EMPLOYEE-ORGANIZATION EXCHANGE RELATIONSHIPS, HRM PRACTICES, AND QUIT RATES OF GOOD AND POOR PERFORMERS

JASON D. SHAW
University of Minnesota

BRIAN R. DINEEN
University of Kentucky

RUOLIAN FANG
ROBERT F. VELLELLA
University of Minnesota

We developed and tested an exchange-theory-based extension of the relationship between human resource management (HRM) practices and quit rates in a two-wave trucking industry study and attempted a constructive replication in a two-wave study of supermarkets. We found that HRM inducements and investments relate negatively to good- and poor-performer quit rates, whereas expectation-enhancing practices relate negatively to good-performer quit rates and positively to poor-performer quit rates. We find support for the predictions that expectation-enhancing practices attenuate the negative relationship between inducements and investments and good-performer quit rates (Study 1) and exacerbate the negative relationship with poor-performer quit rates (Study 2).

Researchers have historically viewed the question of why people quit in terms of several individual bases for turnover (see Maertz and Griffeth [2004] for a review), but in the last ten years the outlook has shifted toward an organization-level view of the phenomenon based on human resource management (HRM) systems. High turnover rates have deleterious effects on outcomes such as productivity and safety in manufacturing and transportation (Shaw, Gupta, & Delery, 2005), sales performance in customer service industries (Batt, 2002; Kacmar, Andrews, Van Rooy, Steilberg, & Cerrone, 2006; Shaw, Duffy, Johnson, & Lockhart, 2005), efficiency, and even patient infection rates in health care (Alexander, Bloom, & Nuchols, 1994; Zimmerman, Gruber-Baldini, Hebel, Sloane, & Magaziner, 2002).

Social exchange theories (Blau, 1964; Ekeh, 1974) and employee-organization relationship frameworks (Coyle-Shapiro, Shore, Taylor, & Tetrick, 2004; Tsui, Pearce, Porter, & Hite, 1995) have suggested that organizations create HRM systems that offer different forms of exchange relationships. HRM systems reflect the different investments organizations make in their employees and also the different behaviors organizations expect of their employees. In particular, HRM practices can be categorized along two distinct social-exchange-based dimensions—practices designed to enhance *employees' expected outcomes* (HRM inducements and investments) and those that focus on *employers' expected contributions from employees* (HRM expectation-enhancing practices) (Cropanzano & Mitchell, 2005; Tsui, Pearce, Porter, & Tripoli, 1997). In general, HRM inducements and investments relate negatively to "voluntary turnover" (quit) rates, whereas practices that employers use to increase expectations relate positively to voluntary turnover rates (Shaw, Delery, Jenkins, & Gupta, 1998).

Although the employee-organization relationship view of HRM practices and voluntary turnover rates has gained considerable traction in recent years, current research has been limited in several ways. First, with few exceptions (Way, 2002), research is beleaguered by the use of measures of total turnover (quits, transfers, discharges, retirements, etc.) in explanatory models, although it has clearly demonstrated that the predictors of voluntary and involuntary quit rates are markedly different (Donoghue & Castle, 2006; Shaw et al., 1998). Understanding the etiology of voluntary turnover is also important because quits are often unplanned and unexpected and can not only damage productivity, but weaken the social fabric of an organization as well (Dess & Shaw, 2001). Second, in terms of HRM practices as predictors of voluntary turnover rates, the implicit assumption to date is that decisions to modify organizational practices affect employees uniformly throughout a workforce. This assumption is not consistent with the commonly accepted thinking that HRM practices often have powerful "sorting" effects (Rynes, Gerhart, & Parks, 2005). In fact, although the idea of functional versus dysfunctional turnover (Abelson & Baysinger, 1984; Dalton & Todor, 1979) holds much conceptual currency in the literature, its incorporation into the organization-level empirical literature has been meager at best (see Park, Ofori-Dankwa, and Bishop [1994] and Shaw et al. [2005] for exceptions). Third, HRM-based models of voluntary turnover rates have typically examined only additive or main effects of HRM practices, paying little attention to the potential for different HRM profiles to have interactive effects on voluntary turnover rates. This is a key omission, not only because existing research shows rather small correlations between the use of various HRM practices, but also because the internal fit of practices is a central theme in the strategic HRM literature (see Becker and Gerhart [1996] for a review).

We addressed these issues here. Specifically, we used a social exchange theory foundation to develop novel direct and interactive predictions about the relationships between HRM inducements and investments and expectation-enhancing practices and functional (poor performer) and dysfunctional (good performer) quit rates. We then tested our predictions in a two-wave study of trucking organizations and attempted a constructive replication (Lykken, 1968) of the findings in a two-wave study of independent grocery stores.

THEORETICAL DEVELOPMENT

From an organizational point of view, decision makers use practices and policies to establish the rules of exchange or the normative definition of the situation that forms among participants (Emerson, 1976) and also to specify the resources or content of exchange. Exchange resources are typically characterized as either tangible or socioemotional in organizational research (Cropanzano & Mitchell, 2005). Using these exchange rules and resources, one can conceptualize employee-organization exchange relationships from the viewpoint of employers along two distinct dimensions—employer expectations about specific desired contributions from employees and the inducements offered to effect the desired contributions (Tsui et al., 1997: 1091). Along these two dimensions, but from the viewpoint of employees, employee resources can be categorized as specific, narrow, and often short-term contributions versus broadly defined and open-ended contributions (Cropanzano & Mitchell, 2005).

By crossing and collapsing these two social-exchange-based continua, Tsui et al. (1997) derived a four-dimension typology of employee-organization exchange relationships that included two balanced and two imbalanced forms. In balanced forms, inducement and expectation levels as viewed from the organization's perspective match employees' expected contributions in level and breadth (Hom, Tsui, Wu, & Lee, 2009). Hom et al. (2009) identified the most limited form of exchange as being purely economic. Here, employers expect employee performance on a limited or narrow range of activities in exchange for a pure, but limited, economic-based inducement. A second form of balanced employer-employee relationship is what Tsui et al. (1997) referred to as the *mutual investment model*. Here, employers have high and wide expectations about employee performance levels. Employers may expect employees to trust organizational decision makers enough to learn skills that are not easily transferred to other organizations and to rotate over job assignments or even physical locations when needed (Tsui et al., 1997). From the employers' perspective, relationships can also be imbalanced in terms of expectations and inducements. In an underinvestment relationship, employers place high and often broad-ranging and sizeable expectations on employees but offer low levels of inducements and investments. In contrast, overinvestment relationships are characterized by high levels of investments in employees and available inducements but little in the way of high-quality performance expectations or an understanding that these

contributions go above and beyond tasks outlined in formal job descriptions.

In this article, we argue that HRM practices represent the conceptual dimensions of social exchange outlined above; that is, they manifest not only the rules or norms of exchange from an employer's point of view, but also specify the resources of exchange between employers and employees. Certain HRM practices (e.g., training, pay level, benefits level, job security, and procedural justice) reflect higher levels of inducements and investments offered to employees (Shaw et al., 1998; Tsui et al., 1997). Reflecting the second continuum, certain HRM practices reflect higher levels of employer expectations about employee performance levels. Individual pay-for-performance systems, employee monitoring, and formal performance appraisals are examples of such practices (Shaw et al., 1998). From an employer's perspective, the goal of these practices is to raise overall performance levels and, often, to sort its workforce by performance level (Gerhart & Rynes, 2003). In doing so, employers place greater demands on, or institute stronger systems of accountability for, employees. In the following sections, we explore how these exchange-based continua, independently and interactively, relate to the quit rates of good and poor performers.

HRM Inducements and Investments and Quit Rates

From an employer's perspective, HRM inducements and investments represent a sustained commitment to workers and an attempt to build deep pools of "human capital" (Osterman, 1988). According to the social exchange theory view, high levels of inducements and investments extend beyond an economic exchange for narrow task accomplishment to include socioeconomic issues, such as considerations of employee well-being, stability, and career enhancement, as well as intangible and symbolic considerations, such as perceptions of fairness (Cropanzano & Mitchell, 2005; Tsui et al., 1997). These HRM inducements and investments also have relevance to social exchange from the employees' perspective. When HRM inducements and investments are higher, employee obligations include being willing to learn skills that are specific to their organization and make organization-specific links or connections that may fall outside the employees' own areas of expertise (Hom et al., 2009). Thus, from an exchange theory view, higher levels of HRM inducements and investments likely increase employees' perceived obligation to the

employer, as well as perceptions of "side bets," or the implied costs of leaving.

Beyond these factors, HRM inducements and investments are likely to elicit increased positive emotional responses to the organization and are likely to decrease the attractiveness of other jobs in the marketplace (Maertz & Griffeth, 2004). High levels of pay and benefits are tangible inducements that can be readily used for comparison with levels in potential alternative employment opportunities. Training, job security, and procedural justice systems are less tangible, but employees can interpret each practice as a retention inducement and a long-term outlook on the employment relationship. Drawing on exchange theory ideas, Shaw et al. (1998), for example, argued that lack of stability implies an abrogation of informal organizational contracts and will diminish employees' attachment and perceived organizational responsibility (see also Ashford, Lee, and Bobko [1989]). Finally, direct and indirect HRM inducements and investments are a mechanism for uncertainty reduction, a key factor in individual turnover decisions (Hom & Griffeth, 1995; Maertz & Griffeth, 2004).[1]

Somewhat consistent evidence in the literature has shown that HRM inducements and investments relate negatively to voluntary turnover rates. Shaw et al. (1998) found that pay and benefits levels related strongly and negatively to quit rates, whereas job stability and procedural justice were significant in bivariate but not multivariate analyses. Batt, Colvin, and Keefe (2002) found that pay level was significantly and negatively related to quit rates, whereas other inducements and investments (training, internal mobility opportunities, and presence of employee problem-solving groups) were not significant in a full model, but had coefficients in the predicted direction (Way, 2002).

As noted previously, in prior research HRM practices have been assumed to have uniform effects on employees of all performance levels throughout a workforce. In terms of HRM inducements and investments, we expect a similar negative relationship with quit rates of good and poor performers for three reasons. First, from an organizational perspective, such practices are designed to send signals about long-term employment possibilities and high levels of employer commitment to all employees regardless of performance levels (Martin & Harder, 1994). Second, in line with the social exchange view, inducements and investments should

---

[1] Thanks to an anonymous reviewer for pointing this out.

strengthen retention for all employees because of stronger perceived obligations and higher perceived costs of leaving (Maertz & Campion, 2004). These factors not only strengthen exchange perceptions but also reduce uncertainty about employment futures and decrease the attractiveness of alternative opportunities in the marketplace. Third, some evidence has shown that individuals, in general, tend to assign and express preferences for equal, rather than equity-based, distributions of indirect or socioemotional investments such as job stability, procedural justice, and training (Cropanzano & Mitchell, 2005; Martin & Harder, 1994). Thus,

> Hypothesis 1. HRM inducements and investments are negatively related to good-performer quit rates.

> Hypothesis 2. HRM inducements and investments are negatively related to poor-performer quit rates.

HRM Expectation-Enhancing Practices and Quit Rates

Higher expectation levels have been argued to increase three key forces stimulating turnover. First, Shaw et al. (1998) argued that increasing the expectations placed on employees through HRM practices in general decreases the likelihood that remaining in their organization will maximize employees' self-interest. Maertz and Griffeth (2004) referred to this decreased likelihood of success as a "calculative force for quitting." This calculative force likely increases the attractiveness of other jobs in the marketplace because those jobs, on balance, may place relatively fewer expectations on employees. Second, in general, higher levels of expectation-enhancing HRM practices decrease the likelihood that employees will share organizational resources and receive rewards (Hom & Griffeth, 1995). For example, many individual pay-for-performance and incentive systems are zero-sum systems. Merit pay raises are by definition distributed on the basis of a fixed merit pool that is typically a percentage of current salary, and many individual bonuses are also distributed after establishment of a fixed pool. Larger raises or bonuses to other employees decrease the likelihood that a focal individual will also receive a large reward. Third, beyond incentive pay examples, higher levels of employee monitoring and extensive performance appraisals also increase the likelihood that performance errors will be detected, and a weakening of perceptions of reciprocation or so-

cial exchange is likely to result (Hom et al., 2009). In addition, monitoring reduces perceptions of job autonomy, which lowers organizational commitment and increases quit intentions (Ahuja, Chudoba, Kacmar, McKnight, & George, 2007).

Although less consistent than the evidence regarding the negative relationship between HRM inducements and investments and quit rates, some evidence from past research has been consistent with Shaw et al.'s (1998) arguments concerning the positive relationship between expectation-enhancing practices and quit rates. These authors found that trucking firms' use of electronic monitoring devices and "time on the road"—an industry-specific proxy for high performance expectations—related positively to quit rates. Batt et al. (2002) found that performance-based variable pay related strongly and positively to quit rates and that monitoring related positively to quit rates fairly consistently.

A closer examination, however, suggests that the proposed positive relationship between expectation-enhancing practices and quit rates is most likely to hold for poor performers and less likely to hold for good performers. Thus, we expect a differential pattern of relationships between HRM expectation-enhancing practices and quit rates by performance level. From an employer's perspective, high levels of HRM expectation-enhancing practices are not only likely to increase expectations about performance and effort levels, but also highlight or expose performance differentials among employees. The use of individually based performance incentives should also create a situation in which the paths of winners and losers in a system diverge (Shaw & Gupta, 2007). Formal performance appraisals and close monitoring of employee behavior also highlight performance distinctions among employees and provide a setting in which turnover forces increase for poor performers and decrease for good performers. These practices should create uncertainty, increase calculative forces for quitting, and weaken perceptions of long-term reciprocated exchange among poor performers. In contrast, good performers should enjoy a relative advantage in attaining resources and sense more strongly that their goals can be accomplished (Trevor, Gerhart, & Boudreau, 1997). In line with these arguments, Park et al. (1994) found that the use of individual incentives related positively to poor-performer quit rates, but they did not observe the predicted negative relationship with good-performer quits. Thus:

Hypothesis 3. HRM expectation-enhancing practices are negatively related to good-performer quit rates.

Hypothesis 4. HRM expectation-enhancing practices are positively related to poor-performer quit rates.

HRM Profiles and Quit Rates of Good and Poor Performers

The research of Shaw et al. (1998) and Park et al. (1994) and the hypotheses above describe relationships along single dimensions, but they do not describe the richer types of relationships suggested by social exchange theory and captured by Tsui et al. (1997). In this section, we argue that combinations of HRM inducements and investments and expectation-enhancing practices can add explanatory power to turnover rate models of good and poor performers.

Good-performer quit rates as a function of HRM practices. For good-performer quit rates, we expected the negative relationship with HRM inducements and investments to be weaker when HRM expectation-enhancing practices are high. Recall that crossing of economic and socioemotional forms of social exchange (Cropanzano & Mitchell, 2005) results in a balanced, but "low-road," form of employee-organization exchange relationship (Cropanzano & Mitchell, 2005; Tsui et al., 1997). From the point of view of employees who perform well, this type of employment relationship offers few future human capital development possibilities and few positive emotional experiences from organizational membership, and it engenders few perceived obligations to their employer. Maertz and Campion (2004) argued that alternative forces stimulating quitting comprise both individuals' self-efficacy beliefs about capability to obtain alternative jobs and the perception of high-quality options in the market. Among good performers, these self-efficacy beliefs about obtaining alternative jobs should be high and the unattractiveness of the current situation and decreased social exchange bonds should make other jobs in the marketplace look favorable.

We expected quit rates for good performers to be lower as organizations' emphasis on HRM inducements and investments increases, but expectation-enhancing practices remain at low levels (toward an overinvestment employment relationship). Tsui et al. (1997) argued that although an overinvestment approach could be seen as unfair (an overpayment inequity situation), employees in these situations rationalize the excess and view it favorably.

For good performers, an overinvestment HRM profile offers considerable opportunity for additional human capital development, although they must forgo the glow of success and individual recognition for their accomplishments when expectations are low. Considerable evidence in the literature, however, has suggested that quit rates are low among good performers under these conditions. An overinvestment strategy insulates organization members from the outside world, and the "luster" of high investments may bind all organization members like "golden handcuffs" (Vaughan, 1982). Thus, when expectation-enhancing practices are low, we expected a strong negative relationship between HRM inducements and investments and good-performer quit rates.

Conversely, we expected the negative relationship between HRM inducements and investments and good-performer quit rates to be attenuated when expectation-enhancing practices are high. When HRM inducements and investments are low, but expectation-enhancing practices are high, good performers should enjoy a advantage in terms of status, which some authors argued is more important than the absolute level of inducements and investments that individuals receive. Duffy, Shaw, and Schaubroeck (2008) argued that many productive workers strongly prefer higher status and that this preference often outweighs the importance of the absolute level of their pay. As HRM inducements and investments increase when expectation-enhancing practices are also high—a mutual investment relationship (Tsui et al., 1997)—we also expected good-performer quit rates to be low. Here, good performers are more likely to enjoy an advantage because expectation-enhancing practices are high, but forces such as positive affect, favorable psychological contract perceptions, and reduced attractiveness of job alternatives encourage retention.

The preceding theorizing provides a foundation for expecting an interaction of HRM inducements and investments and HRM expectation-enhancing practices in predicting quit rates of good performers. Because high levels of expectation-enhancing practices offer good performers better opportunities for achieving relative advantages, we expected that high levels of HRM expectation-enhancing practices would attenuate the negative relationship between HRM inducements and investments and good-performer quit rates.

Poor-performer quit rates as a function of HRM practices. For poor-performer quit rates, we expected a stronger negative relationship with HRM inducements and investments when expectation-enhancing practices are high. Under the indus-

trial, or "low-road," exchange relationship, although some turnover forces for quitting may also be strong for poor performers (e.g., those related to weak perceived social exchange–related obligations and negative emotional reactions), poor performers should have less self-efficacy than good performers about obtaining better jobs in a competitive marketplace (Maertz & Campion, 2004). In addition, the overinvestment exchange relationship (high HRM inducements and investments and low expectation-enhancing practices) may be optimal for poor performers because they receive substantial perquisites without the burden of high expectations. As Hom et al. (2009) stated, this type of social exchange relationship favors those who give less than they receive. Thus, the relationship between HRM inducements and investments and poor-performer quit rates should be attenuated when expectation-enhancing practices are low.

We expected a stronger negative relationship, however, when HRM expectation-enhancing practices are at high levels. Under high expectation-enhancing practices, low levels of HRM inducements and investments should result in high quit rates among poor performers because few organizational signals are given to suggest a long-term, open-ended, and broad exchange relationship for poor performers. In addition, training and development opportunities that may allow skill development and performance improvement are not offered. Not only are these low inducement and investment levels unfavorable for retention, but also, the high emphasis on HRM expectation-enhancing practices provides a situation in which poor performers are likely to fail. Under these conditions, perceived social exchange (or contractual), affective (emotional attachment), and alternative (attractiveness of other opportunities) forces for quitting are high, but these concerns should be exacerbated by high-performance expectations and negative evaluations about future value attainment (Maertz & Campion, 2004).

Predicting poor-performer quit rates under the mutual investment HRM profile (high levels of both HRM inducements/investments and expectation-enhancing practices) is more complex because it involves a balance of the powerful, retention-enhancing effects of HRM inducement and investments with the retention-discouraging effects of high levels of HRM expectation-enhancing practices. In essence, among poor performers, a mutual investment HRM profile results in a tension between positive affective and perceived contractual forces for retention on one hand and increased calculative forces for quitting on the other hand.

But there are reasons to expect relatively low poor-performer quit rates under a mutual investment approach. First, poor performers may view high levels of HRM inducements and investments as an opportunity to develop and enhance their skills. Although staying with the organization may result in short-term deprivation and relative disadvantage because of higher expectations, future possibilities for skill enhancement may outweigh these negatives. Second, in most organizations, discharge rates are low, and most poor performers should be able to perform at a level sufficient to avoid discharge in the short term (Shaw et al., 1998). Third, it is unlikely that many organizations signal that they advocate an employer-employee relationship that favors poor performers (an overinvestment relationship). In the absence of a surfeit of alternative possibilities that offer high investments and low expectations, many poor performers may decide to stay where HRM inducements and investments are high, despite the high expectation levels.

The preceding logic provides a foundation for expecting an interaction of HRM inducements and investments and HRM expectation-enhancing practices in predicting poor-performer quit rates. Because high expectation-enhancing practices leave poor performers at a disadvantage compared with their counterparts who perform well, we expected that high HRM expectation-enhancing practices would exacerbate the negative relationship between HRM inducements and investments and poor-performer quit rates. Thus:

Hypothesis 5. HRM expectation-enhancing practices moderate the negative relationship between HRM inducements and investments and good- (poor-) performer quit rates in such a way that the relationship is weaker (stronger) when HRM expectation-enhancing practices are high.

STUDY 1, METHODS

We mailed questionnaires to the highest ranking HRM managers of 1,041 trucking organizations that were listed as Class I (annual gross revenue of $10 million or more) or Class II ($3 to $10 million) firms in the 1999 version of the *TTS Blue Book of Trucking Companies* (the *Blue Book*). These companies represented the population of Class I and II organizations after we excluded those that used owner-operators exclusively (rather than company drivers) and those that had gone out of business after *Blue Book* publication. Completed questionnaires returned from 380 organizations gave an initial re-

sponse rate of 37 percent. One year later, we mailed a short follow-up questionnaire, 263 of which were returned. Thus, the overall response rate for the study was 25 percent (263/1,041) with a time 2 participation rate of 69 percent (263/380). We obtained the independent variables for the study from the time 1 questionnaire and the dependent variables (quit rates) from the time 2 questionnaire, thus setting up a one-year lag. Missing data on study variables reduced the analysis sample to 209. All measures in the questionnaire pertained to the core occupational group—truck drivers. We conducted extensive site visits to develop and pretest the measurement instruments.

These data were part of a larger study of HRM systems and organizational performance (Shaw, Gupta, & Delery, 2005; Shaw & Gupta, 2007). In their use of the larger data set, Shaw et al. (2005) examined the relationship between voluntary turnover rates measured at time 1 and several archival measures of organizational performance taken at later times. Excluding controls, the index of HRM inducements and investments was the only common measure. Shaw and Gupta (2007) examined tournament theory and internal labor market theories of the relationship between pay dispersion and differential quit rates. Although this prior study used our measures of good- and poor-performer quits at time 2, none of the substantive independent variables in the current study overlap with Shaw and Gupta (2007).

Independent Variables, Time 1

We combined the separate HRM practices into additive indexes (Arthur, 1992, 1994; Shaw et al., 2005). In this operationalization, we assumed that the practices within groups were substitutable and that scores on each dimension caused the level of the composite; this assumption is different from traditional scale score assumptions, in which the underlying conceptual variable is presumed to cause scores on an item (Delery, 1998; Law, Wong, & Mobley, 1998). For instance, HRM inducements and investments would be equivalent in an organization offering high pay and high benefits only and in one offering high pay and high job security only. These organizations would have the same score on the HRM index both conceptually and operationally. The HRM index, therefore, is a formative rather than reflective measure, and reliability assessments that require strong internal consistency, such as coefficient alpha, are not appropriate (Law et al., 1998; MacKenzie, Podsakoff, & Jarvis, 2005). To create the indexes, we standardized the HRM practice measures and then averaged them to form the inducements/investments and expectation-enhancing index measures.

HRM inducements and investments. We measured *pay level* as the average annual pay for drivers in the organization. We operationalized *benefits level* as the percentage of health insurance premiums for drivers paid by the company. *Job security* consisted of the average of two items (with seven-point Likert-type response options; $\alpha = .71$). The items were, "We have systems in place to guarantee work for our drivers," and "We guarantee our drivers a certain amount of work in every pay period." We operationalized *training* as the mean number of hours per year that drivers were provided formal training in the following areas: computer skills, maintenance skills, and interpersonal skills. We assessed *procedural justice* with a five-item scale from Shaw et al. (1998) with seven-point Likert-type response options ($\alpha = .81$). The items were, "Our company has formal procedures to ensure that drivers are treated fairly," "Drivers always have a chance to answer any complaints made against them," "We rule on disputes about drivers only after investigating the issue thoroughly," "Formal procedures are in place to address any driver grievances," and "Drivers can always give 'their side of the story' when complaints are made about their driving performance."

HRM expectation-enhancing practices. We operationalized *pay-for-performance* by asking informants to report the percentage of annual driver pay that was variable and based on individual incentives and individual bonuses. Following Shaw et al. (1998), we measured *performance appraisal* as the number of times per year that the company conducted formal performance appraisals for drivers. We measured *monitoring* using five items developed for this study. Informants reported the extent to which companies used computer technologies to monitor the location of drivers on the road, track the number of hours they were actually driving, keep them in close contact with dispatchers, reduce the number of decisions that drivers must make, and measure driver performance more accurately. The items had response options ranging from 1, "not at all," to 5, "to a very great extent" ($\alpha = .85$).

Dependent Variables, Time 2

Archival measures of voluntary turnover rates are not available for the trucking industry at the organizational level. Therefore, we followed previous researchers (Alexander et al., 1994; Huselid, 1995; Shaw et al., 1998; Shaw et al., 2005) and collected this information from the key informant

in each company presumed to be the most knowledgeable about these rates—the top HRM official. The issue of the association of driver voluntary turnover with performance level is quite salient in the trucking industry. Comparisons of key informant turnover reports in prior research corresponded well with reported national averages (Crum & Morrow, 1998), and the overall voluntary turnover rate reported at time 1 (41%) corresponded well with similar average rates in mixed (truckload and less-than-truckload firms) data sets (Shaw et al., 1998). We asked each informant first how many quits had occurred in the past year and then how many good and poor performers were among those quits. We then divided these reports by the total number of drivers and multiplied by 100 to obtain the good- and poor-performer quit rates. We did not set an absolute standard of performance because considerable variation in criteria for good performance exist in the industry (e.g., few customer complaints, high on-time delivery percentage, high overall engine performance, few inspection violations, etc.) (Belman, Monaco, & Brooks, 1998; Ouellet, 1994).

Control Variables, Time 1 and Archival

We controlled for several variables that might account for the relationships between our independent and dependent variables. We included *organization size* because it might influence the adoption of HRM practices (Osterman, 1994) and voluntary turnover (Freeman & Medoff, 1984; Shaw et al., 1998). We operationalized size as the natural log of total assets, as reported in the *Blue Book*. We included *carrier type* because HRM practices and turnover vary across industry segments. Truckload and specialized commodity carriers were coded 1, and less-than-truckload (LTL) carriers were coded 0. We controlled for *unionization* because collective bargaining agreements may affect HRM practices and quit rates, operationalizing this variable as the percentage of company drivers covered by a collective bargaining agreement. Our hypothesis tests may have been biased to the extent that organizations differed in the quality of their driver workforces. It was therefore important to control for factors other than HRM practices and differential turnover rates that may be related to workforce quality. To accomplish this, we controlled for the organizations' discharge rates and selectivity in their selection processes. *Selective staffing* was a five-item scale adapted from Snell and Dean (1992) ($\alpha = .81$). Sample items were, "We are very choosy about whom we hire," and "As far as drivers are concerned, we select only the 'cream of the crop.'"

The items had five Likert-type response options. *Discharge rate* was the number of drivers fired or discharged in the last year divided by the total number of drivers, times 100. To account for general levels of workforce stability, we also controlled for the alternative voluntary turnover rate in all equations (e.g., we controlled for poor-performer quit rates in the good-performer quit-rate equation).

Analysis Approach

We used hierarchical regressions to test the hypotheses. In step 1, we entered control variables and the HRM indexes. In step 2, we added the interaction between HRM inducements and investments and HRM expectation-enhancing practices to the equation. We used the significance of the unstandardized coefficients to determine support for Hypotheses 1 to 4. The explained variance change, the significance of the interaction term, and the plotted form of a significant interaction were used to determine the level of support for Hypothesis 5. Tests of our hypotheses using Tobit regressions, which account for the left-censoring of our quit rate variables, revealed substantively identical results. Because the interpretability of coefficients and interaction terms is more straightforward with ordinary least square (OLS) regressions, we report these results below.

STUDY 1, RESULTS

Response Bias Checks

Following Shaw et al. (1998), we used data from the *Blue Book* and logistic regressions to compare the characteristics of responding and nonresponding organizations. We conducted two sets of logistic analyses. First, we compared characteristics of nonresponders (coded 0) with those of the 380 organizations (coded 1) who returned time 1 questionnaires on an array of organizational and operating characteristics available in the *Blue Book*: carrier type, current assets, company age, tons per mile, total wages paid, total fringe benefits cost, total highway miles driven, average haul (in miles), total insurance costs, and average load (in tons). None of the independent variables was significant in this equation. Second, we compared nonresponders (coded 0) with the 209 organizations in the analysis sample at time 2 (coded 1) on the same characteristics. Only one variable (average haul) was significant, indicating that time 2 participants had slightly longer average haul lengths. These checks suggested no marked differences between responders and nonresponders

on the available variables. Next, we compared those organizations that participated only at time 1 (coded 0) with those that also participated in the follow-up (coded 1) on the same *Blue Book* variables. None of the characteristics was a significant predictor in this logistic equation. We also compared time 1 only and follow-up participants on the set of independent variables from the time 1 questionnaire, plus good- and poor-performer quits also collected on the time 1 questionnaire. None of the predictor variables was significant in this equation. In all, these tests showed little evidence that response bias affected our results.

Hypothesis Tests

Table 1 shows descriptive statistics for, and correlations among, all the Study 1 variables. Table 2 shows the tests of the hypotheses. Model 1 contains the controls and the main effects of the HRM indexes. In the good-performer quit-rate equation, HRM inducements and investments were strongly and negatively related to good-performer quit rates ($b = -7.40$, $p < .01$), and HRM expectation-enhancing practices were also significantly and negatively related ($b = -2.86$, $p < .05$). Thus, Hypotheses 1 and 3 were supported.

Model 1 shows the tests of Hypotheses 2 and 4—the predicted relationships between HRM practices and poor-performer quit rates—under poor-performer quit rates. The coefficient for HRM inducements and investments was negative, but the relationship with poor-performer quit rates failed to reach standard significance levels ($b = -3.27$, $p < .10$). HRM expectation-enhancing practices were significantly and positively related to poor-performer quit rates ($b = 3.61$, $p < .05$). Thus, Hypothesis 4, but not Hypothesis 2, was supported.

The columns labeled model 2 in Table 2 contain the predicted interactions—the test of Hypothesis 5. As the table shows, the interaction predicted by Hypothesis 5 was significant ($b = 7.80$, $p < .01$) and explained an additional 2 percent of the variation in good-performer quit rates. Figure 1 shows a plot of the significant interaction. The figure reveals the prevailing negative relationship between the HRM inducement and investment index and good-performer quit rates. We found the highest levels of good-performer quits when HRM inducements and investments and expectation-enhancing practices were at low levels. When expectation-enhancing practices were low, there was a significant, negative relationship between HRM inducements and investments and good-performer quit rates (simple slope $= -14.63$, $p < .01$). When expectation-enhancing practices were high, good-performer quit rates were generally low, and the relationship between HRM inducements and investments and good-performer quit rates was not significant (simple slope $= -.97$, $p < .81$). The interaction of the HRM indexes was not significant in the poor-performer quit rates equation ($b = 4.17$, n.s.). Thus, Hypothesis 5 was supported in the good-performer quit rate equation, but not in the poor-performer quit rate equation.

STUDY 2, METHODS

We collected data from a sample of single-unit supermarkets in this study. We randomly selected 1,000 stores from the "single-unit supermarket edition" of the *Chain Store Guide*. After a letter and phone call to identify the key informant at each store and encourage participation, we mailed a questionnaire to the store manager. A month to six weeks following the initial mailing, we mailed a letter encouraging participation and another copy

TABLE 1
Correlations and Descriptive Statistics, Study 1[a]

Variable	Mean	s.d.	1	2	3	4	5	6	7	8
1. Organization size	8.46	1.14								
2. Carrier type	0.88	0.32	.01							
3. Unionization	8.46	29.26	−.01	−.09						
4. Discharge rate	4.41	4.66	.12*	.19**	−.10					
5. Selective staffing	3.59	0.73	.07	−.06	.08	−.14*	(.81)			
6. HRM inducement and investment index	0.03	0.49	.05	−.14*	.27**	−.14*	.40**			
7. HRM expectation-enhancing index	0.06	0.59	.21**	.13*	−.06	.06	.13*	.04		
8. Good-performer quit rates	9.02	14.93	.12*	.11	−.10	.19**	−.13*	−.33**	.06	
9. Poor-performer quit rates	17.98	21.60	.09	.16**	−.19**	.33**	−.23**	−.26**	.17**	.58**

[a] $n = 209$. Coefficient alpha reliability estimates are reported on the main diagonal.
  * $p < .05$
  ** $p < .01$

TABLE 2
Regression Results, Study 1[a]

Variable	Good-Performer Quit Rates		Poor-Performer Quit Rates	
	Model 1	Model 2	Model 1	Model 2
Organization size	1.59*	1.39*	1.21	1.14
Carrier type	−0.05	−0.09	1.68	1.15
Unionization	0.03	0.03	−0.09**	−0.09**
Discharge rate	−0.06	−0.00	0.72**	0.74**
Selective staffing	1.79	1.28	−1.97	−2.23
Poor-performer quit rates	0.39**	0.38**		
Good-performer quit rates			0.64**	0.63**
HRM inducement and investment index	−7.40**	−6.83**	−3.27	−3.04
HRM expectation-enhancing index	−2.86*	−2.80*	3.61*	3.55*
HRM inducement and investment index × HRM expectation-enhancing index		7.80**		4.17
Total R^2	.41**	.43**	.52**	.52**
ΔR^2	.41**	.02*	.52**	.00

[a] $n = 209$. Unstandardized coefficients are reported.
* $p < .05$
** $p < .01$

of the questionnaire to store managers who had yet to return a completed questionnaire. A total of 320 questionnaires were returned—a 32 percent response rate. Two years later (time 2), we mailed a follow-up questionnaire to the store managers in conjunction with a practitioner-oriented feedback report on the first phase of the study. A total of 135 follow-up questionnaires were returned—a 42 percent time 2 participation rate and an overall 14 percent response rate. Missing data reduced the analysis sample to 93 stores. All HRM practices measures and the turnover rate variables for this study were specific to the full-time employee population in the stores. The operationalizations of the variables generally paralleled those in Study 1, with adjustments made to reflect the different industry context. Differences in measures were in keeping with the nature of constructive replication described in Lykken (1968) (see also Kacmar, Witt, Zivnuska, and Gully [2003]).

Independent Variables, Time 1

As in Study 1, we computed the HRM inducements and investments index and the HRM expectation-enhancing practices index by averaging the standardized scores for the individual measures (a formative measure).

HRM inducements and investments. We measured *pay level* as the average hourly pay rate for full-time employees. We operationalized *benefits level* as the percentage of full-time employee health insurance premiums paid by the company. We assessed *training* as the total hours of training that a typical full-time employee received each year. *Job security* was measured with a two-item scale ($\alpha = .70$) adapted from Shaw et al. (1998): "We have systems in place to guarantee work for our employees" and "We guarantee employees a certain amount of work in every pay period" (1, strongly disagree, to 7, strongly agree). We measured *procedural justice* with five items from Colquitt (2001) ($\alpha = .84$). The items were, "To what extent are procedures free of bias?" "To what extent are employees able to express their views before decisions are made?" "To what extent are the procedures used to make decisions generally based on accurate information?" "To what extent are procedures applied consistently across employees?" and "To what extent are employees able to appeal the outcomes arrived at by the procedures?" (1, "not at all," to 5, "to a very great extent."

HRM expectation-enhancing practices. We measured *pay-for-performance* with four items from Colquitt (2001) ($\alpha = .92$): "To what extent do rewards reflect the effort employees put into their work?" "To what extent do rewards reflect what employees have contributed to the organization?" "To what extent are rewards appropriate, given the work employees have completed?" and "To what extent are rewards justified, given employees' performance?" (1, "not at all," to 5, "to a very great extent"). We operationalized *performance appraisal* as the number of times per year that the company conducted formal performance appraisals for employees. We assessed *monitoring* with a three-item scale developed for this study ($\alpha = .90$). Informants reported the extent to which video cameras, one-way mirrors, or other monitoring devices were used to "make sure employees are not stealing from the store," "collect performance appraisal information more accurately," and "make sure that employees are not loafing while on the job" (1, "not at all," to 5, "to a very great extent").

Dependent Variables, Time 2

As in Study 1, we asked informants to report good- and poor-performer quit rates. Although average turnover rates among independent grocers are not available, the Bureau of Labor Statistics reported that 2003 separation rates among all retail

FIGURE 1
Interaction between HRM Inducements and Investments and HRM
Expectation-Enhancing Practices in Predicting Good-Performer Quit Rates

Control Variables, Time 1 and Archival
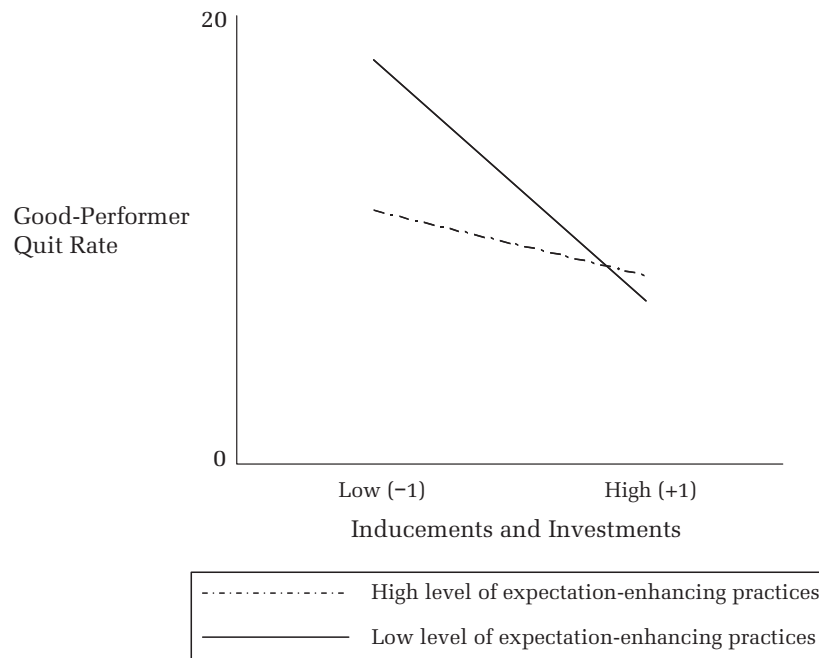
stores were 49.5 percent on average. These estimates include voluntary and involuntary separations for full- and part-time employees. We were able to approximate the total separation rate using time 1 data. We summed total voluntary and involuntary turnover rates for full- and part-time employees and calculated a weighted average based on the number of full- and part-time employees in the stores. According to this calculation, the total separation rate was 44 percent (voluntary turnover rate = 39 percent; discharge rate = 5 percent). Thus, informant reports of total separation rates in our sample are reasonably close to national average retail store separation rates in the same year.

To operationalize quit rates, we asked informants to report the number of full-time employees who had quit in the last year. Next, we asked them to report the number of poor performers (those whose job performance was in the lowest 20 percent for full-time employees) and good performers (those whose job performance was in the highest 20 percent for full-time employees) among the total quits. We then divided these reports by the total number of full-time employees and multiplied by 100 to obtain the good- and poor-performer quit rates. We intended the difference between these operationalizations and the dependent variables in Study 1 to enhance the accuracy of the measures by ensuring that informants used the same performance band for quits of good and poor performers.

Control Variables, Time 1 and Archival

We controlled for organization size, unionization, discharge rate, selective staffing, and the alternative quit rate in all equations. *Organization size* was the total square feet of a store as reported in the *Guide*. *Unionization* was coded 1 if full-time employees were covered by a collective bargaining agreement and 0 otherwise. *Discharge rate* was the number of full-time employees discharged or fired at time 1 divided by the total number of full-time employees times 100. Our *selective staffing* variable was a five-item measure based on the selection procedures measure from Shaw et al. (1998). Informants reported the extent to which they used structured interviews, physical ability tests, reference checks, drug testing, and background checks when hiring employees (1, "not at all," to 5, "to a very great extent").

STUDY 2, RESULTS

Response Bias Checks

We used data from the *Guide* and two sets of logistic regression equations to compare the characteristics of responding and nonresponding organizations. First, we compared characteristics of nonresponders (coded 0) to those of the 320 organizations (coded 1) who returned time 1 questionnaires on five variables that were available in

TABLE 3
Correlations and Descriptive Statistics, Study 2[a]

Variable	Mean	s.d.	1	2	3	4	5	6	7
1. Organization size	12,739	6,780							
2. Unionization	0.04	0.21	.21*						
3. Discharge rate	3.33	8.81	−.10	−.08					
4. Selective staffing	2.35	0.73	.18*	.23*	−.15				
5. HRM inducement and investment index	0.07	0.52	.20*	.29**	−.19*	.39**			
6. HRM expectation-enhancing index	0.25	0.58	.20*	−.07	−.01	.32**	.24**		
7. Good-performer quit rates	2.41	4.61	−.01	−.02	−.14	−.03	−.11	.19*	
8. Poor-performer quit rates	3.92	9.88	−.08	.00	.18*	−.05	−.18*	.18*	−.02

[a] $n = 93$. Coefficient alpha reliability estimates are reported on the main diagonal.
  * $p < .05$
  ** $p < .01$

the *Guide*: store age, store sales, total square feet, and number of specialty departments. One variable—specialty departments—was significant, indicating that responding organizations (mean = 6.7) had slightly more specialty departments than nonresponding organizations (mean = 6.2). Second, we compared nonresponders (coded 0) with the 135 organizations that responded at time 2 (coded 1) using the same list of characteristics. No independent variables were significant predictors in this equation. Third, we compared those organizations that participated only at time 1 (coded 0) with those that also participated in the follow-up (coded 1) using the same list of *Guide* variables. None of the characteristics was a significant predictor in this logistic equation. Fourth, we compared time 1 only and follow-up participants on the set of independent variables from the time 1 questionnaire, plus on the numbers of good- and poor-performer quits, also collected on the time 1 questionnaire. None of the variables was a significant predictor of time 2 participation. In all, these checks suggested no marked differences between responders and nonresponders on the available variables. As a check, we included number of specialty departments as a control in our analyses. The coefficient was not significant in any equation ($p > .90$ in all cases), and the results were substantively identical to those we report below.

Hypothesis Tests

Table 3 shows descriptive statistics for, and correlations among, all the Study 2 variables. Table 4 shows the OLS regressions containing the hypoth-

esis tests for good-performer and poor-performer quit rates. As in Study 1, tests of our hypotheses using Tobit regressions revealed substantively identical results. No support was found for Hypotheses 1 and 3 in Study 2. Neither HRM inducements and investments ($b = -1.26$, n.s.) nor HRM expectation-enhancing practices ($b = 2.16$, n.s.) were sig-

TABLE 4
Regression Results, Study 2[a]

	Good-Performer Quit Rates		Poor-Performer Quit Rates	
Variable	Model 1	Model 2	Model 1	Model 2
Organization size	−0.00	−0.01	−0.00	−0.00
Unionization	1.06	0.92	5.39*	4.71*
Discharge rate	−2.11	−2.32	−3.51	−4.15
Selective staffing	−0.03	0.02	−0.55	−0.50
Poor-performer quit rate	−0.13	−0.14		
Good-performer quit rate			−0.09	−0.09
HRM inducement and investment index	−1.26	−1.15	−3.87**	−3.35**
HRM expectation-enhancing index	2.16	2.21	3.64**	3.71**
HRM inducement and investment index × HRM expectation-enhancing index		−0.73		−2.74*
Total R^2	.05	.05	.27**	.30**
ΔR^2	.05	.00	.27**	.03*

[a] $n = 93$. Unstandardized coefficients are reported.
  * $p < .05$
  ** $p < .01$

FIGURE 2
Interaction between HRM Inducements and Investments and
HRM Expectation-Enhancing Practices in Predicting Poor-Performer Quit Rates

DISCUSSION
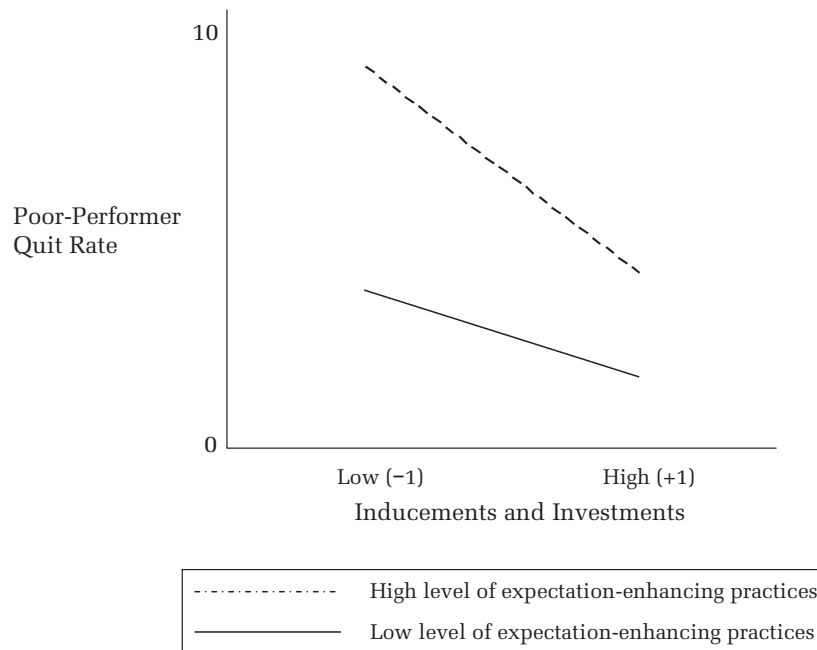
nificantly related to good-performer quit rates. For poor-performer quit rates, the HRM inducement and investment index was strongly and negatively related ($b = -3.87$, $p < .01$), whereas the HRM expectation-enhancing index was strongly and positively related ($b = 3.64$, $p < .01$), as predicted. Thus, Hypotheses 2 and 4 were supported.

The interaction of the HRM indexes in predicting good-performer quit rates was not significant ($b = -.73$, n.s.). The interaction was significant in the poor-performer quit rates equation ($b = -2.74$, $p < .05$), explaining an additional 3 percent of the variance. Figure 2 shows a plot of the significant interaction. When HRM expectation-enhancing practices were high, a strongly negative relationship (simple slope $= -6.09$, $p < .01$) was found between HRM inducements and investments and poor-performer quit rates, as predicted. In addition, we observed the highest poor-performer quit rates when HRM inducements and investments were low and when expectation-enhancing practices were high. When expectation-enhancing practices were low, poor-performer quit rates were generally low, and the relationship between HRM inducements and investments and poor-performer quit rates was not significant (simple slope $= -0.61$, $p < .75$). Thus, Hypothesis 5 was supported in the poor-performer quit-rate equation but not in the good-performer quit-rate equation.

This study is a point of departure for organizational studies on HRM practices and workforce sorting, a topic increasingly being researched at the individual level of analysis (Cadsby, Song, & Tapon, 2007) and one that HRM researchers have identified as a high-need area (Gerhart & Rynes, 2003). On the basis of social exchange and employee-organization relationship theory, we predicted that HRM practices reflect different exchange relationships and can result in differential patterns of functional and dysfunctional quit rates. In Study 1, we found that higher levels of HRM inducements and investments and HRM expectation-enhancing practices related negatively to good-performer quit rates. We also found that higher levels of HRM expectation-enhancing practices were positively related to poor-performer quit rates in Study 1. HRM inducements and investments were negatively related to poor-performer quit rates, although this relationship was only marginally significant. In Study 2, as predicted, HRM inducements and investments were negatively, and expectation-enhancing practices positively, related to poor-performer quit rates.

Perhaps the most significant findings in these studies concern the dynamic interplay of these two sets of HRM practices in relation to differential quit rates. We argued that high levels of expectation-

enhancing practices attenuate the negative relationship between HRM inducements and investments and good-performer quit rates but exacerbate the relationship for poor-performer quit rates. We found support for the attenuation prediction in Study 1. Good-performer quit rates were generally low over all levels of HRM inducements and investments when HRM expectation-enhancing practices were high, but a strongly negative relationship existed when expectation-enhancing practices were low. In Study 2, we found support for the prediction of the exacerbation interaction in relation to poor-performer quit rates. Poor-performer quit rates were low at all levels of HRM inducements and investments when expectation-enhancing practices were low, but a strongly negative relationship was seen when expectation-enhancing practices were high.

It is useful to compare and contrast our findings with those in Tsui et al.'s (1997) job-level study of employer-employee relationships and individual-level outcomes. In job-level analyses, those authors found that a mutual investment exchange relationship (here suggested by high levels of HRM inducements and investments and high expectation-enhancing practices) was generally associated with higher levels of employee performance and more-favorable job attitudes. They suggested that these job-level findings were consistent with macro- or organization-level research findings on the effects of high-commitment systems (Arthur, 1992, 1994) and the salaried model (Osterman, 1988), as well as with field and anecdotal reports of the success of high-involvement systems (Lawler, 1992). In many ways, the results we report here are in line with these findings. In Study 1, we found low quit rates among good performers for organizations whose HRM practices were consistent with a "mutual investment" approach to exchange. In Study 2, although poor-performer quit rates were consistently low when expectation-enhancing practices were low, a mutual investment approach was associated with much lower quit rates than an unbalanced exchange focusing on expectation-enhancing practices.

Our exchange-based theorizing and results differ from, and extend, the existing literature in two important ways. First, we demonstrate that HRM profiles that reflect employee-organization exchange relationships do not uniformly affect employees throughout a workforce, at least in terms of quit patterns. As Tsui et al. (1997) pointed out, the macro-HRM literature includes a number of studies that focus on the benefits of a mutual investment approach, referred to as commitment or high-involvement systems, and evidence in the literature

has shown consistently that a strong emphasis on these systems is associated with low overall turnover levels. We find support for this trend in the good-performer quit rates in Study 1 and poor-performer quit rates in Study 2. But we also argue and show in Study 1 that many organizations report low quit rates among good performers when the organizations emphasize expectation-enhancing practices but not inducements and investments. Although Tsui et al. (1997) reported consistently deleterious effects of an underinvestment approach on employee performance and attitudes, our Study 1 results, although not definitive, suggest that calculative forces and favorable social comparisons may be significant factors in the retention of good performers, even when generous inducements and investments are not offered.

Examples of such an HRM approach focused on good-performer retention are not uncommon. Cypress Semiconductor, a successful organization based in Silicon Valley, has received considerable media attention for its people management systems. Central to its approach is the retention of excellent performers, and many facets of its system are consistent with an underinvestment approach. For example, Cypress uses a stalwart performance ranking for employees and for many years employed a systematic monitoring system that was referred to as "killer" software (O'Reilly & Caldwell, 1998). Both are examples of high HRM expectation-enhancing practices. But the Cypress HRM system also de-emphasized hiring bonuses, base pay, and other perquisites consistent with high HRM inducements and investments. In line with the Cypress case and our theory, when viewed across our two studies (Figures 1 and 2), the underinvestment situation suggests a *functional* sorting.

Second, it is important to highlight that a number of the macrolevel HRM turnover rate studies (Arthur, 1994; Guthrie, 2001) have focused on a single continuum of practices and thus fell short of capturing the richness suggested by social exchange theory and the employee-organization exchange framework tested here with HRM profiles. For example, Guthrie's (2001) high-involvement index included a mix of practices consistent with the inducement and investment continuum (cross-training, dispute resolution, internal career ladders) and those associated with the expectation-enhancing practices continuum (emphasis on performance-based pay). Similarly, Arthur (1992, 1994) clustered organizations into commitment- and control-oriented archetypes that reflected a "do everything" versus "do nothing" approach to HRM. The current study takes a step forward in understanding how internal synergies among HRM prac-

tices relate to different organizational outcomes. As a number of authors have pointed out (e.g., Delery, 1998; Lepak & Shaw, 2008), internal fit among HRM practices is a popular view, but it is one that the literature does not meet with a surfeit of empirical support. Our study is among the first to show a theoretically consistent and divergent pattern of findings across outcomes for interactions of HRM system bundles.

In addition to using an employee-organization exchange approach to offer new predictions, our two-study approach represents a constructive replication (Kacmar et al., 2003; Lykken, 1968) whereby we were able to test our hypotheses using different measures in two diverse samples. Although we did not find support for all our hypotheses in each study, we did find support for all of them across the two studies. It is also important to point out that in no case did we find a significant effect that was *inconsistent* with our hypotheses across the two studies, as would be anticipated if there were no substance behind the theory, measures, and tests. In essence, the results of the two studies complement, rather than contradict, each other.

For future research, we encourage investigators to explore the performance implications of our theoretical approach, not only in terms of individual or aggregate employee performance levels such as those examined in Tsui et al. (1997), but also in terms of measures of organizational performance such as safety, productivity, and profitability (Shaw, Gupta, & Delery, 2005). We found relatively low levels of good-performer quit rates in Study 1 in an underinvestment exchange relationship characterized by high HRM expectation-enhancing practices and low levels of HRM inducements and investments. In contrast, Tsui et al. (1997) predicted that under an underinvestment relationship, employees' basic task performance, citizenship, dependable continuance of employment, and various job attitudes would be the least favorable, and indeed, in their study, performance, citizenship, and job attitudes were significantly less favorable in organizations with an underinvestment strategy than in those with a mutual investment strategy. One could speculate by comparing the two sets of results that although good performers may be retained in both situations (underinvestment and mutual investment), good-performing employees are willing to "go the extra mile" or focus on optimal, rather than relative, performance in a mutual investment situation.

We also found relatively low quit rates among good performers for an overinvestment approach (high inducements and investments and low expec-

tation-enhancing practices), but retaining good performers with such an approach may come with certain costs in terms of their long-term effort levels. Tsui et al. (1997), for example, argued that such arrangements do not provide an incentive for good-performing employees to continue to perform exceptionally well, but rather, only an incentive to be retained. Retention of good performers can take the form of loyalty or neglect (Rusbult, Farrell, Rogers, & Mainous, 1988). The latter—where good employees allow conditions to deteriorate through reduction of effort and interest—is likely when HRM inducements and investments are not met with the challenge provided by high levels of expectation-enhancing practices. An excellent avenue for the future would be to explore how performance-turnover dynamics unfold over time.

In addition, researchers investigating functional and dysfunctional quit rates have implicitly assumed that departures of poor-performing individuals will improve (or at least not damage) organizational performance. But formal theories of the relationship between voluntary turnover rates and organizational performance are based on total or cumulative voluntary turnover rates and make no distinctions in the content of those rates (see Shaw, Duffy, et al. [2005] for an exception). Future research that explicates the nature of the relationship between good- and poor-performer quit rates and organizational performance measures would be a strong step forward. Finally, future organizational-level research that explicitly incorporates job alternatives as a theoretical variable would be a valuable way of linking macro-oriented research like ours with research on individual motivational forces for turnover.

In terms of limitations, we collected data in both studies from a single key informant—the highest-ranking HRM manager in Study 1 and the store manager in Study 2. Although this approach has been common in the HRM literature, its appropriateness has been questioned (Gupta, Shaw, & Delery, 2000). Another limitation is that we did not provide performance bands in Study 1, a problem that we addressed in Study 2 by asking informants to report quitters who rated among the top and bottom 20 percent on performance. To the extent that informants used wider or narrower performance bands to report quits, our measures would be contaminated. The construct validity of other measures should also be scrutinized. For example, in Study 2 we assessed performance-based pay by adapting a distributive justice measure from Colquitt (2001) (e.g., "To what extent do rewards reflect the effort employees put into their work?"). At the individual level, these items are good reflec-

tions of distributive justice in a performance-based equity context, but from an organization-level HRM practice view, they match well with pay-for-performance practice operationalizations used in key informant research (Huselid, 1995; Shaw, Gupta, & Delery, 2002). In addition, some of the HRM measures were based on factual information (pay levels, training hours), but others were based on informants' judgments about practices (procedural justice and job security). Whether key employee groups (truck drivers and grocery workers) and the informants would agree about justice and job security levels are open questions that future research should address.

This study provides an extension and initial demonstration that the employer-employee exchange relationship and the HRM practices that reflect these exchange arrangements can have a dramatic impact on quit patterns by performance levels. We encourage additional research on the content of organization-level voluntary turnover rates, as well as the consequences for organizational performance of functional and dysfunctional quit rates.

REFERENCES

Abelson, M., & Baysinger, B. 1984. Optimal and dysfunctional turnover: Towards an organizational level model. *Academy of Management Review,* 9: 331–341.

Ahuja, M., Chudoba, K., Kacmar, C., McKnight, D., & George, J. 2007. IT road warriors: Balancing work-family conflict, job autonomy, and work overload to mitigate turnover intentions. *MIS Quarterly,* 31: 1–17.

Alexander, J. A., Bloom, J. R., & Nuchols, B. A. 1994. Nursing turnover and hospital efficiency: An organization-level analysis. *Industrial Relations,* 33: 505–520.

Arthur, J. B. 1992. The link between business strategy and industrial relations systems in American steel minimills. *Industrial and Labor Relations Review,* 45: 488–506.

Arthur, J. B. 1994. Effects of human resource management systems on manufacturing performance and turnover. *Academy of Management Journal,* 37: 670–687.

Ashford, S. J., Lee, C., & Bobko, P. 1989. Content, causes, and consequences of job insecurity: A theory-based measure and substantive test. *Academy of Management Journal,* 32: 803–829.

Batt, R. 2002. Managing customer services: Human resource practices, quit rates, and sales growth. *Academy of Management Journal,* 45: 587–597.

Batt, R., Colvin, A., & Keefe, J. 2002. Employee voice, human resource practices, and quit rates: Evidence from the telecommunications industry. *Industrial and Labor Relations Review,* 55: 573–594.

Becker, B., & Gerhart, B. 1996. The impact of human resource management on organizational performance: Progress and prospects. *Academy of Management Journal,* 39: 779–801.

Belman, D., Monaco, K. A., & Brooks, T. J. 1998. *And Lord, let it be palletized: A portrait of truck drivers' work and lives.* Working paper, University of Michigan Trucking Industry Program.

Blau, P. M. 1964. *Exchange and power in social life.* New Brunswick, NJ: Transaction Publishers.

Cadsby, C. B., Song, F., & Tapon, F. 2007. Sorting and incentive effects of pay for performance: An experimental investigation. *Academy of Management Journal,* 50: 387–405.

Colquitt, J. A. 2001. On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology,* 86: 386–400.

Coyle-Shapiro, J., Shore, L., Taylor, M., & Tetrick, L. 2004. Commonalities and conflicts between different perspectives of the employment relationship: Toward a unified perspective. In J. Coyle-Shapiro, L. Shore, M. Taylor, & L. Tetrick (Eds.), *The employment relationship: Examining psychological and contextual perspectives:* 119–134. Oxford, U.K.: Oxford University Press.

Cropanzano, R., & Mitchell, M. S. 2005. Social exchange theory: An interdisciplinary review. *Journal of Management,* 31: 874–900.

Crum, M. R., & Morrow, P. C. 1998. The influence of carrier scheduling practices on truck driver fatigue. *Transportation Journal,* 42 (fall), 20–41.

Dalton, D., & Todor, W. 1979. Turnover turned over: An expanded and positive perspective. *Academy of Management Review,* 4: 225–235.

Delery, J. E. 1998. Issues of fit in strategic human resource management: Implications for research. *Human Resource Management Review,* 8: 289–309.

Dess, G. G., & Shaw, J. D. 2001. Voluntary turnover, social capital, and organizational performance. *Academy of Management Review,* 26: 446–456.

Donoghue, C., & Castle, N. G. 2006. Voluntary and involuntary nursing home staff turnover. *Research on Aging,* 28: 454–472.

Duffy, M. K., Shaw, J. D., & Schaubroeck, J. 2008. Envy in organizational life. In R. Smith (Ed). *Envy: Theory and research:* 167–189. New York: Oxford University Press.

Ekeh, P. P. 1974) *Social exchange theory: The two traditions.* Cambridge, MA: Harvard University Press.

Emerson, R. M. 1976. Social exchange theory. In A. Inkeles (Ed.), *Annual review of sociology,* vol. 2: 335–362. Palo Alto, CA: Annual Reviews.

Freeman, R. B., & Medoff, J. L. 1984. ***What do unions do?*** New York: Basic Books.

Gerhart, B., & Rynes, S. L. 2003. ***Compensation: Theory, evidence, and strategic implications.*** Thousand Oaks, CA: Sage.

Gupta, N., Shaw, J. D., & Delery, J. E. 2000. Correlates of response outcomes among organizational key informants. ***Organizational Research Methods,*** 3: 323–347.

Guthrie, J. P. 2001. High-involvement work practices, turnover, and productivity: Evidence from New Zealand. ***Academy of Management Journal,*** 44: 180–196.

Hom, P. W., & Griffeth, R. 1995. ***Employee turnover.*** Cincinnati: Southwestern.

Hom, P. W., Tsui, A. S., Wu, J. B., & Lee, T. W. 2009. Explaining employment relationships with social exchange and job embeddedness. ***Journal of Applied Psychology,*** 94: 277–297.

Huselid, M. A. 1995. The impact of human resource management practices on turnover, productivity, and corporate financial performance. ***Academy of Management Journal,*** 38: 635–672.

Kacmar, K. M., Andrews, M. C., Van Rooy, D. L., Steilberg, R. C., & Cerrone, S. 2006. Sure everyone can be replaced . . . but at what cost? Turnover as a predictor of unit-level performance. ***Academy of Management Journal,*** 49: 133–144.

Kacmar, K. M., Witt, L. A., Zivnuska, S., & Gully, S. M. 2003. The interactive effect of leader-member exchange and communication frequency on performance ratings. ***Journal of Applied Psychology,*** 88: 764–772.

Law, K. S., Wong C., & Mobley, W. H. 1998. Toward a taxonomy of multidimensional constructs. ***Academy of Management Review,*** 23: 741–755.

Lawler, E. E. III. 1992. ***The ultimate advantage: Creating the high-involvement organization.*** San Francisco: Jossey-Bass.

Lepak, D., & Shaw, J. D. 2008. Strategic HRM in North America: Looking to the future. ***International Journal of Human Resource Management,*** 19: 1486–1499.

Lykken, D. T. 1968. Statistical significance in psychological research. ***Psychological Bulletin,*** 70: 151–159.

MacKenzie, S. B., Podsakoff, P. M., & Jarvis, C. B. 2005. The problem of measurement model misspecification in behavioral and organizational research and some recommended solutions. ***Journal of Applied Psychology,*** 90: 710–730.

Maertz, C. P., Jr., & Campion, M. A. 2004. Profiles in quitting: Integrating process and content turnover theory. ***Academy of Management Journal,*** 47: 566–582.

Maertz, C. P., Jr., & Griffeth, R. W. 2004. Eight motiva-

tional forces and voluntary turnover: A theoretical synthesis with implications for research. ***Journal of Management,*** 30: 667–683.

Martin, J., & Harder, J. W. 1994. Bread and roses: Justice and the distribution of financial and socioemotional rewards in organizations. ***Social Justice Research,*** 7: 241–264.

O'Reilly, C., & Caldwell, D. 1998. ***Cypress Semiconductor (A): Vision, values, and "killer" software.*** Case HR-8a, Stanford University, Graduate School of Business.

Osterman, P. 1988. ***Employment futures: Reorganization, dislocation, and public policy.*** New York: Oxford University Press.

Osterman, P. 1994. How common is workplace transformation and who adopts it? ***Industrial and Labor Relations Review,*** 47: 173–188.

Ouellet, L. J. 1994. ***Pedal to the metal: The work lives of truckers.*** Philadelphia: Temple University Press.

Park, H. Y., Ofori-Dankwa, J., & Bishop, D. R. 1994. Organizational and environmental determinants of functional and dysfunctional turnover: Practical and research implications. ***Human Relations,*** 47: 353–366.

Rusbult, C. E., Farrell, D., Rogers, G., & Mainous, A. G. 1988. Impact of exchange variables on exit, voice, loyalty, and neglect: An integrative model of responses to declining job satisfaction. ***Academy of Management Journal,*** 31: 599–627.

Rynes, S. L., Gerhart, B., & Parks, L. 2005. Performance evaluation and pay for performance. In S. Fiske, D. L. Schacter, & C. Zahn-Wexler (Eds.), ***Annual review of psychology,*** vol. 56: 571–600. Palo Alto, CA: Annual Reviews.

Shaw, J. D., Delery, J. E., Jenkins, G. D., Jr., & Gupta, N. 1998. An organizational-level analysis of voluntary and involuntary turnover. ***Academy of Management Journal,*** 41: 511–525.

Shaw, J. D., Duffy, M. K., Johnson, J. J., & Lockhart, D. 2005. Turnover, social capital losses, and performance. ***Academy of Management Journal,*** 48: 594–606.

Shaw, J. D., & Gupta, N. 2007. Pay system characteristics and quit patterns of good, average, and poor performers. ***Personnel Psychology,*** 60: 903–928.

Shaw, J. D., Gupta, N., & Delery, J. E. 2002. Pay dispersion and workforce performance: Moderating effects of incentives and interdependence. ***Strategic Management Journal,*** 23: 491–512.

Shaw, J. D., Gupta, N., & Delery, J. E. 2005. Alternative conceptualizations of the relationship between voluntary turnover and organizational performance. ***Academy of Management Journal,*** 48: 50–68.

Snell, S. A., & Dean, J. W., Jr. 1992. Integrated manufacturing and human resource management: A human

capital perspective. *Academy of Management Journal,* 35: 467–504.

Tsui, A. S., Pearce, J. L., Porter, L. W., & Hite, J. P. 1995. Choice of employee-organization relationship: Influence of external and internal factors. In G. R. Ferris (Ed.), *Research in personnel and human resource management,* vol. 13: 117–151. Greenwich, CT: JAI Press.

Tsui, A. S., Pearce, J. L., Porter, L. W., & Tripoli, A. M. 1997. Alternative approaches to the employee-organization relationship: Does investment in employees pay off? *Academy of Management Journal,* 40: 1089–1121.

Trevor, C. O., Gerhart, B., & Boudreau, J. W. 1997. Voluntary turnover and job performance: Curvilinearity and the moderating influences of salary growth and promotions. *Journal of Applied Psychology,* 82: 44–61.

Vaughan, D. 1982. Toward understanding unlawful organizational behavior. *Michigan Law Review,* 80: 1377–1402.

Way, S. A. 2002. High performance work systems and intermediate indicators of firm performance within the U.S. small business sector. *Journal of Management,* 28: 765–785.

Zimmerman, S., Gruber-Baldini, A. L., Hebel, J. R., Sloane, P. D., & Magaziner, J. 2002. Nursing home facility risk factors for infection and hospitalization: Importance of registered nurse turnover, administration, and social factors. *Journal of the American Geriatrics Society,* 50: 1987–1995.

—————⋀⋀—————

Jason D. Shaw (shawx218@umn.edu) is a professor and the Curtis L. Carlson Professor of Industrial Relations in the Carlson School of Management at the University of Minnesota. He received his Ph.D. from the University of Arkansas. His current research interests include workforce turnover, the effects of compensation systems on individuals and organizations, and personality-environment congruence issues.

Brian R. Dineen (brian.dineen@uky.edu) is an associate professor of management in the Gatton College of Business and Economics at the University of Kentucky. He received his Ph.D. from Ohio State University. His research interests include recruitment, person-environment congruence, and counterproductive behavior among members of collectives.

Ruolian Fang (fang0106@umn.edu) is a Ph.D. candidate in the Carlson School of Management at the University of Minnesota. Her current research interests include effects of social networks on individuals, organizational justice, and interpersonal aggression.

Robert F. Vellella (vell0006@umn.edu) is a Ph.D. student in the Carlson School of Management at the University of Minnesota. He earned his SPHR credentials prior to joining the Ph.D. program. His research interests include the study of HRM practices in the context of strategic decision making.

—————⋀⋀—————