WHY PEOPLE STAY:

USING JOB EMBEDDEDNESS TO PREDICT VOLUNTARY TURNOVER

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ABSTRACT

A new construct, entitled job embeddedness, is introduced. Assessing factors from on and off the job, it includes an individual's (a) links to other people, teams and groups, (b) perception of their fit with their job, organization and community and (c) what they say they would have to sacrifice if they left their job. A measure of job embeddedness is developed with two samples. The results show that job embeddedness predicts the key outcomes of both intent to leave and voluntary turnover, and explains significant incremental variance over and above job satisfaction, organizational commitment, job alternatives and job search. Implications for theory and practice are discussed.

The personal and organizational costs of leaving a job are often very high. It is not surprising, then, that employee retention has the attention of top-level managers in today's organizations. The questions that challenge social scientists and practitioners alike are "Why do people leave?" and "Why do they stay?" Over the years, researchers have developed partial answers to these questions. More specifically, given alternatives, people stay if they are satisfied with their job and committed to their organization and leave if they aren't. However, the research in scientific journals reports that work attitudes play only a relatively small role overall in employee retention and leaving (Hom & Griffeth, 1995; Griffeth, Hom & Gaertner, 2000). Other factors besides job satisfaction, organizational commitment, and job alternatives are important for understanding turnover (Maertz & Campion, 1998).

The purpose of this paper is to present a new construct called job embeddedness. We believe that it is a key factor in understanding why people stay on their jobs. First, we review the existing literature on organizational attachment; second, we define job embeddedness; and third, we describe how it is similar and different from major constructs in the attachment literature. Next, we empirically develop a measure of job embeddedness; describe its reliability and validity; and provide a competitive test, against other constructs, of its ability to predict voluntary turnover. Finally, we discuss how employers can increase or decrease embeddedness and thereby influence subsequent employee propensities to stay in or leave a job.

THE ATTACHMENT LITERATURE

Most of the current theory and research on voluntary turnover springs from the ideas of March and Simon (1958) on the perceived ease and desirability of leaving one's job. The perceived ease of movement is reflected by job alternatives, while the perceived desirability of movement is usually taken to mean job satisfaction. The traditional wisdom suggests that people

become dissatisfied with their job, search for alternatives, compare those options with their current job using an expected-value-like decision process and leave if any of these alternatives are judged better than their current situation (Mobley, 1977). Job attitudes combined with job alternatives predict intent to leave which is the direct antecedent to turnover.

Traditional Attitude Models

The research investigating the traditional attitude-driven process and its component parts has been extensive. [Maertz & Campion (1998) and Hom & Griffeth (1995) provide excellent reviews.] The two most frequently tested attitudinal constructs have been job satisfaction and organizational commitment. In general, empirical results suggest satisfaction and commitment have consistent, statistically significant and negative relationships with turnover (e.g., Jaros, 1997). Some of the current research, moreover, modifies traditional attitudinal measures or introduces new attitude constructs. For example, Irving, Coleman and Cooper (1997) provide a new measure of Occupational Commitment, whereas Shore and Tetrick (1991) develop and test a new measure of Perceived Organizational Support. Other researchers suggest that justice perceptions (Aquino, Griffeth, Allen & Hom, 1997) and burnout (Wright & Cropanzano, 1998) influence these attitudes, which in turn affect turnover. When considered together, this body of research expands our understanding of which attitudes lead to turnover as well as the causes of these attitudes.

The traditional attitude model also suggests that negative attitudes combine with job search to predict leaving (Blau, 1993). Of course, whether a search is successful or not partly depends on the job market. Bretz, Boudreau and Judge (1994) found that job search is frequently unsuccessful. In addition, Gerhart (1990) concluded that perceptions of the job market (general perception of job opportunities) predicted turnover but that search was not as important. Carsten

and Spector (1987) found that the attitude-turnover relationship was higher when unemployment rates were low (jobs are available) rather than high. Thus, most of the traditional models of turnover (e.g., March & Simon, 1958; Mobley, 1977; Steers & Mowday, 1981; Price & Mueller, 1981; Hom & Griffeth, 1995) include two major categories of predictor variables, one emphasizing job attitudes (like satisfaction and commitment) and one emphasizing the ease of movement (reflected in perceived alternatives and job search behavior).

Although much of the research described above found significant results, these results are modest, at best. In their quantitative reviews, for example, Hom and Griffeth (1995) and Griffeth et al. (2000) report that attitudinal variables control only about four to five percent of the variance in turnover. Steel and Griffeth (1989) and Griffeth et al. (2000) report even weaker findings for the effect of perceived opportunities but slightly stronger results for the effect of intention to search on leaving. In their narrative review, Maertz and Campion (1998) conclude that, while the attitude-perceived alternative-search-turnover links are consistent but weak, many other meaningful topics have been neglected.

Different Directions

A number of researchers have attempted to break away from the attitudes and alternatives model generally prescribed by the theorists mentioned above. Hulin's work, for example, on a general withdrawal construct has broadened our understanding of both the predictors of, and criteria for, organizational attachment (e.g., includes lateness and absences, Hulin, 1991). Recent work by Barrick and Mount (1996) and Chan (1996) moreover, have successfully investigated the effect of individual differences (e.g., conscientiousness) on turnover. However, the foundations for job embeddedness are three other sets of ideas that emerged from this growing literature.

Non-work factors. First, a body of empirical research suggests that many off-the-job factors are important for attachment. The original turnover models of Price & Mueller (1981), Steers and Mowday (1981), and Mobley (1982) mention "non-work" influences and they include family attachments or conflicts between work and family roles. More recent research on spillover models explains how family and work life are related (Marshall, Chadwick & Marshall, 1992). Cohen (1995), for example, shows how non-work commitments like family, hobbies and church influence job attitudes and attachment. Lee and Maurer (1999), moreover, found that having children at home and a spouse were better predictors of leaving a job than organizational commitment.

Other organization-focused predictors. Second, there are now a variety of factors that have been empirically associated with retention that are not attitudes but are organizational in nature. Inducements to stay can derive from working with groups or on certain projects that create types of commitment other than the attraction one has for his or her job or organization. For example, many companies use teams to induce attachments (Cohen & Bailey, 1997). Reichers (1985) labels these attachments "constituent commitments" and includes attachment to unions, teams and other work related groups.

New turnover theory. Third, there is the research on the Unfolding Model (Lee & Mitchell, 1994; Lee, Mitchell, Holtom, McDaniel & Hill, 1999). These authors describe different ways people decide to leave organizations (i.e., four distinct paths). From our perspective, the interesting points are that many people who leave (1) are relatively satisfied with their job, (2) don't search for other jobs before leaving, and (3) leave because of some sort of precipitating event (which they call a shock) rather than a negative attitude. In addition, the content or issues involved with the shock frequently occur off the job (e.g., spouse relocates).

Thus, these results provide clues as to why the attitude-search models only predict modestly well who leaves. In many cases, negative attitudes or job search are simply not associated with leaving (Campion, 1991). Collectively these different and nontraditional ideas helped us to develop the job embeddedness construct.

JOB EMBEDDEDNESS

Job embeddedness (JE) represents a broad constellation of influences on employee retention. Two research related ideas that help in understanding the core of this construct are the embedded figures test and Kurt Lewin's field theory. Embedded figures are immersed in their background. They are attached to it and are hard to separate. They become part of the surroundings. Similarly, Lewin's (1951) field theory asserts that people have a perceptual life space in which the aspects of their lives are represented and connected. These connections can be few or many, as well as close or distant. Metaphorically, job embeddedness is like a net or a web in which one can become "stuck". One who is highly embedded has many links that are close together (a low level of differentiation). Moreover, the content of the parts may vary considerably, suggesting that one can be enmeshed or embedded in many *different* ways. It is this overall level of embeddedness, rather than specific elements of embeddedness, that is our central focus.

The critical aspects of job embeddedness are (a) the extent to which people have links to other people or activities, (b) the extent to which their job and community are similar to or fit with the other aspects in their life space and, (c) the ease with which links can be broken--what they would give up if they left, especially if they had to physically move to another city or home. These three dimensions are called links, fit and sacrifice and they are important both on and off

the job. This 3 x 2 matrix suggests 6 dimensions: links, fit and sacrifice in the organization and in the community.

Links

Links are characterized as formal or informal connections between a person, and institutions or other people. Embeddedness suggests that a number of strands connect an employee and his or her family in a social, psychological, and financial web that includes work and non-work friends, groups, the community, and the physical environment in which he or she lives. The higher the number of links between the person and the web, the more an employee is bound to the job and the organization. We recognize that certain links may be more important than others and that these differences may be population specific. However, given our broad-based conceptualization, we define links broadly as discernable connections.

A variety of research streams suggest that there is normative pressure to stay on a job, which derives from family, team members and other colleagues (Maertz, Stevens, Campion & Fernandez, 1996; Prestholdt, Lane & Mathews, 1987). O'Reilly, Caldwell and Barnett (1989) use the term social integration to describe the at-work part of the link process. Furthermore, a study by Abelson (1987) assessed variables related to both on and off-the-job links. He found that people who are older, are married, have more tenure and/or have children requiring care are more likely to stay than to leave. Cohen (1995), moreover, specifically mentions hobbies and church-related activities as factors that can influence commitment. Thus, people have many links among the various aspects of their lives. Leaving their job and perhaps their home can sever or require the rearrangement of some of these links.

Fit

Fit is defined as an employee's perceived compatibility or comfort with an organization and with his or her environment. According to our theory, an employee's personal values, career goals and plans for the future must "fit" with the larger corporate culture and the demands of his or her immediate job (e.g., job knowledge, skills and abilities). In addition, a person will consider how well he or she fits the community and surrounding environment. We posit that the better the fit, the higher the likelihood that an employee will feel professionally and personally tied to the organization.

In studying voluntary turnover, for example, O'Reilly, Chatman and Caldwell (1991) found that misfits with the organization values terminated slightly faster than fits, but only after 20 months of tenure. Chatman (1991) later reported that when organizational entry produces poor person-organizational fit, employees are likely to leave the organization. Chan (1996) suggests that having one's personal attributes fit with one's job may decrease turnover, and Villanova, Bernardin, Johnson and Dahmus (1994) found that lack of job compatibility predicted turnover. Cable and Judge (1996), Cable and Parsons (1999) and Werbel and Gilliland (1999) report that people self-select jobs based on value congruence and that employers try to hire on that basis. Many socialization practices follow similar processes. More specifically, initial job choice and socialization are related to perceived fit which in turn affects turnover.

Thus, a person's fit with the job and organization relates to attachments to the organization. We believe that there are similar community dimensions of fit as well. The weather, amenities and general culture of the location in which one resides are further examples. In addition, outdoor activities (e.g., fishing, skiing), political and religious climates, and entertainment activities (college or professional sports, music, theater) vary dramatically by region and location. Most important, these assessments of fit may be independent of job or

organization fit (I love IBM, I hate New York). Relocation would obviously require a recalibration of fit, but even a new job without relocation could disturb ones general patterns with new hours of work or a different commute.

Sacrifice

Sacrifice captures the perceived cost of material or psychological benefits that may be forfeited by leaving one's job. For example, leaving an organization likely promises personal losses (e.g., giving up colleagues, interesting projects or pleasant perks). The more an employee gives up when leaving, the more difficult it is to sever employment with the organization (Shaw, Delery, Jenkins & Gupta, 1998). Though comparable salary and benefits may be easily found in an environment of low unemployment, the switching costs (e.g. new health care or pension plans) are real and relevant. Moreover, non-portable benefits like stock options or defined benefit pensions may involve sacrifices. These latter factors have been shown to be related to turnover (Gupta & Jenkins, 1980).

Less visible, but still important, potential sacrifices incurred by leaving an organization include opportunities for job stability and advancement (Shaw et al., 1998). In addition, various advantages accrue to an individual who stays. Time in rank can determine your order in picking an office. Sabbaticals are granted after six years of employment at many universities. Taking a new job means giving up these accrued advantages.

Community sacrifices (as well as links and fit to some extent) are mostly an issue if one has to relocate. Leaving a community that is attractive, safe and where one is liked or respected can be hard. You might have to give up the football tickets or ballet seats that took 20 years of seniority to obtain. Of course, one can change jobs but stay in the same home. But even then, various conveniences like an easy commute or the ability to be at home during certain times due

to flextime (e.g., when kids come home from school) may be lost by changing jobs. Perks that effect one's private life such as day care or vehicles provided by the company may also disappear. Although off-the-job embeddedness may be more crucial when relocation is involved, we suspect it will be important even for situations only requiring a change in jobs. In addition, if people are embedded they may remove job alternatives that require relocation from the set of job options they consider.

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Construct Comparisons

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In our previous section we cited some of the research that supported ideas incorporated into our six job embeddedness dimensions. However, it is also important that we differentiate job embeddedness from specific similar constructs and measures already in the literature. We will start at the overall embeddedness level and progress to a discussion of the six dimensions.

Embeddedness: Overall Construct

The term "embeddedness" has been used in the sociological literature to explain the process by which social relations influence and constrain economic action (Granovetter, 1985; Uzzi, 1996, 1997). The idea of social networks as a constraint is similar to our "stuckness" idea. However, the sociologists use of the construct is far broader than ours in terms of the units of analysis and the dependent variables. Whereas they focus on individuals, groups and organizations and a wide variety of economic actions, we focus more narrowly on an individual staying on their job.

Attitudinal Competitors: Organizational Commitment and Job Satisfaction

Hom and Griffeth (1995) and Griffeth et al. (2000) report meta analyses of the main predictors of turnover. Job satisfaction (67 samples; 24,566 subjects) and organizational commitment (67 samples; 27,540 subjects) are by far the main attitudinal variables researched.

In contrast, job involvement is third with 16 samples and 7,666 subjects. All three are significantly related to retention although involvement has far weaker relationships.

The problem with making comparisons between organizational commitment (OC) and job embeddedness (JE) is that there are numerous definitions and measures of OC in the literature. However, the Allen and Meyer (1990) 3 dimensional model (i.e. affective, continuance and normative) is the most current and widely used. Thus, we will use it for comparison purposes.

Initially, it is important to point out that OC is concerned with organizational issues. Thus, half of the JE construct is simply not covered by OC. Also, two of the factors, affective and normative commitment, are conceptually quite different from JE. Affective commitment reflects one's liking of the job and emotional attachment with the organization. In other words, people stay because of their positive affect and feelings about their organization. Some of our on-the-job factors such as fit may reflect some positive affect towards the job but may also reflect a relatively non-affective judgment. People may stay specifically because they have found or created a "niche" in the organization that matches their needs and talents. Cable and Parsons (1999: 24) suggest that person-organization fit "represents a cognitive belief rather than an emotional response." Thus, our embeddedness construct is not as affect driven as the Allen and Meyer (1990) OC construct.

In addition, the normative commitment dimension of the Allen and Meyer model springs from a sense of obligation. People stay because they feel they ought to. Although some of our organizational links may increase this sense of obligation (e.g., to co-workers), other links we measure, like the sheer number of teams or committees one works with, are not part of their construct.

In contrast, the continuance commitment dimension has some aspects that are fairly similar conceptually to our sacrifice-organization dimension. Utilizing Becker's (1960) idea of side bets, Allen and Meyer (1990) define continuance commitment as "the magnitude and/or number of investments (or side-bets) individuals make and a perceived lack of alternatives" (p.4). These side bets include things like job effort, friendships, specific skills developed and political deals (Jaros, Jermier, Koehler & Sincich, 1993).

Items included in Allen and Meyer's (1990) continuance commitment measure are similar at a general level to items that we use to assess sacrifice-organization (e.g., "It would be very hard for me to leave my organization right now, even if I wanted to"). However, there are also four items assessing the perceived lack of alternatives part of the construct (e.g., "I feel that I have too few options to consider leaving my organization"). As we will see, our items for sacrifice-organization differ in two major ways from continuance commitment. First, we include no items assessing job alternatives. We see that as a separate construct that should be measured separately. Second, instead of just using general items, we assess specific entities that people feel they would have to give up if they leave their job (e.g. freedom, retirement benefits, perks, compensation, health care, promotional opportunities). Thus, our measure is more specific and includes elements not typically included in the side bet idea.

A similar perspective emerges in a review of the job satisfaction (JS) construct and measures. First, the focus of JS is on-the-job, not off-the-job. Second, there are multiple measures of JS (e.g., Job Descriptive Index, Minnesota Satisfaction Questionnaire) and most measures include multiple dimensions. These dimensions include attributes about one's work environment, supervision, co-workers and pay (Griffeth et al., 2000). Sacrifice-organization is

meant to focus on what people would "give up" if they left their job. It does not include items assessing one's affective reactions to the work itself, their supervision or co-workers.

Nonetheless, we do include items on compensation and benefits (e.g., health care, retirement). Thus, sacrifice-organization has some conceptual similarity with compensation satisfaction. Heneman and Schwab's (1985) Pay Satisfaction Questionnaire (PSQ) is the most frequently used instrument in current compensation research. While it does include satisfaction with pay and benefits, the PSQ also includes items referring to raises, the pay structure (distribution) in the organization and procedures involved with pay administration. Thus, the PSQ includes constructs and items which are not conceptualized as part of job embeddedness.

In summary, organizational commitment and job satisfaction have some similarities with and differences from job embeddedness. These two well researched job attitudes do assess on-the-job dimensions. But, they are affective in content and although some of their subdimensions have some similarity with sacrifice-organization, job embeddedness differs from these well-known job attitudes in significant ways.

Other Constructs Similar to Job Embeddedness Dimensions

Besides JS and OC, there are other specific constructs that have some overlap with job embeddedness dimensions. For example, both the cost of quitting and job investment constructs have some similar aspects with sacrifice-organization (S-O). Cost of quitting was part of Mobley's early (1977) model and was meant to reflect March and Simon's (1958) perceived ease of movement concept. Mobley includes, as costs of quitting, things like the "loss of seniority, vested benefits and the like" (p. 238), which combine with the expected utility of search. The research on cost of quitting (e.g., Hom & Hulin, 1981; Hom, Griffeth & Sellaro, 1984) includes three general items (e.g., It is easy for me to leave my present job) as well as measures of the

cost of searching. Similar to the continuance commitment idea, cost of quitting is general and includes search items, while sacrifice-organization assesses specific things to be given up and does not include search.

The job investment idea comes from Farrell and Rusbult (1981) and Rusbult and Farrell (1983). They developed a commitment model to predict turnover with job investments as one of the four main factors (also included are job rewards, job costs and alternative quality) contributing to commitment. Conceptually, job investments include things that are "intrinsic to the job (e.g., years of service, non-portable training, non-vested portions of retirement programs" (1983 p. 431) and resources that are external but tied to the job such as friends at work, housing arrangements and other extraneous benefits. They had 20 items assessing these specific contributors to commitment but the measure they used empirically had only three general items (In general, how much have you invested in this job?; All things considered, to what extent are there activities/events/persons/objects associated with your job that you would lose if you were to leave?; How much does your investment in this job compare to what most people have invested in their jobs?). The idea of losing things by leaving is very similar to our sacrifice-organization (S-O) construct and many of their specific items (e.g. home ownership, spousal employment, community ties) reflect our sacrifice-community and links-community dimensions. However, job investments, as operationalized by the 3 items above, includes elements not in S-O as well as a relative comparison idea (their third item) that appears to invoke equity or fairness judgments. In short, the measure they used is more general in nature, while S-O measures specific factors one would have to give up by leaving. In addition, they see the job investment, turnover relationship as mediated by commitment while we make no such claim.

There are also two constructs that partially overlap with our fit-organization (F-O) dimension. The work of Schneider (1987), Chatman (1989) and Kristof (1996) discusses the idea of person-organization fit. More recently, person-job fit has been researched by Saks and Ashforth (1997) and Werbel and Gilliland (1999). In general these constructs refer to compatibility ideas including the "congruence of the personality traits, beliefs and values of individual persons with the culture, strategic needs, norms and values of organizations" (Netemeyer, Boles, McKee & McMurrian, 1997: 88) for P-O fit and the congruence of knowledge, skills and abilities (KSA) with one's job for P-J fit. The measures include items like, "to what extent are the values of the organization similar to your own values" (Saks & Ashforth, 1997).

Our dimension of fit-organization incorporates a number of the separate fit ideas from this literature. We ask how well one perceives they fit with their co-workers, group, job, company and culture. In addition, since there is confusion in the literature on the bases of fit (e.g., personality, values, needs and goals; Kristof, 1996), we simply ask for an overall fit perception without referring to needs as apparent in the above items. Thus, our construct is more encompassing than the separate fit constructs in the literature.

The second construct that may appear similar to F-O is organizational identity (see Whetten & Godfrey, 1998). Unfortunately, there is little agreement on the definition of this construct (Albert, 1998) with both macro (organization) and micro (individual) referents used. At the individual level, organizational identity comes from the social identity literature and refers to "a perceived oneness with an organization and the experience of the organization's successes and failures as one's own" (Mael & Ashforth, 1992, 103). In other words, "the individual defines him or herself in terms of the organization." In doing research on schools, Mael and

Ashforth (1992) use items like "When someone criticizes (name of school) it feels like a personal insult" or "this school's successes are my successes").

We think that OI is fundamentally different from F-O. In particular, OI involves a far broader and deeper idea than just fit. Ashforth (1998), for example, says it involves the fusion of self and organization. Gioia (1998) says it is "fundamental to the conception of humanity." In contrast, we see fit as assessing the degree of similarity on a few specific dimensions.

There is also one construct that is somewhat similar to our idea of links-organization (L-O). Reichers defines constituency commitment as "a process of identification with the goals of an organization's multiple constituencies" (1985: 465). Research using this concept asks "How attached are you to the following people and groups (top management, supervisor and work group)" (Becker, 1992; Hunt & Morgan, 1994). In our conceptualization, L-O focuses only on attachments that develop over time on-the-job and that embed someone. We assess the length of time one has been on the job and in the organization, along with the number of co-workers, teams, and committees with which one is involved. However, we do not assess attachment to top management nor one's identification with the goals of various groups. These are separate concepts.

Finally, there are constructs and measures that have some similarity with our links-community (L-C) dimension. Price and Mueller (1981) suggest that kinship responsibilities may limit one's ease of movement. They see the variable as reflecting "obligations to relatives in the community" and use items assessing whether one is married, and the number of children and relatives in the community (Blegen, Mueller & Price, 1988). We should add that investigators interested in the ideas of relocation (Miller, 1976) or expatriates leaving job assignments (i.e., the person changes their job assignment and home location but stays with the organization) also have

pointed to family entanglements as important (Shaffer & Harrison, 1998). For example, Miller

(1976), Spitz (1986) and Turban, Campion and Eyring (1992) all suggest that relocation is

severely affected if a spouse (or family member) does not want to move. Turban et al. (1992)

use the kinship responsibility measure in their research as do Shaffer and Harrison (1998).

The kinship responsibility idea is very similar to our links-community, both conceptually

and empirically. However, our concept and measure are broader. Beyond kinship, we focus on a

variety of other links that inhibit changing jobs or moving, such as home ownership, close

friends living nearby and community-organization links.

The last construct we will mention is subjective norm.   Fishbein (1967) and Ajzen and

Fishbein's (1977) attitude model suggests that behavior is influenced by the extent to which

"others" think you should engage in that behavior and your motivation to comply with these

expectations. A few researchers (e.g., Parker & Dyer, 1976; Hom & Hulin, 1981; Hom, et al.,

1984) have used these ideas to predict turnover with items like "most of the people whose

opinion I respect, think I should leave my present job" (Newman, 1974). In many cases, the

subject responds to these questions with respect to various reference groups (e.g., friends, family,

employer).

The L-C construct is different in a variety of ways. It refers to other links beside people

such as owning a home or community organizations. Also, L-C only refers to off the job links,

while subjective norm refers to people who can be both on the job and off the job. In addition,

L-C only assesses links (our web or stuckness idea), not whether family or friends want one to

quit their job. People may feel constrained simply by having the personal links and connections,

independent of how other people feel.

In summary, there are clearly ideas in the literature that are similar to the dimensions of job embeddedness. However, there are also important differences. Job embeddedness is broader than any of the constructs discussed in the literature. It includes an assessment of some factors both on and off the job that are not measured elsewhere. In addition, its constituent dimensions have a less affective nature than most of the constructs that dominate this literature. Links is clearly non affective and fit and sacrifice are only indirectly or secondarily affective. In sum, at the construct level, JE is conceptually unique in the turnover literature.

Summary and Hypotheses

Job embeddedness is conceived as a key mediating construct between specific on-the-job and off-the-job factors and employee retention. It represents a focus on the accumulated, generally non-affective, reasons for why one would not leave a job: a sort of stuckness, inertia or status quo bias. Each of the three dimensions--fit, links and sacrifice--has an organizational and community component. Though both "organization" and "community" are abstractions that are socially constructed, they capture domains where people are potentially embedded. Also, the effects of these six different factors may vary across people, jobs or circumstances, such as one's age or the organization's size. People can become embedded in many ways; the process may systematically vary by occupation or personality. In sum, our focus is more on the totality of embedding forces that keep a person on the job than the negative attitudes that prompt one to leave. From this perspective, JE may be seen as a "higher order' aggregate of forces for retention. This overall focus on the factors that lead to employee retention give rise to the following hypotheses:

Hypothesis 1. Job embeddedness is negatively correlated with employee intent to

leave and subsequent voluntary turnover.

Hypothesis 2. Job embeddedness improves the prediction of voluntary turnover

above and beyond that predicted by job satisfaction and organizational

commitment.

Hypothesis 3. Job embeddedness improves the prediction of voluntary turnover

above and beyond that predicted by perceived alternatives and job search.

Hypothesis 4. Job embeddedness improves the prediction of voluntary turnover

above and beyond that predicted by variables representing the desirability of

movement (i.e. job satisfaction and organizational commitment) and variables

representing ease of movement (i.e. perceived alternatives and job search).

METHOD

Overview and Samples

The general research strategy was to assess personal characteristics, job satisfaction, organizational commitment, job embeddedness, job search, perceived alternatives and intent to leave at time 1, and actual turnover at time 2. We contacted, visited and gained access to data from two organizations that operate in environments characterized by relatively high turnover. The first organization was a regional grocery store chain. The second organization was a community-based hospital. The labor market was exceptionally tight for both organizations with unemployment well below 5 percent. Thus, the two organizations studied were similar in terms of their turnover but the types of people employed in these industries vary substantially.

Grocery Store Respondents. Surveys were distributed to 700 randomly selected grocery store employees (from 8 stores) in March, 1998. Self-addressed stamped envelopes were provided for the return of completed surveys. The confidentiality of completed surveys was guaranteed to all respondents. Follow-up letters were sent to remind employees to participate.

Ultimately, 232 surveys were returned, yielding a response rate of 33.1 percent; 55 respondents did not self-identify. Thus, for analyses of turnover only 177 surveys were analyzed.

The average age of respondents was 37.57 years (SD=13.02), 77% were female, and 38% were married. They had worked in their current position for 6.15 years (SD=6.88), for the organization for 7.00 years (SD=7.29), and in the industry for 9.94 years (SD=8.84). To test for response bias, we obtained basic information about the survey population from the organization. We compared the 177 respondents who provided their names on the questionnaire to the remaining 523 employees who received questionnaires. The "non-respondents" thus included some who responded to the survey without disclosing their name. The respondents were not different from the non-respondents in terms of age, tenure with the firm and job level. However, respondents do appear to differ from non-respondents in terms of gender (t=3.83, p<.01). Women responded to the survey at a higher rate than men did. Consequently, gender was used as a control variable throughout the analyses. Moreover, the response rates from different stores appears to be highly similar (Chi-square=9.31, ns). So, the various store samples appear to be fairly similar to the population of employees in terms of demographic attributes.

Hospital Respondents. Surveys were mailed to a random sample of 500 employees of the hospital in June, 1998 (150 were nurses and the other 350 were from administration, maintenance, admitting, cafeteria and special services). Self-addressed stamped envelopes again were provided. We guaranteed confidentiality to all respondents in a letter sent in advance of the survey. Follow-up letters also were sent to remind employees to participate. There were 232 surveys sent back by hospital employees, yielding a response rate, of 46.4 %. However, not all respondents identified themselves. Thus, for calculations involving turnover 208 surveys were analyzed.

The average age of respondents was 43.10 years (SD=10.21), 84% were female, and 60% were married. They had worked in their current position for 6.22 years (SD=6.39), for the organization for 7.92 years (SD=7.18), and in the industry for 16.82 years (SD=10.41). To test for response bias, we compared the 208 respondents who provided their names on the questionnaire to the other 940 employees of the hospital. The respondents do not appear to be different from non-participants in terms of gender, tenure with the organization, job level or job type. Thus, sample respondents are fairly similar to the population of employees with respect to their major demographic attributes.

Measures

Personal Characteristics. For both the grocery store and hospital samples, we measured age, gender, marital status, job level and tenure in their job, with their organization and industry. Simple, fill-in-the-blank type questions were used.

Job Embeddedness. The items used to assess embeddedness came from four sources. First, there were obvious demographic and descriptive items available to assess marital state, number of children, house ownership, years at one's job, etc. Second, there were items from traditional attitudinal type measures that could be modified for our purposes, especially for job fit (i.e. my job utilizes my skills and abilities well) and job sacrifice (i.e. the benefits are good on this job). Third, the authors of the paper met weekly for over a year to discuss this construct, clarify its component parts and generate items for the measure. Fourth, we conducted 21 preliminary interviews at two grocery stores from the participating chain and 12 interviews at the hospital. None of these 33 employees participated in the survey. The purposes of these interviews were to pre-test the relevance of the items and to generate additional items. Our initial questionnaire (at the grocery store) had 42 items which were written to assess our six

dimensions (links, fit, and sacrifice, on and off-the-job). Some used a Likert-type format while others were yes, no, or fill in the blank. At the hospital, we had six additional items based on our interviews and deliberation that occurred after the data were gathered at the grocery stores. Three of these items were added to the links-community and three to fit-organization. The final set of items is shown in Table 1.

Insert Table 1 about here

Job satisfaction. Among the grocery clerks, Spector's (1997) Job Satisfaction Survey measured job satisfaction. It is a 36-item measure of employee job satisfaction applicable specifically to service-oriented organizations. To assess overall job satisfaction, an averaged composite of all 36 items was used (alpha=.92). For the facets of job satisfaction, Spector's subscales were used. Their alpha reliabilities were: .84 for pay, .77 for promotion, .88 for supervision, .70 for benefits, .82 for contingent rewards, .53 for operating conditions, .63 for coworkers, .80 for the nature of the work and .75 for communication. Among the hospital employees, management's concerns about questionnaire length did not allow use of Spector's scale. Instead, overall satisfaction was measured with an averaged composite of the following three items: "All in all, I am satisfied with my job." "In general, I don't like my job (reverse scored)." And "In general, I like working here" (alpha=.85).

Organizational commitment. Meyer and Allen's (1997) 3-dimensional measure assessed organizational commitment. To assess overall organizational commitment, an averaged composite of all items was used (alpha=.84 and .87 in the two samples). For the 3 dimensions, Meyer and Allen's sub-scales were used. Their alpha reliabilities among grocery and hospital employees were, respectively: .86 and .89 for affective commitment, .85 and .81 for calculative commitment, and .71 and .81 for normative commitment.

Job Alternatives. These two items were adapted from a Lee and Mowday (1987) study. The items are: "What is the probability that you can find an acceptable alternative to your job?" and "If you search for an alternative job within a year, what are the chances you can find an acceptable job?" These items were averaged to reflect one's perceived alternatives (alpha = .93, .93) and use a 5-point response format. While this measure has been used in previous research we should add that it suffers from two of the criticisms leveled by Steel and Griffeth (1989). With only 2 items it is relatively simplistic and with analyses conducted within a sample the variance is limited. Both of these problems may inhibit its relationship with turnover.

Job Search Behavior Index. This composite is designed to measure actual search activity. We used the 10 item scale used by Kopelman, Rovenpor and Millsap (1992). It includes questions such as "During the past year have you 1) revised your resume, 2) sent copies of your resume to a prospective employer, 3) read the classified advertisements in the newspaper, 4) gone on a job interview and, 5) talked to friends or relatives about getting a new job? Responses are yes or no and the alphas were .80 and .82 for the two samples.

Intention to leave. These items were adapted from Hom, et al., (1984). The three items were "Do you intend to leave the organization in the next 12 months?", "How strongly do you feel about leaving the organization within the next 12 months?" and "How likely is it that you will leave the organization in the next 12 months?" An averaged composite was used in the analysis (alphas were .95 and .97).

Voluntary turnover. Both organizations provided a list of all voluntary and involuntary leavers for a 12-month period following each survey administration. Maertz & Campion (1998) define voluntary turnover as, "Instances wherein management agrees that the employee had the physical opportunity to continue employment with the company, at the time of termination." To

confirm this volitional nature from both the organization and the employee, we attempted to contact every leaver to confirm the voluntariness of departure. Because some of the people who left the organizations also left the area, we were only able to contact 15 of 20 "voluntary leavers" at the grocery store chain. However, this proved to be an important check on the reporting system as 3 of the leavers interviewed indicated that their departure was somewhat less than voluntary. (They felt some pressure to leave but were not fired). To be conservative, these three people and all the involuntary leavers were omitted from the analyses. In the hospital sample we were able to contact 20 of 27 "voluntary leavers". Each of the persons contacted reported leaving voluntarily. Thus, the p-values were approximately 10% for grocery employees (total voluntary leavers out of self-identified respondent sample) and 13% for hospital employees.

RESULTS

Development of Job Embeddedness

Job embeddedness is an aggregate multidimensional construct formed from its six dimensions (Law, Wong & Mobley, 1998). More specifically, its indicators are causes of embeddedness and not reflections (MacCallum & Brown, 1993). The survey instrument measures these causal (and not effect) indicators of the dimensions for embeddedness i.e., fit, links and sacrifice. Note that our conceptualization is different from a latent factor that influences effect indicators. Put another way, being embedded does not cause one to go out and get married, buy a house, or increase linkages with the organization. Rather, those activities cause a person to become embedded. In terms of a path diagram, the causal arrow goes out from the causal indicators (items) to determine the six dimensions; and from the dimensions, the arrow goes out to determine the aggregate construct (Law et al., 1998).

In addition, it should be noted that job embeddedness is not a unified construct—it is a multidimensional aggregate of the on and off-the-job forces that might keep someone on the job. We do not expect the six dimensions to be highly correlated with one another (although some dimensions might). For example, we have no reason to believe that on-the-job links will be related to off-the-job sacrifice, or on-the-job fit will be related to off-the-job links.

On the basis of our definition of the construct and its constituent parts, we first assigned each of the survey questions to one of the six embeddedness dimensions. For the data gathered from the grocery store employees, we then conducted an exploratory factor analysis on the items in each of the six dimensions to assess whether the items within each dimension are reasonably correlated. Third, we calculated alpha reliabilities for each of the dimensions, not because they are particularly valid for causal indicators, but simply as some evidence that the items within a dimension are internally consistent (Bollen & Lennox, 1991). Table 1 summarizes the final set of items derived from these factor analyses and reports the alpha coefficients for the two samples. Fourth, we created averaged composite variables for each of the six dimensions. The number of items per dimension ranges from 3 to 10. Finally, we created an aggregate measure of embeddedness by computing the mean of the six dimensions (a mean of means). Thus, the composite equally weights the influence of the distinct dimensions. For the hospital employees, we repeated the basic process. However, based on further deliberations, as a result of discussions with the grocery store employees and interviews with the hospital employees, we elected to add 6 items to the questionnaire and composites (shown in Table 1). The alpha reliability (using all the items) for this overall measure was .85 among grocery employees and .87 among hospital employees. Table 2 shows the means, standard deviations and correlations for all variables in this study.

Insert Table 2 about here

Descriptive Information

The intercorrelations presented in Table 2 show that embeddedness is related to complementary work-related constructs. Embeddedness is positively, significantly and moderately correlated with job satisfaction (r=.43 and .57; grocery and hospital employees respectively, both p<.01) and organizational commitment (r=.44 and .54; grocery and hospital employees respectively, p<.01). As further evidence of convergent validity, "fit with the organization"--the dimension hypothesized to be most closely related to the above-mentioned affective measures--is positively and strongly correlated with job satisfaction (r=.52 and .72, p<.01) and organizational commitment (r=.58 and .52, p<.01). Also, embeddedness is negatively related to job search (r = -.24, -.29 p<.01) and job alternatives (r = -.12, p<.10; -.07, ns) as we would expect. The more people are embedded, the less they search and the lower the probability of perceived alternatives. Indicative of discriminant validity and as expected, the non-affective dimensions of embeddedness appear only weakly related to the traditional measures of employee attachment. For example, "links to the organization" is not highly correlated with job satisfaction (r=.03 and .10, ns) or organizational commitment (r=.15, p<.05, and .28, p<.01). Also as expected, the community-based subdimensions of embeddedness exhibit generally *lower* correlations with overall job satisfaction and overall organizational commitment than their organization-based counterparts. In sum, data from these two samples indicated evidence of convergent and discriminant validity for job embeddedness.

Tests of Hypotheses

Hypothesis 1 posits that embeddedness is negatively correlated with employee intent to leave and turnover. As noted in Table 2, the product-moment correlations in the two samples

between embeddedness and intent to leave are -.41 and -.47 (p<.01) and the point-biserial

correlations between embeddedness and voluntary turnover are -.24 and -.25 (p<.01). These

results suggest that a negative relationship exists between being embedded in an organization

and one's intent to leave as well as actual voluntary leaving. Hypothesis 1 is supported across

both samples.

Hypothesis 2 asserts, "Job embeddedness improves the prediction of voluntary turnover

above and beyond that predicted by job satisfaction and organizational commitment." Tables 3

and 4 present the results when turnover is logistically regressed onto the overall aggregated

measures. Among grocery employees, job embeddedness significantly improves the prediction

of turnover (improvement in chi-square=2.58, p<.05; Wald=2.54, p<.05; pseudo partial r=-.08),

after controlling for the effects of gender, job satisfaction and organizational commitment (Table

3). Among hospital employees, job embeddedness also significantly improves prediction of

turnover after controlling for gender, job satisfaction and organizational commitment

(improvement in chi-square = 5.29, p<.01; Wald=4.95, p<.0l; pseudo partial r =-.14; Table 4). In

sum, hypothesis 2 is supported across the two samples.

Insert Table 3 and 4 about here

Note that the p values reported above are one tailed (chi-square p values divided by 2).

Statistically, one might legitimately ask whether improvement in chi-squares tests should be one-

tailed. Because chi-square is derived with squared values, directionality cannot be readily

determined via this test statistic (i.e., directionality is "squared away"). In response, we note that

our concept of job embeddedness clearly specifies a direction (i.e., more embeddedness, less

turnover). In addition, directionality is also explicitly indicated by exp (b) and directly tested

with the Wald statistic. Thus, there is a theoretical basis <u>and</u> an empirical reason to justify our directional interpretation of chi-square.

Hypothesis 3 holds, "Job embeddedness improves prediction of voluntary turnover above and beyond that predicted by perceived alternatives and job search." Among grocery store employees, job embeddedness significantly improves prediction of turnover (improvement of fit chi-square = 6.18, p<.01; Wald = 5.65, p<.01; pseudo partial r =-.20) after controlling for the effects of gender, perceived alternatives and job search (Table 3). Among hospital employees, job embeddedness significantly improves the prediction as well (improvement of fit chi-square = 7.36, p<.01; Wald = 6.76, p<.01; pseudo partial r =-.18) after controlling for gender, perceived alternatives and job search (Table 4). Thus, hypothesis three is supported across two samples.

In hypothesis 4, job embeddedness is predicted to improve prediction of turnover above and beyond that predicted by job satisfaction and organizational commitment (a.k.a., perceived desirability of movement) and perceived alternatives and job search (a.k.a., perceived ease of movement). Among grocery workers, job embeddedness marginally improves prediction (improvement of fit chi square = 2.37, p<.06; Wald = 2.31, p<.06; pseudo partial r =-.06) after controlling for gender and the perceived desirability and perceived ease of movement (Table 3). Among hospital workers, job embeddedness significantly improved prediction (improvement of fit chi-square = 5.67, p<.01; Wald = 5.20, p<.01; pseudo partial r =-.16) after controlling for gender and the perceived ease of movement and desirability of movement variables (Table 4). In sum, hypothesis 4 is largely supported.

DISCUSSION

The current study is unique in that it develops and tests a new organizational attachment construct: job embeddedness. It is important to emphasize that embeddedness was

conceptualized specifically as reflecting the totality of forces that constrain one from leaving his or her current employment. It captures those factors that embed and keep one in the present position. While other ideas, constructs and measures helped to shape our thinking (and have some empirical associations with parts of embeddedness), job embeddedness, especially its off-the-job components, represents a new perspective on why people stay on their jobs.

The empirical research we have presented provides some initial support for job embeddedness. In two separate investigations, we demonstrated that people who are embedded in their jobs have a lower intent to leave and do not leave as readily as those who are not embedded (hypothesis 1). In addition, each of the six components of embeddedness were significantly related to turnover in at least one of the samples (see Table 2). These data suggest that our emphasis on some off-the-job and non-affective causes of turnover has some predictive validity. The data also show that job embeddedness predicts turnover over and above that made by standard measures of job satisfaction and organizational commitment (hypothesis 2) and that made by perceived job alternatives and job search behaviors (hypothesis 3).

Job embeddedness also predicts turnover over and beyond a combination of perceived desirability of movement measures (job satisfaction, organizational commitment) and the perceived ease of movement measures (job alternatives, job search). Thus, job embeddedness assesses new and meaningful variance in turnover in excess of that predicted by the major variables included in almost all the major models of turnover (hypothesis 4). Thus, our empirical findings show that job embeddedness complements and extends our understanding of the antecedents to leaving (and staying).

While we are pleased with these initial results, we would hasten to point out that there are many unanswered questions. Schwab reminded us two decades ago that "construct validity is

often a sequential process" (1980: 10) and that "initial construct validation will likely lead to modification of the instrument and perhaps in the investigator's definition of the construct" (p.11). More recently, Hanisch, Hulin and Roznowski (1998: 464) state in a discussion of turnover research that "it takes time to conceptualize important constructs, refine them, accurately assess them, and then study the antecedents and consequences of these constructs."

These quotes point to some of the limitations in our work. First, turnover studies using actual turnover as the criterion (instead of intent to leave) take a long time to conduct, usually about two to three years. The research reported in this paper commenced in 1995. Since then, new ideas and research have appeared in the literature. For example, the recent work on socialization (Cable & Judge, 1996; Cable and Parsons, 1999) suggests that socialization practices may be highly related to fit-organization and the work by Barrick and Mount (1996) and Chan (1996) suggests that conscientiousness may moderate the embeddedness, turnover relationship. These changes need to be incorporated in future work. Second, the job embeddedness construct is in a process of development. For example, we added some items in our second study and more changes may occur in the future. But, evolution is always true of new constructs. For example, two popular measures of job satisfaction, the Job Descriptive Index and the Index of Organizational Reactions have changed substantially over the years (Ironson, Smith, Brannick, Gibson & Paul, 1989, Dunham, Smith & Brackburn, 1977). Moreover, it is important to point out that to the extent to which the reliability and validity of job embeddedness is increased through subsequent research and development, the results presented in the current paper may be conservative. Third, we clearly did not test job embeddedness against all possible competitors. We started with the two most frequently researched attitudes (JS and OC) and the two variables most frequently cited as reflecting external forces for leaving

(search and alternatives). Additional work is needed to see how embeddedness complements and supplements other variables in the literature.

There are also clearly some empirical and conceptual issues that need further attention. In terms of empirical work, we see three major research directions. First, as mentioned above, the items composing our six dimensions need additional development. There may be items that need to be dropped or added. For example, an important organizational factor which we may have overlooked was the relationship an employee has with his or her supervisor. Having a great boss may be hard to give up (sacrifice). Another example is adding items to the link-community dimension reflecting political or religious ties.

A second direction has to do with how we decide to include or exclude items. Since the construct of job embeddedness is a heterogeneous totality of forces, many of which may be independent, high alphas should not be expected necessarily within the six sub-dimensions or high intercorrelations expected across dimensions. What is needed to decide the acceptability of items and sub-dimensions may be a global measure of overall embeddedness (e.g. how stuck do you feel in your job) and global measures of the sub-dimensions as well. For four of the six sub-dimensions (fit and sacrifice on and off-the-job), we included a single general item (e.g., for fit-organization we ask "I feel like I am a good match for the company"). However, these single items are potentially unreliable. Moreover, both links dimensions have no summary item. Having reliable and valid global estimates of overall embeddedness and for the six sub-dimensions would help in any future item analysis.

A third research direction relates to our results with these two samples. At the time that we designed these studies, 1997-1998 census data indicated about 15% of people relocate (move) when they change jobs. In addition, some of our previous research at a hospital suggested about

20% of the people who left, relocated. Therefore, we tried to find out whether those who quit in our samples left the area. Everyone we reached had not relocated (3 of the grocery clerks and 4 of the hospital workers were no longer at their listed phone number—they may have moved but we do not know for sure). These data are important because our off-the-job dimensions assess issues that might be most salient for people considering alternatives that involved moving. However, it is important to note that if the people we didn't reach indeed left, the percent leaving (3 of 15, 4 of 27) in our studies would fit with the national norms. In addition, because job embeddedness correlates significantly with search behaviors (-.24 and -.29, $p<.01$ in the two samples), it can be inferred that highly embedded people search less. For both stayers and leavers, we can not tell the number of available alternatives that were passed over or discarded because they involved moving. To the extent that moving was not an option for these employees, then the results we present are likely to be conservative. Embeddedness may have even stronger effects for people in professions where changing jobs involves changing locations (e.g., academics).

There is conceptual work to be done as well. We recognize that other constructs control part of the variance in turnover. More specifically, the Wald statistics reported in Tables 3 and 4 clearly show that job satisfaction, organizational commitment, job search and perceived alternative control variance in turnover, not controlled by job embeddedness. We never envisioned job embeddedness replacing those other constructs. What is needed, then, is a better understanding of the construct space that these variables have in common and where they differ.

Job embeddedness may also be related to other dependent variables. Although it was designed specifically to predict why people stay on a job (and in that sense, it's purpose is different from other constructs such as job satisfaction or organizational identity), job

embeddedness may also predict variables that are similarly beneficial to organizations. People who are more embedded, for example, may be absent less, work harder, perform better and engage in more organizational citizenship behaviors than people who are less embedded. These questions merit further research.

A final conceptual issue that needs attention is whether job embeddedness could actually facilitate leaving. There are two rather indirect ways this leaving could happen. First, having many links suggests that one is well networked. Such networking, especially off-the-job, might lead to unsolicited job offers or knowledge about other positions. Also, being highly embedded at work might lead to work-family role conflicts and such conflicts might result in turnover. Thus, while job embeddedness focuses on how one is stuck in their current situation, such stuckness might result in secondary circumstances that eventually cause turnover.

A more general critical question is why we should care about embeddedness? How important is it? What does it add to the literature and to our understanding of the turnover/ staying process? Obviously, one argument for its importance is the statistical findings that support the hypotheses. However, one could argue that these increments are not terribly large and may not be large enough to warrant the use of a new construct and a new measure.

We think there are at least three reasons, besides the data, that support its conceptual value. First, job embeddedness captures some theoretical ideas (supported by recent research) that off-the-job and non-affective factors can influence turnover. Thus, the embeddedness construct reflects some of the current zeitgeist about retention. It adds coherence (or understanding) to the extensive list of work and non-work factors that create forces for staying on the job.

Second, the implications of thinking about job embeddedness issues are quite different than thinking about increasing satisfaction or commitment. That is, the levers or factors that researchers, as well as managers, need for managing turnover are <u>conceptually very different</u>. For example, links-organization can be increased by making people mentors and putting them on long-term projects. Links and fit-community can be influenced by providing resources and support for community activities and involvement. On and off-the-job perks linked to longevity can increase sacrifice issues. Thus, job embeddedness points theory, research <u>and</u> practice in some new directions.

Third, other approaches (e.g., Lee & Mitchell, 1994) have suggested that many people leave their jobs for reasons other than dissatisfaction (e.g. shocks or specific events) and many people leave without doing a job search. Being less embedded does not push you to leave a job like dissatisfaction (e.g., one can have a low level of embeddedness and be satisfied with a job). What low levels of embeddedness may do is make you susceptible to shocks or if dissatisfaction occurs, make it easier to search and leave. Thus, embeddedness may add to our understanding of the turnover process through its deflection of the effects of shocks and as a variable that diminishes job search.

In summary, we believe that this study makes an important contribution to the organizational attachment literature. It suggests some new and intriguing ways to think about employee retention. Apparently, being embedded in an organization and one's community is associated with reduced intent to leave and actual leaving. These findings appear to support the current emphasis in the academic and popular press on the need for organizations to be concerned with employee's lives both on and off-the-job. It also suggests that the focus on money and job satisfaction as the levers for retention may be limited in scope. Many non-

financial and non-attitudinal factors serve to place people in a network of forces that keep them in their job. Further pursuit of these ideas will hopefully increase our understanding of why people stay, why they leave and how those actions can be influenced.

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TABLE 1

Results of Factor Analysis on Job Embeddedness Items[a, b]

FIT: Community. I really love the place where I live. (.77, .74). The weather where I live is suitable for me. (.53, .59). This community is a good match for me. (.84, .87). I think of the community where I live as home. (.80, .80). The area where I live offers the leisure activities that I like. (.70, .69). Alpha coefficient for composite (.78, .79).

FIT: Organization. I like the members of my work group. (.57, .53). My coworkers are similar to me. (.51, .40). My job utilizes my skills and talents well. (.72, .80). I feel like I am a good match for this company. (.80, .82). I fit with the company's culture. (.72, .72). I like the authority and responsibility I have at this company. (.67, .74). Alpha coefficient for composite at grocery store chain (.75).

*Additional items at hospital. My values are compatible with the organization's values. (.68) I can reach my professional goals working for this organization. (.77) I feel good about my professional growth and development. (.69) Alpha coefficient for composite at hospital (.86).

LINKS: Community[b]. Are you currently married? (.93, .93). If you are married, does your spouse work outside the home? (.88, .91). Do you own the home you live in? (.67, .65). Alpha coefficient for composite at grocery store chain (.77).

*Additional items at hospital. My family roots are in this community. (.06) How many family members live nearby? (.07) How many of your close friends live nearby? (.13) Alpha coefficient for composite at hospital (.50).

LINKS: Organization. How long have you been in your present position? (.65, .32). How long have you worked for this company? (.72, .46). How long have you worked in the grocery industry? (.83, .37). How many coworkers do you interact with regularly? (.40, .56). How many coworkers are highly dependent on you? (.42, .57). How many work teams are you on? (.37, .73). How many work committees are you on? (.58, .81). Alpha coefficient for composite (.65, .62).

SACRIFICE: Community. Leaving this community would be very hard. (.78, .83). People respect me a lot in my community. (.80, .76). My neighborhood is safe. (.68, .85). Alpha coefficient for composite (.61, .59).

SACRIFICE: Organization. I have a lot of freedom on this job to decide how to pursue my goals. (.56, .49). The perks on this job are outstanding. (.73, .75). I feel that people at work respect me a great deal. (.47, .45). I would sacrifice a lot if I left this job. (.56, .56). My promotional opportunities are excellent here. (.74, .68). I am well compensated for my level of performance. (.62, .59). The benefits are good on this job. (.61, .74). The health-care benefits provided by this organization are excellent. (.58, .67). The retirement benefits provided by this organization are excellent. (.60, .60). The prospects for continuing employment with this company are excellent. (.70, .65). Alpha coefficient for composite (.82, .82).

[a] The factor loadings for the two samples (grocery, hospital) are in parenthesis after the items.

[b] Items 1-3 for links-community and links-organization were standardized before being analyzed or being included in any composites.

TABLE 2
Means, Standard Deviations, and Correlations
Grocery Store Chain[a, b]

		Mean	Sd Dev	1	2	3	4	5	6	7
1.	Voluntary turnover	.10	.30							
2.	Intent to leave	2.32	1.24	.30**						
3.	Job satisfaction (JS)	3.18	.52	-.22**	-.40**					
4.	Organizational commitment(OC)	3.09	.50	-.22**	-.55**	.46**				
5.	Job alternatives	3.47	1.20	.23**	.32**	-.09	-.44**			
6.	Job search behavior	3.31	2.66	.16**	.43**	-.30**	-.41**	.36**		
7.	Job embeddedness (JE)	2.62	.40	-.24**	-.41**	.43**	.44**	-.12	-.24**	
8.	Fit – community	3.98	.62	-.02	-.09	.19**	.07	.08	-.03	.66**
9.	Fit – organization	3.51	.62	-.18**	-.53**	.52**	.58**	-.17**	-.32**	.58**
10.	Links – community	-.04	.85	-.18**	-.12	.04	.08	-.02	-.12	.63**
11.	Links – organization	1.27	.60	-.11	-.14*	.03	.15*	-.11	-.06	.43**
12.	Sacrifice – community	3.78	.69	-.11	-.12	.17**	.14*	-.04	.01	.67**
13.	Sacrifice – organization	3.23	.66	-.22**	-.51**	.65**	.58**	-.20**	-.32**	.78**
14.	JE – community (off the job)	2.67	.44	-.14*	-.14*	.17**	.13*	.02	-.03	.56**
15.	JE – organization (on the job)	2.57	.55	-.24**	-.57**	.60**	.64**	-.22**	-.34**	.74**
16.	JS – Pay	2.90	.89	-.34**	-.29**	.64**	.32**	-.18**	-.26**	.38**
17.	JS – Promotion	2.71	.76	-.11	-.26**	.67**	.30**	-.08	-.19**	.27**
18.	JS – Supervision	3.63	.95	-.06	-.22**	.67**	.26**	.03	-.15*	.22**
19.	JS – Fringe benefits	3.42	.67	-.09	-.26**	.50**	.18**	.02	-.17**	.32**
20.	JS – Contingent rewards	2.80	.88	-.14*	-.24**	.81**	.36**	-.06	-.23**	.32**
21.	JS – Operating conditions	3.12	.66	-.02	-.12	.56**	.22**	-.06	-.14*	-.03
22.	JS – Co-workers	3.55	.67	-.33**	-.35**	.63**	.25**	-.02	-.20**	.43**
23.	JS – Nature of the work	3.64	.76	-.19**	-.48**	.64**	.50**	-.14*	-.30**	.52**
24.	JS – Communication	2.87	.82	-.01	-.17**	.74**	.28**	-.01	-.10	.12
25.	OC – Affective	2.85	.75	-.17*	-.49**	.67**	.76**	-.21**	-.36**	.42**
26.	OC – Continuance	3.27	.81	-.18**	-.28**	-.01	.66**	-.48**	-.16*	.18**
27.	OC – Normative	3.13	.55	-.10	-.41**	.35**	.71**	-.19**	-.38**	.33**

TABLE 2 (continued)
Grocery Store Chain

	8	9	10	11	12	13	14	15	16
1. Voluntary turnover									
2. Intent to leave									
3. Job satisfaction (JS)									
4. Organizational commitment(OC)									
5. Job alternatives									
6. Job search behavior									
7. Job embeddedness (JE)									
8. Fit – community									
9. Fit – organization	.19**								
10. Links – community	.28**	.13*							
11. Links – organization	.08	.08	.22**						
12. Sacrifice – community	.66**	.13*	.26**	.19**					
13. Sacrifice – organization	.15*	.63**	.12	.01	.14*				
14. JE – community (off the job)	.85**	.19**	.47**	.20**	.88**	.16*			
15. JE – organization (on the job)	.20**	.79**	.23**	.49**	.21**	.81**	.26**		
16. JS – Pay	.21**	.23**	.12	.08	.22**	.53**	.22**	.42**	
17. JS – Promotion	-.01	.36**	.01	.10	.05	.48**	.02	.46**	.48**
18. JS – Supervision	.11	.36**	.02	.05	.01	.26**	.07	.32**	.13*
19. JS – Fringe benefits	.18**	.24**	.01	-.01	.19**	.55**	.18**	.37**	.43**
20. JS – Contingent rewards	.13*	.40**	-.01	.06	.13*	.50**	.11	.47**	.51**
21. JS – Operating conditions	-.03	.23**	-.25**	-.25**	-.06	.32**	-.10	.17**	.22**
22. JS – Co-workers	.27**	.41**	.17**	.09	.24**	.37**	.27**	.40**	.31**
23. JS – Nature of the work	.24**	.53**	.24**	.09	.28**	.46**	.27**	.55**	.36**
24. JS – Communication	.02	.34**	-.15*	-.08	-.02	.38**	-.05	.34**	.28**
25. OC – Affective	.07	.61**	.01	.17**	.11	.59**	.11	.68**	.36**
26. OC – Continuance	.01	.19**	.08	.11	.02	.24**	.04	.24**	.11
27. OC – Normative	.09	.45**	.09	-.01	.18**	.40**	.15*	.43**	.22**

TABLE 2 (continued)
Grocery Store Chain

	17	18	19	20	21	22	23	24	25	26
1. Voluntary turnover										
2. Intent to leave										
3. Job satisfaction (JS)										
4. Organizational commitment(OC)										
5. Job alternatives										
6. Job search behavior										
7. Job embeddedness (JE)										
8. Fit – community										
9. Fit – organization										
10. Links – community										
11. Links – organization										
12. Sacrifice – community										
13. Sacrifice – organization										
14. JE – community (off the job)										
15. JE – organization (on the job)										
16. JS – Pay										
17. JS – Promotion										
18. JS – Supervision	.30**									
19. JS – Fringe benefits	.29**	.16*								
20. JS – Contingent rewards	.55**	.57**	.26**							
21. JS – Operating conditions	.26**	.34**	.18**	.37**						
22. JS – Co-workers	.26**	.44**	.27**	.40**	.22**					
23. JS – Nature of the work	.35**	.35**	.25**	.39**	.23**	.48**				
24. JS – Communication	.43**	.52**	.22**	.56**	.53**	.38**	.41**			
25. OC – Affective	.45**	.44**	.31**	.55**	.35**	.36**	.54**	.54**		
26. OC – Continuance	.01	-.05	-.03	-.02	-.08	.02	.11	-.15*	.11	
27. OC – Normative	.19**	.17**	.12	.24**	.24**	.15*	.46**	.25**	.52**	.15*

[a] N=177 for Column 1 (turnover); N ranges from 219-232 for all other variables
[b] Column 1 reports point-biserial correlations; all other columns report product-moment correlations
* P<.05
** P<.01

TABLE 2 (continued)
Means, Standard Deviations, and Correlations
Hospital[c, d]

		Mean	Sd Dev	1	2	3	4	5	6	7
1.	Voluntary turnover	.13	.34							
2.	Intent to leave	2.36	1.29	.45**						
3.	Job satisfaction	3.94	.75	-.26**	-.53**					
4.	Organizational commitment(OC)	3.01	.52	-.11	-.46**	.52**				
5.	Job alternatives	3.97	1.10	.08	.09	-.03	-.34**			
6.	Job search behavior	3.17	2.63	.31**	.50**	-.40**	-.33**	.25**		
7.	Job embeddedness (JE)	2.90	.40	-.25**	-.47**	.57**	.54**	-.07	-.29**	
8.	Fit – community	4.04	.63	-.16**	-.10	.23**	.18**	-.06	-.05	.70**
9.	Fit – organization	3.79	.61	-.18**	-.41**	.72**	.52**	-.02	-.32**	.69**
10.	Links – community	1.32	.86	-.14*	-.20**	.20**	.15*	.09	-.05	.58**
11.	Links – organization	1.52	.61	-.17**	-.12	.10	.28**	-.11	-.20**	.45**
12.	Sacrifice – community	3.62	.68	-.17**	-.15*	.27**	.24**	.02	-.07	.72**
13.	Sacrifice – organization	3.09	.66	-.13*	-.45**	.62**	.67**	-.19**	-.43**	.64**
14.	JE – community (off the job)	2.80	.46	-.20**	-.19**	.30**	.24**	.02	-.07	.84**
15.	JE – organization (on the job)	2.99	.51	-.21**	-.44**	.65**	.67**	-.14*	-.43**	.81**
16.	OC – Affective	3.18	.78	-.18**	-.41**	.69**	.80**	-.12	-.37**	.65**
17.	OC – Continuance	2.93	.73	-.05	-.29**	.07	.64**	-.44**	-.13	.12
18.	OC – Normative	2.93	.63	-.01	-.29**	.37**	.76**	-.17**	-.23**	.39**

TABLE 2 (continued)
Hospital

	8	9	10	11	12	13	14	15	16	17
1. Voluntary turnover										
2. Intent to leave										
3. Job satisfaction										
4. Organizational commitment(OC)										
5. Job alternatives										
6. Job search behavior										
7. Job embeddedness (JE)										
8. Fit – community										
9. Fit – organization	.26**									
10. Links – community	.27**	.25**								
11. Links – organization	.14*	.17**	.25**							
12. Sacrifice – community	.73**	.30**	.32**	.07						
13. Sacrifice – organization	.21**	.64**	.13*	.15*	.27**					
14. JE – community (off the job)	.84**	.35**	.65**	.19**	.87**	.26**				
15. JE – organization (on the job)	.28**	.82**	.28**	.58**	.29**	.82**	.36**			
16. OC – Affective	.26**	.69**	.24**	.30**	.30**	.67**	.34**	.76**		
17. OC – Continuance	.01	.03	-.03	.20**	.02	.27**	-.01	.22**	.18**	
18. OC – Normative	.12	.40**	.12	.11	.20**	.51**	.19**	.47**	.54**	.20**

[c]   N=208 for Column 1 (turnover); N ranges from 221-232 for all other variables
[d]   Column 1 reports point-biserial correlations; all other columns report product-moment correlations
*   P<.05
**   P<.01

TABLE 3

Logistic Regression of Voluntary Turnover onto Gender, Job Satisfaction, Organizational Commitment, Job Alternatives, Job Search and Job Embeddedness among Grocery Workers

Hypotheses

Predictors	(2)			(3)			(4)		
	exp b[a]	Wald	Pseudo R	exp b	Wald	Pseudo R	exp b	Wald	Pseudo R
Gender	.85	.07	.00	1.14	.05	.00	1.10	.02	.00
Job Satisfaction	.45	1.95^+	.00				.23	5.21^{**}	-.19
Organizational Commitment	.44	1.91^+	.08				1.07	.01	.00
Job Alternatives				2.23	4.99^{**}	.18	2.51	5.54^{**}	.20
Job Search				1.00	.00	.00	.94	.25	.00
Job Embeddedness	.28	2.54^*	-.08	.16	5.65^{**}	-.20	.27	2.31^+	-.06
Improvement of Fit x^2 for Job Embeddedness	2.58^*			6.18^{**}			2.37^+		

+ p < .10
* p ≤ .05,
** p ≤ .01, one-tailed tests

a Exp b values <u>above</u> 1.0 indicate a positive effect; values <u>at</u> 1.0 indicate no effect; and values <u>below</u> 1.0 indicate a negative effect.

TABLE 4

Logistic Regression of Voluntary Turnover onto Gender, Job Satisfaction, Organizational Commitment, Job Alternatives, Job Search and Job Embeddedness among Hospital Workers

Hypotheses

Predictors	exp b[a]	(2) Wald	Pseudo R	exp b	(3) Wald	Pseudo R	Exp b	(4) Wald	Pseudo R
Gender	1.43	.42	.00	1.50	.53	.00	1.45	.43	.00
Job Satisfaction	.50	4.55*	-.13				.53	3.15*	-.09
Organizational Commitment	1.99	1.52	.00				3.25	3.28*	.10
Job Alternatives				.97	.01	.00	1.21	.59	.00
Job Search				1.34	10.62***	.25	1.32	8.47**	.22
Job Embeddedness	.19	4.95**	-.14	.22	6.76**	-.18	.18	5.20**	-.16
Improvement of Fit x^2 for Job Embeddedness		5.29**			7.36**			5.67**	

* p ≤ .05
** p ≤ .01
***p ≤ .001, one-tailed tests

b. Exp b values above 1.0 indicate a positive effect; values at 1.0 indicate no effect; and values below 1.0 indicate a negative effect.

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