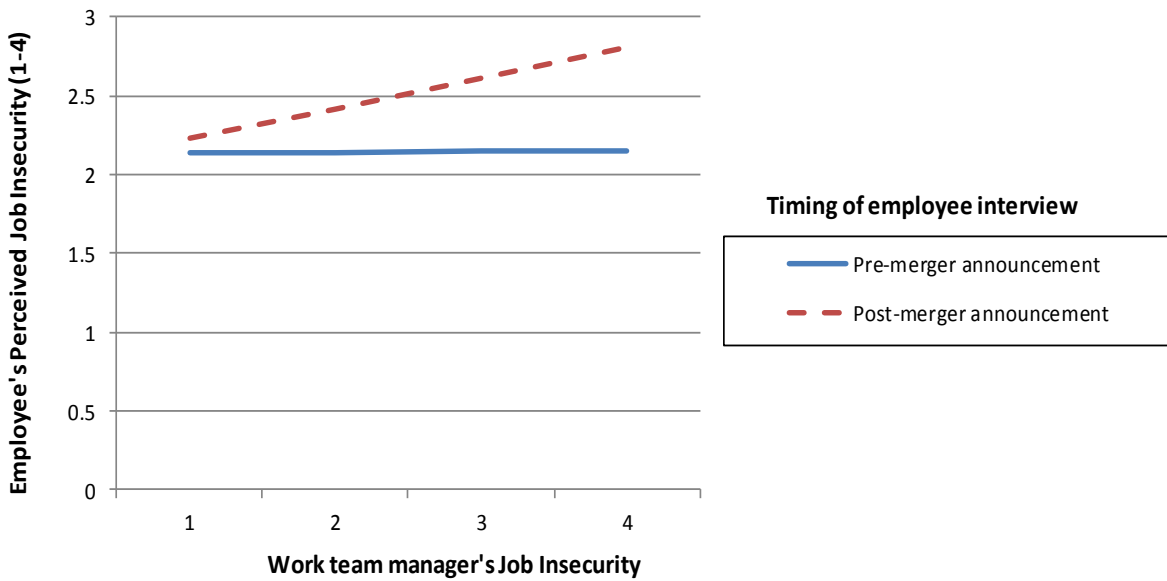

Figure 4. Interaction of pre/post merger announcement interview with work team manager's job insecurity on employee perceived job insecurity

Appendix A. Correlation table for main predictors in model

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
A. Female	1.00																					
B. Age	0.13	1.00																				
C. Married/Partnered	-0.20	0.01	1.00																			
D. Parent	-0.05	-0.18	0.30	1.00																		
E. Adult-care responsibility	0.08	0.09	0.00	0.00	1.00																	
F. Asian	-0.14	-0.43	0.10	0.20	0.03	1.00																
G. Hispanic, African American	0.16	0.03	-0.06	0.02	-0.03	-0.19	1.00															
H. College educated	-0.22	-0.21	0.08	0.13	-0.05	0.25	-0.19	1.00														
I. Income adequacy	0.02	0.01	0.01	-0.19	-0.05	-0.01	0.02	0.01	1.00													
J. Income	-0.19	0.20	0.15	0.14	0.03	-0.03	-0.11	0.18	0.11	1.00												
K. Work Hours	-0.03	-0.01	0.00	-0.03	0.07	-0.01	0.01	0.04	0.05	0.14	1.00											
L. Work Schedule	-0.03	0.07	-0.02	-0.08	0.07	-0.08	0.03	0.01	-0.02	0.03	0.21	1.00										
M. Self-reported performance	0.05	0.01	-0.02	0.02	-0.03	0.04	0.06	-0.02	0.02	0.05	0.06	0.06	1.00									
N. Female manager	0.20	0.14	0.01	-0.06	0.06	-0.13	0.08	-0.17	-0.01	-0.04	-0.02	0.05	0.05	1.00								
O. Asian manager	-0.07	-0.17	0.01	0.02	-0.02	0.21	-0.04	0.08	-0.01	-0.02	-0.02	-0.08	-0.02	-0.28	1.00							
P. Hispanic, African American manager	0.04	0.12	0.00	-0.05	0.03	-0.10	0.04	-0.09	0.05	-0.07	-0.03	-0.05	0.03	0.30	-0.13	1.00						
Q. Manager tenure	0.05	0.09	-0.04	-0.10	0.01	-0.09	0.09	-0.15	0.02	-0.12	-0.14	0.01	0.01	0.31	-0.24	0.29	1.00					
R. Manager and Employee in Different Work Location	0.01	0.00	-0.10	-0.08	0.04	0.02	0.00	-0.08	0.01	-0.10	-0.03	0.05	0.04	-0.05	0.06	-0.06	0.12	1.00				
S. Manager job insecurity	0.05	0.04	0.05	0.06	0.03	-0.05	0.00	0.00	-0.02	0.03	-0.01	0.01	-0.02	0.06	-0.05	-0.19	-0.10	-0.01	1.00			
T. Manager's self-rated performance	0.05	-0.03	-0.03	-0.01	-0.05	0.04	0.02	-0.05	-0.01	-0.05	-0.01	-0.01	0.02	0.10	0.20	0.10	0.06	0.08	-0.13	1.00		
U. Software development team	-0.21	-0.18	0.09	0.07	-0.05	0.21	-0.12	0.17	0.01	0.17	-0.01	-0.05	-0.03	-0.26	0.30	-0.08	-0.16	-0.12	-0.18	-0.01	1.00	
V. Team size	-0.04	0.01	0.04	-0.05	0.04	-0.01	-0.02	0.01	-0.02	-0.06	0.02	0.04	0.06	0.03	0.07	-0.06	0.10	-0.03	-0.06	-0.03	0.19	1.00

Appendix B. Hierarchical Linear Models of Individual and Team Characteristics and Interaction Terms with Merger Announcement on Employee Job Insecurity

	Model 1	Model 2	Model 3	Model 4
A. Organizational-level exogenous shock				
employee interview post-merger announcement	-0.331	-8.834*	0.599***	-0.113
	(0.229)	(3.463)	(0.110)	(0.179)
B. Employee background demographics				
Female	-0.093	-0.101+	-0.099+	-0.086
	(0.060)	(0.060)	(0.060)	(0.060)
Age	0.092**	0.098**	0.091**	0.094**
	(0.030)	(0.031)	(0.030)	(0.031)
Age-squared	-0.001*	-0.001**	-0.001*	-0.001**
	(0.000)	(0.000)	(0.000)	(0.000)
Married/Partnered[a]	-0.048	-0.054	-0.022	-0.024
	(0.072)	(0.072)	(0.071)	(0.071)
Parent[b]	-0.021	-0.019	-0.015	-0.021
	(0.062)	(0.062)	(0.062)	(0.062)
Adult-care responsibility[c]	0.087	0.083	0.080	0.080
	(0.065)	(0.065)	(0.065)	(0.065)
Race/ethnicity[d]				
Asian	0.044	0.039	0.003	0.030
	(0.075)	(0.075)	(0.075)	(0.075)
Hispanic, Black or African American	0.194*	0.191*	0.206*	0.181*
	(0.090)	(0.091)	(0.090)	(0.091)
College graduate	-0.121+	-0.121+	-0.113	-0.120+
	(0.072)	(0.072)	(0.072)	(0.072)
Perceived income adequacy	-0.120*	-0.040	-0.034	-0.028
	(0.048)	(0.037)	(0.036)	(0.037)
Log income	-0.405*	-0.718***	-0.364*	-0.389*
	(0.168)	(0.214)	(0.167)	(0.168)
C. Employee Work characteristics				
Work hours	0.010*	0.011*	0.011*	0.009+
	(0.005)	(0.005)	(0.005)	(0.005)
Schedule type[e]	0.072	0.070	0.078	0.077
variable, evening, or night schedule	(0.066)	(0.066)	(0.066)	(0.066)
Self-rated performance	-0.073**	-0.073**	-0.079**	-0.076**
	(0.026)	(0.026)	(0.026)	(0.026)
D. Work team manager characteristics				
Female	0.094	0.089	0.045	0.082
	(0.063)	(0.063)	(0.064)	(0.063)
Race/ethnicity[f]				
Asian	-0.184*	-0.153+	-0.167*	-0.167*
	(0.080)	(0.081)	(0.080)	(0.081)
Hispanic, Black or African American	-0.071	-0.059	-0.020	-0.057
	(0.112)	(0.112)	(0.113)	(0.112)
Manager's Tenure	-0.002	-0.002	0.006	-0.003
	(0.003)	(0.003)	(0.004)	(0.003)
Manager and Employee in Different Work Location	-0.167*	-0.161*	-0.171**	-0.162*
	(0.067)	(0.067)	(0.067)	(0.067)
Manager's Job Insecurity	0.103*	0.094*	0.109**	0.001
	(0.040)	(0.040)	(0.040)	(0.057)
Manager's self-rated performance	0.030	0.026	0.034	0.029
	(0.026)	(0.026)	(0.026)	(0.026)

E. Work team structural characteristics

Work team function	-0.013	0.000	-0.030	-0.039
Software development function	(0.065)	(0.065)	(0.065)	(0.065)
Work team size	-0.009*	-0.008+	-0.008+	-0.006
	(0.005)	(0.005)	(0.005)	(0.005)

F. Interaction terms

Merger announcement by employee income adequacy	0.206**			
	(0.072)			
Merger announcement by employee log income		0.805**		
		(0.305)		
Merger announcement by manager's tenure			-0.017**	
			(0.005)	
Merger announcement by manager's job insecurity				0.195*
				(0.079)
Constant	4.707*	7.892***	3.799*	4.439*
	(1.858)	(2.353)	(1.842)	(1.853)
Observations	633	633	633	633
Number of groups	142	142	142	142
team variance	0	0	0	0
individual variance	0.437	0.438	0.436	0.439
deviance	1272	1274	1271	1275
BIC	1453	1454	1451	1455

Standard errors in parentheses

*** $p<0.001$, ** $p<0.01$, * $p<0.05$, + $p<0.1$

Note: reference group: [a]Not married or partnered; [b]Not a parent; [c]No adult care; [d]White;
[e]Regular, daytime schedule; [f]White manager