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What is This?

A Firm-Level Analysis
of Employee Attrition

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Using a sample ($n = 297$) of private sector firms, this article considers the role that firm characteristics, work force characteristics, location, and employee benefits practices have in explaining employee attrition. Hierarchical regression analyses suggest that benefit practices are associated with turnover, even when controlling for firm characteristics, firm setting, and work force characteristics. Specifically, firms where benefits were a higher percentage of total labor costs and firms whose benefits packages were described to be of higher quality experienced less attrition. Implications of the findings for human resource management are discussed.

Most research on turnover has been conducted at the individual- or job-level of analysis, examining the cognitive processes that precede a jobholder's decision to leave a firm (see Cotton & Tuttle, 1986, for a review). Research conducted at the firm level has typically examined the dysfunctional consequences of turnover, particularly its costs for employers (e.g., Cascio, 1991; Mobley, 1982). Researchers have argued that some employee attrition is functional (e.g., Dalton, Krackhardt, & Porter, 1981; Dalton & Todor, 1979, 1982). They reason that employees who quit because of a recognized lack of

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fit between their abilities and job demands save managers and firms from further investment in efforts to provide training. Moreover, more costly senior employees can be replaced with less expensive, albeit often less experienced, junior employees.

Regardless of the reason, turnover clearly is consequential for organizations (Mobley, 1982). It has been suggested that some solutions to problematic turnover may be linked to the manipulation of organizationally controlled variables (Bluedorn, 1982; Edwards, 1979; Terborg & Lee, 1984). Further, turnover can be conceptualized as a behavior that is embedded in the context of a firm and its environment, indicating that an understanding of context is critical to an understanding of the behavior (cf. Granovetter, 1985). Thus an argument can be made for the importance of examining turnover as a firm-level variable (Baysinger & Mobley, 1983). There are, however, few published studies that take such a perspective. This void has been previously identified by Baron and Bielby (1980), who argue that firm-level research provides the necessary bridge between investigations conducted at an economic or industrial sector unit of analysis and research at the job or individual level. Recently, Cappelli and Sherer (1991) made a similar argument, suggesting that there has been little success in the past decade at building bridges between macro- and microlevels of analysis.

One likely explanation for the lack of firm-level turnover research is the difficulty associated with obtaining data on turnover and its possible correlates from a heterogeneous sample of firms. A second explanation is the lack of a cogent theoretical model to guide such an effort. Although social stratification theorists have developed propositions to explain the relationship between markets and employment outcomes such as turnover (e.g., Averitt, 1968; Beck, Horan, & Tolbert, 1978; Edwards, 1979), theoretical development at the firm level is lacking (Baron & Bielby, 1980). Further, research at the individual level has gradually reduced the role given to firm-level variables and environmental characteristics in favor of variables that are more easily measured, such as intention to quit (Cappelli & Sherer, 1991; Mobley, 1982). Thus, as Cappelli and Sherer (1991) report, a review of extant turnover studies provides few insights into the role played by external factors.

The purpose of this study is to examine, at the firm level, variables that have been linked to employee turnover in microlevel investigations and to industry turnover rates in macrolevel investigations. Four categories of variables are considered: firm characteristics, firm setting, work force characteristics, and benefit practices. We consider characteristics of a firm (e.g., size, industry, economic sector) to be largely fixed. Turnover explained by

these variables is essentially a cost incurred due to a firm's chosen line of business. To a degree, firm setting is also not readily altered. Variance in turnover explained by location might provide information to decision makers about where to locate a facility, but once investment is made, employee attrition becomes a cost of doing business. Work force characteristics are also expected to be related to turnover. Because work force race and gender are difficult and often illegal to manipulate, particularly as a solution to a turnover problem, these too may represent fixed or relatively fixed costs. The final block of variables, benefit practices, are to a large extent within a firm's control. Variance explained by benefits is a portion of turnover that decision makers can manipulate through policies, rules, and procedures.

FIRM CHARACTERISTICS

SIZE

Studies examining the relationship between size and structure (e.g., Blau & Schoenherr, 1971; Hickson, Pugh, & Pheysey, 1969) have found size to be positively correlated with increased differentiation among tasks and functional areas within an organization. Size has also been found to be positively related to the number of hierarchical levels in an organization (Blau & Schoenherr, 1971). Together, these aspects of size would suggest that because of greater structural opportunities for advancement, larger organizations should have relatively lower employee turnover rates. Although size is generally thought to be negatively related to turnover, it should be noted that other researchers have suggested that size may have a negative impact on turnover because of its tendency to create higher levels of worker alienation (Terborg & Lee, 1984).

INDUSTRIAL SECTOR

Averitt (1968), Bluestone, Murphy, and Stevenson (1973), Edwards (1979), and Tolbert, Horan, and Beck (1980) are among those who claim a substantial link between industrial structure and individual work outcomes such as turnover. A distinction is made between oligopolistic (core) and competitive (periphery) industrial sectors that can be used for classifying organizations and their impact on employment. The emergence of these sectors is commonly linked to the development of a core of powerful oligopolistic corporations that grew to dominate the U.S. economy in the late

19th and early 20th centuries. In contrast, the periphery sector is characterized by much smaller firms operating in a relatively competitive environment.

As a result of the differential financial and political powers of the firms in these sectors, workers who are able to secure employment in the core sector theoretically can be assured of an advantage over their periphery sector counterparts. This approach would suggest that a firm in the core sector experiences lower turnover rates as a direct result of its greater ability to support the development of long-term employment relationships (e.g., Bluestone et al., 1973). Employee retention is most often accomplished through the extensive use of internal labor markets and deferred compensation programs such as pension plans and vacation pay based on length of employment.

UNIONIZATION

The presence of union representation has often been associated with differences in turnover rates (e.g., Freeman, 1980; Pfeffer, 1983). This argument posits that unions promote human resource management practices that deter employee turnover. For example, Freeman and Medoff (1979) find that unions increase the proportion of total compensation that is deferred in the form of fringe benefits and promote seniority and thus work force stability. Unionization is also argued to reduce turnover rates because it offers employees an opportunity to voice dissatisfactions rather than quitting (Freeman, 1980; Hirschman, 1970). It has been suggested that in the absence of adequate grievance procedures, such as those generally maintained by unions, quitting and firing are the most common methods of dispute resolution (Pfeffer, 1983). Finally, although there is variability in the proportion of workers in individual bargaining units covered by union agreements, it is asserted (e.g., Freeman & Medoff, 1979) that the impact of a union's presence may "spill over" to all other workers, thus reducing turnover among nonunion as well as union employees.

INDUSTRY

Data reported by Price (1977), as well as continually updated data from the Bureau of Labor Statistics, suggest that industry differences in turnover rates persist in a fairly predictable pattern, with median turnover rates highest in goods-producing firms and lowest in service-producing firms. Explanations of this pattern generally point to the disproportionate representation of blue collar laborers with general skills in goods-producing firms as compared to the predominance of white collar workers with firm-specific skills employed in service-producing firms. Clearly, this argument has some parallel

with that regarding the core/periphery distinction. Yet many manufacturing firms are properly classified as core firms with concomitant internal labor markets and employee retention goals, whereas many service firms (e.g., hotels, retail) are more properly classified as periphery firms (Beck et al., 1978).

FIRM SETTING

Cappelli and Sherer (1991) encouraged researchers to consider the role of context in explaining employee behavior. Although previous research indicates that turnover varies by industry and job type (Price, 1977), availability of opportunities (Price, 1977; Weiss, 1984), and the state of the economy (March & Simon, 1958), microlevel investigations of turnover too often exclude context (Cappelli & Sherer, 1991). This oversight has led researchers to make false attributions of contextual effects to individuals (Ross, 1977). The present analysis explores the relationship between turnover and three variables describing each firm's setting.

UNEMPLOYMENT RATE

Local unemployment rate has been found to have some effect on an individual's decision to quit (Barnes & Jones, 1973; Farber, 1980). Cappelli and Sherer (1991) have argued that labor market variables are critical to an understanding of turnover behavior, as employees are clearly linked to both employers and the labor market. In reviewing research into individual antecedents to turnover, Hulin, Roznowski, and Hachiya (1985) report that analyses conducted as far back as the 1930s have found a consistent, strong, and negative relationship between unemployment and voluntary turnover rates. Cotton and Tuttle (1986) and Price (1977) note that although weak effects for unemployment rate are found at the individual level, a stronger relationship may be expected when considering organizational turnover rates. Bluedorn (1982), Mobley (1982), and Parsons (1977) have also shown that the local demand for labor as indicated by unemployment rates is positively related to organizational turnover rates.

RURAL VERSUS URBAN LOCATION

Falk and Lyson (1988) contend that new and growing industries are attracted to urban areas where needed scientific and engineering skills are easily found. Mature and declining industries, with standardized production

technologies and little need for important innovations, on the other hand, are drawn to rural areas where labor costs are low and community subsidies are high. As a result, a disproportionate number of periphery firms are located in rural areas. These firms are characterized by competitive markets and low margins; as a result, they possess limited financial resources.

Recent research (Falk & Rankin, 1990) has found that differences beyond the urban/rural distinction exist. Specifically, Falk and Rankin found that among rural Blacks, those living in historically Black regions (the "Black belt" of the South) experience the most restricted economic opportunity. We argue that turnover can be viewed as another indicator of employment inequality. Holding other factors constant, such as unemployment rate and job availability, high rates of turnover in a firm are an indicator of unsatisfactory employment opportunities and employee frustration. Based on this argument, this analysis considers both whether the firm is located in a rural or urban setting and whether it is located in the Black belt.

WORK FORCE CHARACTERISTICS

AVERAGE AGE OF EMPLOYEES

Parsons (1977), Schein (1978), and Terborg and Lee (1984) have all found support for the hypothesis that turnover rates are higher in work forces that are, on average, younger. These findings are not surprising given the consistency with which research on turnover at the individual level has found this to be the case (e.g., Mobley, Griffeth, Hand, & Meglino, 1979; Porter & Steers, 1973; Price, 1977). One suggestion is that younger employees may be less likely to have personal constraints or "side bets" (Becker, 1960) that limit their mobility and that they may perceive more alternative opportunities than older employees.

GENDER AND RACIAL COMPOSITION

Early work in economic segmentation argued that men are more likely to be employed by core firms where jobs offer security, relatively high returns on education and experience, and established internal labor markets (Beck et al., 1978; Edwards, 1979). In contrast, this same work argued that women are more often employed by periphery firms where wages and returns to human capital are lower and turnover is higher. More recent research in this area (e.g., Baron, Davis-Blake, & Bielby, 1986; Falk & Lyson, 1988) has

found that even when women are employed in the core sector, the jobs that are usually open to them are not likely to be included in formal career ladders and thus are often as unstable as those found in the periphery.

It has also been argued (e.g., Edwards, 1979; Gordon, 1972) that Whites are more likely to find employment in the core sector. In contrast, Blacks, like women, are primarily employed in periphery firms. In an extensive study of employment in the South, Falk and Lyson (1988) have found substantial support for this position. Counties with predominantly Black populations were also found to be counties in which the major employers were those firms in periphery industries. Moreover, as is the case with female workers, Blacks who do find employment in the core are usually found in relatively unstable jobs with little if any opportunity for advancement. This suggests that even when economic sector is taken into account, both women and Blacks experience different work opportunities than men and Whites. As a result, turnover patterns may differ as well.

BENEFITS PRACTICES

The overall level of benefits and types of indirect compensation, such as pension plans or vacation pay based on length of service, have been said to be a reflection of an organization's desire to retain employees (e.g., Edwards, Reich, & Gordon, 1975). As employees become increasingly "vested" in such programs, the opportunity cost of switching employers also increases. Further, in an environment in which health care costs are increasing so dramatically, health benefits have become especially important as tools of employee retention (Mitchell, 1983; Pritchett, 1977; Sutton, 1985). Most significantly, benefits practices represent a human resource management practice over which the firm exerts near total control. Whereas many of the other variables considered in this analysis are either a given based on a firm's business or reflective of considerable sunk costs (e.g., facility location), employee benefits are "movable" and can reasonably be used to influence turnover rates.

METHOD

SAMPLE AND DATA COLLECTION

The data for this analysis were collected from personnel/human resource managers as part of a larger study in late 1988 and early 1989 from a sample

of 297 firms in Georgia. A population frame of private sector (for profit, nonpublic) firms with 250 or more employees was constructed from *Dun's Marketing Indicators* (DMI). The use of the DMI as a sampling frame has been found to compare favorably to other methods (cf. Kalleberg, Marsden, Aldrich, & Cassell, 1990). In addition, the *Georgia Manufacturing Directory* and chamber of commerce lists provided by each of the state's 159 counties were used as supplements.

Once a firm was selected for inclusion in the sample, the human resource department was contacted to verify the number of employees at the location. Work sites that were found to have fewer than 250 employees and those that could not be located were replaced in the sample by an organization with a similar expected size and standard industrial classification code. Ultimately, 343 eligible work sites were contacted in order to conduct 297 interviews, a participation rate of 86.3%. Interviews were conducted with the highest level human resource person at each site. Two of the interviews yielded insufficient data for the analysis and were excluded.

MEASURES

The dependent variable in this analysis is the work site's voluntary turnover rate for the preceding 12-month period, as reported in interviews with human resource managers. Of the 297 respondents, 265 (90%) were able to provide exact or documented turnover rates for their location. To correct for a positive skew (i.e., a small number of work sites with very high [over 400%] turnover) the natural logarithm of a site's turnover rate is used in the analysis.

To explain variance in a firm's turnover rate, four categories of independent variables were used:

Firm characteristics. Using two-digit SIC codes, firms were grouped into manufacturing (58%) versus service (42%) industry. The four-digit SIC code was used to categorize each firm as belonging to either the core (59%) or periphery (41%) sector using the classification suggested by Beck et al. (1978) and others (e.g., Baron & Bielby, 1980; Tolbert, 1982; Tolbert et al., 1980).

Finally, presence of a union (26% of the work sites had at least one union) was coded as a dummy variable with a 1 indicating the presence of at least one union. Number of employees at the work site was reported by human resource managers ($\overline{X} = 738$; $SD = 818$) and is included as a measure of size.

Organizational demographics. Three work force characteristics are included in the analysis. Firms were grouped into one of three categories based on the racial and gender makeup of their work force. The categories used distinguish between firms with less than 33%, between 33% and 50%, and over 50% of the target group. In this sample, 24% of the firms employed fewer than 33% women, 25% employed between 33% and 50% women, and 51% employed a majority of women. Forty-four percent of the firms employed fewer than 33% Blacks, 39% employed between 33% and 50% Blacks, and 17% employed greater than 50% Blacks. The average age of employees ($\overline{X} = 35$, $SD = 6$) was obtained from the human resource manager as well.

Contextual variables. Because the counties in Georgia are geographically small, it was deemed inappropriate to use a county as proxy for a firm's labor market. Where appropriate, labor market was defined as the Standard Metropolitan Statistical Area (SMSA) in which a firm is located ($n = 206$). For firms located outside of an SMSA ($n = 91$), the labor market was defined as the county in which it was located, as well as all contiguous counties. The available archival data were disaggregated and reaggregated, based on the population of this larger area. The mean unemployment rate for a firm's labor market during the years 1986 to 1988 ($\overline{X} = 6.7\%$; $SD = 1.4\%$) was obtained from the *Georgia County Data Guide*, (University of Georgia Cooperative Extension Service, 1988, 1990). Based on criteria developed by Falk and Lyson (1988), dummy variables were computed that indicate whether a county is a rural Black county (i.e., $> 30\%$ Black; not part of an SMSA, $n = 31$) or rural White county ($< 30\%$ Black; not part of an SMSA, $n = 60$).

Benefit practices. Two variables were included to address a work site's benefit practices. First, the percentage of a company's total payroll costs designated for employee benefits was collected from each firm ($\overline{X} = 31.3$, $SD = 9.9$). Second, using a four-item scale (Cronbach's $\alpha = .75$) the human resource manager was asked to evaluate the overall quality of the site's health benefits package, compared to those of other employers in the area with whom they compete for labor.

RESULTS

Table 1 presents a correlation matrix including all study variables. Several of the relationships between independent variables should be noted. As would be expected, both core sector and manufacturing firms are more likely to have

TABLE 1
Correlation Matrix—All Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Firm turnover	1.0												
Firm characteristics													
2. Size	-.15	1.0											
3. Manufacturing	-.34	.05	1.0										
4. Core sector	-.35	.11	-.05	1.0									
5. Union	-.23	.13	.22	.16	1.0								
Firm setting													
6. Unemployment rate	-.14	-.02	.28	-.12	.10	1.0							
7. Rural White county	.11	-.09	.24	-.26	.09	.37	1.0						
8. Rural Black county	-.11	-.01	.18	.01	-.07	.41	-.17	1.0					
Firm demographics													
9. Percent Black	.21	-.04	.08	-.20	.25	.07	.23	.15	1.0				
10. Percent female	.40	-.02	-.22	-.20	-.24	-.09	.02	-.08	.08	1.0			
11. Mean age	-.45	.09	.33	.08	.22	.18	.10	.05	-.07	-.22	1.0		
Benefit practices													
12. Perceived benefits quality	-.31	.00	.08	.15	.01	.01	.02	.01	-.10	-.11	.12	1.0	
13. % labor costs to benefits	-.20	.05	.22	.06	.09	.03	.03	.04	.05	-.14	.09	.19	1.0

NOTE: $n = 295$. A correlation of $\pm.12$ is significant with $p < .05$.

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a union present at the site. As found by Falk and Lyson (1988), sampled manufacturing firms were more likely to be located in rural areas, regardless of labor market composition. Peripheral sector firms were more often found in rural White counties. Generally, periphery sector firms were more likely to employ a larger percentage of Blacks. The correlation between economic sector and percentage Black, controlling for the rural White county dummy variable, also indicates a moderate relationship between peripheral sector and percentage Black employees ($r_p = -.24$, $p < .05$). There is no correlation between economic sector and the rural Black county dummy variable. Again, as one would anticipate, unemployment was positively correlated with both of the rural county measures.

Periphery sector firms, manufacturing firms, and firms in rural Black counties were found to have a greater percentage of Black employees. Firms in rural White counties were also found to employ more Blacks. This relationship holds when controlling for whether a firm is in the core or periphery ($r_p = -.26$, $p < .001$). Core firms, manufacturing firms, and firms with union representation were found to employ smaller numbers of women. Firms in which the mean employee age was younger tended to be nonunion, in the economic periphery, and tended to employ greater numbers of women.

Finally, the benefit practices variable shows that the ratio of labor costs to benefits is greater in manufacturing firms and lower in firms employing large numbers of women. Human resource managers in core firms perceived their benefits package as superior to those offered by other firms in their area. It may be noted that there are no significant bivariate relationships between union presence and benefit quality.

The results of a hierarchical regression analysis are presented in Table 2.[1] In the regression, four blocks of variables were entered sequentially in an order that reflects the degree to which they can be influenced by a firm. This allows us to consider the role that movable factors have when those that are set are statistically controlled. In other words, firms are least able to be in a position to manipulate firm characteristics. One can imagine such change under only the most unusual and extreme circumstances. As a result, this block of variables is entered first. Further, firms can exercise choice over where they locate; once a decision is made, however, change is expensive. Thus firm setting variables are entered into the equation in the second step. To continue on to the third step, firms may, through employee selection for example, alter the demographic characteristics of the work force. Such efforts may or may not be legal, but discretion and flexibility exist. Finally, the easiest of these blocks for a firm to change is its benefits practices, thus this block is entered into the equation last.

TABLE 2
Final Statistics From Hierarchical Multiple Regression Analysis

Independent Variables	Dependent Variable Turnover Rate			
	b	SE	t	
Firm characteristics				
Size	.00	.00	−.74	
Manufacturing	−.50	.19	−2.67**	
Core sector	−.38	.19	−2.06*	
Union	−.34	.21	−1.61	
R^2 for block				.24
F				12.10***
Firm setting				
Unemployment rate	−.20	.11	−1.86†	
Rural White county	.89	.26	3.43***	
Rural Black county	.09	.32	.27	
ΔR^2 for block				.03
F				1.56
Work force characteristics				
Percent Black	.45	.13	3.49***	
Percent female	.20	.07	2.72**	
Mean age	−.06	.02	−4.04***	
ΔR^2 for block				.19
F				15.70***
Benefit practices				
Perceived benefits quality	−.12	.04	−2.68**	
% labor costs to benefits	−.02	.01	−2.53*	
ΔR^2 for block				.06
F				8.14***
Overall adjusted R^2				.49
Overall $F_{(12,130)}$				12.28***

$†p < .10; *p < .05; **p < .01; ***p < .001.$

In this sample, firm characteristics explain 24% of the variance in turnover rate. Turnover rates are lower in the core sector and in manufacturing firms. Controlling for these characteristics, firm setting does not add significantly to the variance explained, although in the final equation turnover rates are lower in areas with greater unemployment ($p < .10$) and higher in rural White counties.

When work force characteristics are added to the equation, the change in variance explained is 19%. Turnover rates are higher in firms that employ a younger work force and a larger percentage of women and Blacks.

Controlling for firm characteristics, firm setting, and work force charac-
teristics, a firm's benefits practices still add significantly to explained vari-
ance in turnover rates. Both a low ratio of labor costs to benefits and a poor
perception of benefits quality relative to other area employers are associated
with a higher rate of turnover. For the full equation, 49% (adjusted) of the
variance in turnover is explained by these four blocks of variables.

Three relationships are unexpected when comparing the regression results
to the correlation matrix in Table 1. Both firm size and union presence are
correlated with turnover in the bivariate analysis. However, economic sector
is a suppressor, reducing the strength of these relationships to nonsignificance
while supporting the theorized relationship between economic sector and
turnover. Finally, the rural county dummy variables are not significantly
correlated with turnover. When firm characteristics are controlled, however,
the relationship between the dummy variable indicating rural White location
and turnover becomes strong and positive.

DISCUSSION

THEORETICAL IMPLICATIONS

Despite its apparent importance as an organizational characteristic, firm-
level turnover has received minimal empirical attention. Using a sample
representing private sector firms, the present analysis allows for an exami-
nation of multivariate prediction of organizational turnover rates.

Among the various typologies of work organizations, the core/periphery
dichotomy has received substantial attention. To some extent, the character-
istics of firms placed in these segments has been conjectural. The present
analysis adds to understanding by demonstrating with firm-level data a
relatively robust relationship between the dichotomy based on industrial
classification and turnover, with such turnover greater (as predicted) in the
peripheral segment of the economy. This relationship is sustained when
controlling for other theoretically relevant variables.

Findings regarding firm setting variables and work force characteristics
are also of note. As compared to previous research, the role of unemployment
rate as a factor in predicting turnover rate was slight. At least in this data,
consideration of a firm's structural and work force characteristics provided
better explanation of turnover.

The results concerning the relationship between turnover and the rural
White county location and organizational demographics is also intriguing.

As expected, firms that employ a high percentage of women, Blacks, and younger people were found to have higher rates of turnover. Also, turnover was higher in firms located in rural White counties. Although turnover in firms with a high percentage of Black employees might have been expected based on a dual labor market hypothesis, the relationship here holds when economic sector and other structural features of employers are controlled. Similar expectations would have existed regarding turnover and percent of female employees. This suggests that even within the core sector, firms with higher percentages of Blacks and women experience greater rates of turnover. One possible explanation is provided by Baron et al. (1986) and Falk and Lyson (1988), who have found that Blacks and women experience limited opportunity, even in the core sector. Clearly, this begs the question of who precisely is quitting. Unfortunately, this data set does not provide an opportunity to answer that question. What can be said, however, is that core sector firms with these characteristics have a work force that is less stable than those of other core firms.

A second question for future research raised by these findings concerns the relationship of the percent of a work force that is Black and location in a rural White county. Again, these results suggest that when controlling for other variables, location in a rural White county is associated with a higher rate of turnover. An important area for future research would be to compare the turnover rates among Blacks and Whites in firms located in these areas. Inferences based on these findings suggest that higher turnover may exist among Blacks employed by firms located in White counties, regardless of economic sector. Such turnover might be influenced by restricted opportunity within a firm. Alternatively, turnover may be higher among White workers seeking opportunities elsewhere.

In sum, the results lend credence to arguments (cf. Baron & Bielby, 1980; Cappelli & Sherer, 1991) that firms are both the theoretical and practical link between micro- and macrodimensions of organization research. Further, the results have implications for existing theories of turnover by examining the organizational context in which quit decisions are made. Moreover, as others (e.g., Baysinger & Mobley, 1983; Bluedorn, 1982; Cappelli & Sherer, 1991; Terborg & Lee, 1984) have argued, the results point up the need for a more comprehensive model of turnover that encompasses multiple levels.

The first steps in such an undertaking would necessarily include specification of theoretically relevant structures (e.g., economic sector, location), and explanation of how and when those contextual features influence affect, cognition, and behavior. For example, a multilevel model of turnover will require further investigation of the connection between objective job oppor-

tunities and individual perceptions of alternatives. Similarly, we know little about the impact of firm-level demographics (e.g., cohort size, race/gender composition) on employee expectations and perceptions. And finally, research of this nature requires that we address the various problems (e.g., Iversen, 1991; Rousseau, 1985) associated with data collected at different levels.

MANAGERIAL IMPLICATIONS

The analysis also provides some practical implications in terms of influences on turnover rates. Traditionally, turnover has been viewed as an individual-level behavior explained by individual-level attitudes and characteristics. However, as strategic human resource planning grows in importance (e.g., Schuler & Jackson, 1987; Schuler & MacMillan, 1984), organizational turnover becomes a salient issue for intervention (Cascio, 1991). Movable variables affecting turnover include training and development opportunities as well as indirect compensation through provision of employee benefits, both of which can help reach organizational subgoals such as employee retention and can ultimately accomplish overall organizational goals (Pritchett, 1977). Although the formulation and implementation of human resource management policy cannot take place without understanding the antecedents of an individual's decision to quit, the effectiveness of such policy may be enhanced by understanding the structural context in which individual turnover decisions are made. With the exception of Terborg and Lee's (1984) multivariate analysis, previous examinations of these structural factors have been discursive.

There certainly is no lack of attention to benefits issues in practitioner-oriented publications. Most of this attention has been focused on the escalating costs of benefits, especially those associated with employee health care. This analysis suggests the "benefits of benefits" for workplaces alert to the many costs of turnover. Workplaces generally need greater sensitivity to the relatively hidden costs of turnover, costs that extend across all types and sizes of workplaces. As part of an examination of turnover costs, the present research suggests, for example, the potential value of attention in exit interviews to the role of benefits in employees' decisions to quit.

In sum, although many interrelated variables affect turnover rates within and among organizations, employee benefits are among these factors. Furthermore, this relationship holds when labor market segment, organizational size, and work site characteristics, such as the average age of the work force and gender distribution, are included in the analysis. Thus, whereas relatively

high levels of benefits do not necessarily cause a lower turnover rate, the negative relationship suggests that this reasonably flexible human resource strategy has important contributions to stability in organizational staffing.

NOTE

1. Two variables, percent Black employees and percent of labor costs designated for benefits, had a number of missing cases (84 and 107, respectively). Analyses do not reveal significant differences in turnover based on whether a firm provided data on these two variables. Among the independent variables, the only significant differences involved firms that provided data on percent Black employees. These firms were more likely to be: (a) in the core economic sector, (b) in areas with lower unemployment, and (c) in areas other than those coded rural White. There were no substantive differences between the regressions conducted using listwise and pairwise deletion of cases. Based on these findings, the results of the pairwise deletion are presented.

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