A Model of Voluntary Turnover for New Hires in State Government

Reese M. Thompson

Lynchburg College

Follow this and additional works at: https://digitalshowcase.lynchburg.edu/utcp

Part of the Labor Economics Commons, and the Other Economics Commons

Recommended Citation
https://digitalshowcase.lynchburg.edu/utcp/67

This Thesis is brought to you for free and open access by Digital Showcase @ Lynchburg College. It has been accepted for inclusion in Undergraduate Theses and Capstone Projects by an authorized administrator of Digital Showcase @ Lynchburg College. For more information, please contact digitalshowcase@lynchburg.edu.
A Model of Voluntary Turnover for New Hires in State Government

Defended by
Reese M. Thompson, III

Reviewed by
Dr. Maria Nathan
Dr. Lee Schimmoeller
Dr. Sally Selden
A Model of Voluntary Turnover for New Hires in State Government

Reese M. Thompson, III
School of Business and Economics
Lynchburg College

Data and Direction Provided by
Dr. Sally Coleman Selden
School of Business and Economics
Lynchburg College

February 26, 2010
Why do new hires have a tendency to voluntarily quit their jobs more than tenured employees? This question has important implications for organizations and human resource managers who have to develop and implement human resource management (HRM) strategies that are designed to recruit and retain the best employees. An underlying theme of turnover research is that voluntary turnover is a negative outcome for an organization. While it has been suggested and established that job tenure affects turnover (Lewis, 1991; Cohen, 1993), very little research has been undertaken regarding the specific factors that drive retention of new hires (Shipp, Payne, & Culbertson, 2009; Slattery, Selvarajan, & Anderson, 2009).

Voluntary employee turnover has been one of the most researched subjects in the field of human resource management. This overwhelming interest is derived from recognizing that voluntary turnover can be very costly, and that understanding and managing it better can provide considerable individual and organizational benefits (Maertz, Griffeth, Campbell, & Allen, 2007). In fact, retaining talent is now becoming more critical in a world where the organization’s human capabilities are increasingly the key source of competitive advantage (Pfeffer, 2005). Also, historical changes like the massive retirement of baby boomers (leading to a dearth of qualified workers for some key jobs) and the erosion of societal norms favoring organizational loyalty promise difficult challenges for turnover management (Cappelli, 2005; Ito & Brotheridge, 2005). Thus, better understanding turnover causes and how to control them will likely remain a primary concern into the future.

There has been a great amount of research into turnover in the private sector of the workforce. However, much less research has been undertaken by scholars on turnover in the public sector. Most studies concerning turnover in the public sector have focused on the federal
level of government (e.g., Lewis, 1991; Kellough & Osuna, 1995; Bertelli, 2007), while a limited number of studies focused on state governments (Selden & Moynihan, 2000; Kim, 2005).

The first goal of this paper is to examine the concept of turnover in order to develop a better understanding of the factors that drive the retention of new employees. Second, taking inspiration from previous studies on turnover, we propose a model of voluntary turnover focusing on newly hired employees in state governments. Third, the model will be tested using data collected from the Government Performance Project (GPP) and other sources. At the end, we discuss the results and implications of this research.

**Voluntary Turnover**

Many studies focusing on employee turnover have indicated that lower turnover is an important factor in organizational effectiveness (Park, Ofori-Dankwa, & Bishop, 1994; Vandenberg, Richardson, & Eastman, 1999; Mitchell, Holtom, & Lee, 2001; Maertz, Griffeth, Campbell, & Allen, 2007; Trevor & Nyberg, 2008; Hausknecht, Rodda, & Howard, 2009). At the organizational level, turnover is responsible for many costs. Employees who quit their jobs often take with them important knowledge and expertise gleaned through experience. Organizations may be at risk because of the close relationships that some of the departing employees have established with clients. In addition to these indirect costs, organizations face many costs directly related to turnover, including costs associated with lost productivity and any additional wages needed to employ temporary workers or to pay for overtime to cover vacant positions (Mitchell, Holtom, and Lee, 2001). Replacement costs include advertising, recruiting of candidates, interviewing, and selection. Finally, costs associated with orientation and training add to the overall burden that organizations encounter when employees that it wants to retain
quit. Recent research indicates that it costs 1/3 of a new hire's annual wages to replace him or her (Harper, 2007), which is lower than the results reported in an earlier study that found replacement costs to be about 50 to 60 percent of a person's annual salary (Mitchell, Holtom, and Lee, 2001).

Employee retention can be defined as the effort by an employer to keep desirable workers to meet business objectives. Turnover, on the other hand, is most often used to describe the loss of workers who leave and whom employers would prefer to keep. In statistical terms, measuring employee turnover is relatively straightforward and is tracked by most organizations (Frank, Finnegan, & Taylor, 2004). Most researchers have distinguished two main types of turnover: voluntary (quits or resignations) or involuntary (deaths, layoffs, retirements, and terminations), which are combined to comprise total turnover (Shaw, Delery, Jenkins, & Gupta, 1998). The main difference between the two types of turnover is that involuntary turnover is initiated by the employer rather than the employee (Price, 1977).

We have decided to concentrate on researching voluntary turnover rates in state governments for a number of reasons. First, the vast majority of turnover studies have concentrated on voluntary turnover, while terminations have been discussed only briefly in the literatures (Shaw, Delery, Jenkins, & Gupta, 1998). Second, most organizations experience much more voluntary turnover than involuntary. Third, it is easier to develop and support models of turnover theory if the two types are kept separate, because the underlying factors that cause these different types of employee exits are likely to be completely different. Fourth, human resource managers have more opportunities to control voluntary turnover. Employee deaths and retirements are normally uncontrollable and unavoidable (Price, 1977). To reduce the loss of talented and valuable human capital, organizations must have a thorough understanding
of the reasons that drive voluntary turnover. In this case, an organization and its managers will have a better understanding as to what resources and plans of action could be used to prevent valued and desired employees from quitting their jobs (Selden & Moynihan, 2000).

**Different Strategies to Study Voluntary Turnover in State Governments**

A review of the literature reveals an extensive amount of empirical literature devoted to turnover in the private sector. However, scholars have undertaken very little research concerning turnover in the public sector by comparison. Most of those studies have focused on turnover in the federal government (e.g., Lewis, 1991; Ito, 2003; Bertelli, 2007), with research rarely concentrating on turnover at the state government level (e.g., Mowday, 1981; Kim, 1999). Kim (1999), for example, examined turnover behavior in California's Civil Service to determine whether higher wage rates will pay for themselves through lower turnover costs. The most common approach to examining turnover in the public sector appears to be studying the factors and effects related to voluntary turnover over a specific time period, as exemplified by Lewis’ 1991 study, which investigated retention and turnover patterns of federal civil service employees with data from thousands of personnel files over a 12-year period.

To develop our model, we selected possible correlates of voluntary turnover for newly hired state employees. Most studies have indicated that the factors associated with voluntary turnover can usually be classified into three broad categories: individual, organizational, and environmental (Mobley, Griffeth, Hand, & Meglino, 1979; Cotton & Tuttle, 1986; Selden & Moynihan, 2000). For instance, Cotton and Tuttle (1986) have suggested that the unemployment rate and the presence of unions are examples of environmental factors, which refer to variables that are external to the organization. For organizational-related turnover correlates, we found studies that linked pay, job performance, job satisfaction, opportunities for promotion, and
organizational commitment as important determinants of turnover. Individual factors are the 
"personal characteristics of the employees" (Cotton & Tuttle, 1986, p. 57) that have been 
hypothesized as having a direct impact on turnover. Common individual variables that have 
been studied in the past have been an employee's age, tenure, gender, and education level 
(Mobley, Griffeth, Hand, & Meglino, 1979; Cotton & Tuttle, 1986; Cohen, 1993).

In addition to the environmental, individual, and organizational factors, our turnover 
model will include the impact of human resource management practices and policies. Many 
scholars have suggested that HRM policies can be designed and implemented to reduce quit 
rates. Research has indicated that investments in the human capital of an organization, such as 
pay, benefits, and training, can reduce voluntary turnover. Research suggests that HRM 
practices are important for turnover implications because they can strongly influence employees' 
assessment of their current job (Mobley, 1977; Shaw, Delery, Jenkins & Gupta, 1998; Selden & 
Moynihan, 2000). Discussing the importance of an organization's policies on the employee-
organization relationship, Tsui et al. (1997) stated, "Where the exchange is less favorable to the 
employee than to the employer, the employee is most likely to leave the firm as soon as 
alternative employment options are available." Our model is designed to assist HR managers in 
state government agencies to determine what policies and practices are negatively related to 
voluntary turnover, so measures can be put in place to help retain employees who are new to the 
organization. Figure 1 details the framework for this study.

**Determinants of Turnover for New Hires at the State Level**

Since we will be analyzing organizational-level data from state governments, we will not be incorporating individual-level factors into our turnover model, even though such variables as
job satisfaction, intentions to remain on the job, and organizational commitment have been found to be negatively related to voluntary turnover on a consistent basis (Cotton & Tuttle, 1986; Lewis, 1991). This section develops a detailed list of organizational-level hypotheses concentrating on reducing voluntary turnover rates for new hires.

Environmental Factors

Environmental factors that drive voluntary turnover decisions are usually based on current economic conditions and variables that are external to the organization. March and Simon perhaps best described the relationship between the economy and turnover in their classic work, Organizations. "Under nearly all conditions," according to March and Simon (1958, p. 100), "the most accurate single predictor of labor turnover is the state of the economy." Many scholars have featured this classic quote and numerous studies have found evidence to support the assertion (Price, 1977; Cotton & Tuttle, 1986; Selden & Moynihan, 2000).

State Unemployment

Price (1977) suggested that higher levels of unemployment usually lead to lower turnover rates. When unemployment increases, fewer employees choose to voluntarily leave their jobs due to the increased competition for the remaining jobs in the resulting weak labor market (Park, Ofori-Dankwa, & Bishop, 1994; Selden & Moynihan, 2000). Many other researchers have confirmed this relationship (Mobley, Griffeth, Hand, & Meglino, 1979; Cotton & Tuttle, 1986). Therefore, we propose the following:

Hypothesis 1: States with higher rates of unemployment will have lower rates of voluntary turnover for new hires.
Individual Factors

Age

There is a new hire revolving door for most employees in their early twenties as they tend to move quickly between jobs. Today’s new hires are leaving employers too soon after joining the organization, which represents substantial corporate investments in recruiting and training that are never realized. Nearly half of U.S. employees from 20-24 years of age have been with their employer for a year or less according to the 2006 numbers from the Bureau of Labor Statistics. That figure looks fantastic compared to the 10 percent who stay for a whole two years. Combine those figures with the Millennial’s (people born after 1980) often documented need for constant attention and instant information, and organizations will be facing more difficulties retaining new employees than ever before (Testa, 2008).

Many studies have suggested that older employees and longer tenured employees quit their jobs less often than their counterparts (Cotton & Tuttle, 1986; Lewis, 1991). These individual characteristics demonstrate how economic imperatives and familial constraints reinforce the desire for the status quo. Older employees who have the responsibility of being a household’s primary income earner will be less likely to exit a stable job like those found in state civil service agencies and face the risks inherently connected with searching for a new job (Moynihan & Landuyt, 2008). Therefore, we propose the following:

Hypothesis 2: States that have older new hires on average will have lower voluntary turnover rates.
Organizational Factors

The work environment reflects how organizational rules and culture interact with individual employee perspectives. An important aspect of the work environment is the amount of control that employees perceive they have in the workplace. Some turnover research has suggested that employees who believe that they have a greater sense of control over their jobs will be less likely to quit (Gill, 2009). This concept is especially important for new hires, as they generally are in positions with little control or power when they begin their employment. Individual control is linked to turnover with the concept of empowering employees who are able to join and participate in unions.

Unionization

Previous research has suggested that the presence of a union in an organization is negatively related to voluntary turnover (Cotton & Tuttle, 1986; Park, Ofori-Dankwa, & Bishop, 1994; Selden & Moynihan, 2000; Gill, 2009). There are many reasons why the presence of a union is likely to lower employee turnover for new hires. A union often provides a collective voice—a mode for employees to express discontent without quitting. In fact, Gill (2009, p. 44) believes that the “collective voice of unionism leads to lower probabilities of quitting, longer tenure, and a lower lay-off rate which reduces the costs of training and recruitment and increases productivity.” Organizations are able to receive more accurate information from the union concerning issues such as employee working conditions and desires for better wages and benefits. Employees may be less likely to seek a new job if their union has been successful in pressuring the organization to meet their demands. Perhaps most importantly, the presence of unions gives employees additional incentives to stay in their current position because they would
be facing a loss of all of the benefits and privileges that come with seniority (Park, Ofori-Dankwa, & Bishop, 1994; Selden & Moynihan, 2000).

**Hypothesis 3:** States with a higher percentage of unionized new hires will have less voluntary turnover.

**HRM Factors**

Many scholars have asserted that HRM policies and programs can and should be designed to lower turnover (Mobley, 1977; Shaw, Delery, Jenkins, & Gupta, 1998; Selden & Moynihan, 2000). A number of specific HRM policies have been suggested to reduce voluntary employee turnover. For our model of turnover, we will test the role and significance of pay, benefits, information sharing, training programs, signing bonuses, recruitment programs, and timely performance evaluations.

**Salary**

A number of studies have indicated that employees who receive better pay are less likely to quit (Cotton & Tuttle, 1986; Park, Ofori-Dankwa, & Bishop, 1994). Organizations offering higher pay should be able to increase retention because the employee’s self-interest is maximized through staying, while providing organizational-level benefits with the attraction and retention of a superior workforce (Shaw, Delery, Jenkins & Gupta, 1998). Public sector research supports this assertion based on comparisons of state pay differentials (Selden & Moynihan, 2000) and actual measures of different pay grades (Lewis, 1991). Therefore, we argue that state governments that offer higher pay rates, adjusted for cost of living, will likely be more successful in retaining new employees.
Hypothesis 4: States with higher average employee salaries will have lower quit rates for new hires.

Benefits

Research indicates that benefits\(^1\) (such as health insurance, retirement plans, wellness programs, flextime, on-site child care center, etc.) are another form of compensation that should negatively affect turnover (Powell, Montgomery, & Cosgrove, 1994; Trevor & Nyberg, 2008; Hausknecht, Rodda, & Howard, 2009). Shaw et al. (1994, p. 512) argue that “investment in a good benefits package should achieve the same ends as does high pay—that is, it should reduce voluntary turnover.” Organizations that provide family-friendly benefits to its employees are likely to increase retention since such benefits enable employees to better balance the demands of work and family life (Ezra & Deckman, 1996; Selden & Moynihan, 2000; Mitchell, Holtom, Lee, Sablynski, & Erez, 2001; Trevor & Nyberg, 2008).

Hypothesis 5: States that offer new hires more benefits will have lower voluntary turnover.

Recruiting Methods

The importance of effective recruiting methods in helping to reduce turnover has been studied by previous researchers (Breaugh & Mann, 1984; Schulz, Camp, & Waltman, 2008; Barrick & Zimmerman, 2009; Weller, Holtom, Matiaske, & Mellewigt, 2009). Cappelli (2005, p. 148) believes that “employers must invest in programs that help them target appropriate recruits and identify where their recruiting investments are most effective.” Effective recruiting gives HR managers a larger pool of applicants that could be considered a “right fit” for the organization. Mitchell, Holtom, & Lee (2001, p. 103) define fit “as an employee’s perceived compatibility with job, organization, and community.” Therefore, recruiting and hiring for organizational fit should increase employee compatibility with the values and culture of an
organization, which leads to lower turnover (Mitchell, Holtom, & Lee, 2001; Trevor & Nyberg, 2008).

Many scholars have focused their turnover research on such recruiting sources as employee referrals and newspaper advertisements (Breaugh & Mann, 1984; Weller, Holtom, Matiaske, & Mellewigt, 2009). In fact, Braugh & Mann (1984) found employee referrals to be the most effective recruiting source at reducing turnover, while newspaper ads were among the worst sources. Monetary incentives, such as signing bonuses, have been neglected by most recruiting and turnover studies. However, Schulz, Camp, & Waltman (2008) found that monetary incentive recruitment practices mitigate annual turnover in a study that featured data on information technology (IT) workers from 650 firms. It is possible that the potential loss of a signing bonus may motivate employees to work productively to keep these jobs in order to earn the additional compensation.

**Hypothesis 7a:** State governments with a higher percentage of employees who were eligible for a signing bonus when hired will have lower voluntary turnover.

Few scholars have researched the relationship between turnover and college recruitment programs (Schulz, Camp, & Waltman, 2008). Many young people will take the first job available to them and often quit because they did not really know what to expect in their new position. We believe that centralized college recruitment programs, where a state government employs HR specialists who recruit, hire, and assign new employees to the state agency where they will best fit and have a greater chance at a long and productive career, are more effective at reducing turnover. A centralized college recruitment program will be beneficial because the
young students hired out of college will know for sure that they want a career working in state government.

**Hypothesis 7b:** States that feature a centralized college recruitment program will have lower voluntary turnover.

**Training Programs**

Many studies have investigated the relationship between turnover and employee development programs, which include training and career development practices (e.g., a career resource center, cross-training, coaching/mentoring programs, job rotations, education opportunities) designed to positively influence organizational socialization, and ultimately improve employee attitudes and organizational performance (Selden & Moynihan, 2000; Mitchell, Holton, and Lee, 2001; Jacobs & Washington, 2003; Trevor & Nyberg, 2008; Ng & Butts, 2009; Slattery, Selvarajan, and Anderson 2009). New employee training programs have been found to have strong relationships with job satisfaction and organizational commitment (Holton, 2001), which have been indicated to be important predictors of turnover (Cotton & Tuttle, 1986). Many scholars have hypothesized that higher levels of training designed to enhance an individual's career development will be negatively related to voluntary turnover at the organizational level (Shaw, Delery, Jenkins, & Gupta, 1998; Selden & Moynihan, 2000; Ng & Butts, 2009).

Our literature review provided conflicting results relating new employee development programs to lower turnover rates: some researchers found training to be significantly related to increasing involuntary turnover (Shaw, Delery, Jenkins, & Gupta, 1998), while others indicated that training was not significantly related to reducing voluntary turnover (Shaw, Delery, Jenkins, & Gupta, 1998; Moynihan & Landuyt, 2009). Some studies report organizations that offer more
employee training and development programs will have lower quit rates (Curry, McCarragher, & Dellmann-Jenkins, 2005), while others have noted a positive relationship with voluntary turnover (Selden & Moynihan, 2000; Ito, 2003). These conflicting results might be explained by a curvilinear theory, noting a u-shaped relationship between the amount of spending on training per employee and voluntary turnover. When employees begin employee training programs, they are likely to develop an appreciation for the internal opportunities associated with expanding their knowledge, skills, and abilities (KSA). Therefore, individuals should exhibit loyalty to the organization soon after beginning such programs. However, organizations that offer higher levels of training and development may lose their investments as employees will be more likely to quit their positions because they are likely to be more marketable to outside organizations with their newly enhanced KSA. In spite of the conflicting results from previous research, our turnover model includes employee training opportunities.

Hypothesis 8: States should expect a curvilinear (u-shaped) relationship between spending on training per employee and voluntary turnover for new hires.

Information Sharing

Another HRM factor that we include in our model is information sharing. A number of studies have focused on the relationship between information sharing and turnover. Information sharing refers to the extent to which organizations provide organization-level information to their employees, including information concerning government regulations, individual and group successes, changes to policies and procedures, training and development opportunities, customer feedback, and financial results. Organizations that provide employees with access to information have lower turnover according to the results in several studies (Price, 1977; Mobley, Griffeth, Hand, & Meglino, 1979; Vandenberg, Richardson, & Eastman, 1999; Ng & Butts, 2009).
Information sharing may be useful in increasing new employees’ perceptions of organizational membership, which should lead to lower quit rates. The ability for a new employee to easily access important information from the organization should also lead to increased performance (Ng & Butts, 2009). Important information can be distributed to employees through numerous channels, including group meetings, annual reports, company websites, memos, and emails. We believe that a website and intranet dedicated to providing important HRM-related information to employees will be more effective than the other distribution avenues.

**Hypothesis 9:** States that share information with their employees through a dedicated HRMIT web portal will have lower quit rates.

**Performance Evaluations**

The final HRM factor that we include in our model is the effect of annual performance evaluations. Performance evaluations are methods that organizations can use to record and evaluate the value added to the organization by each individual employee. They allow organizations to gain better access to information about employees including behaviors and performance. Administered on a regular basis, they can help reinforce organizational membership, which is particularly important for new employees. Performance evaluations give an organization and its managers an opportunity to demonstrate care and support by using positive feedback to emphasize an employee’s strengths and by suggesting ways to improve any weaknesses through training and development programs. When employees perceive that they are supported and cared for, they will be more likely to stay with the organization as a form of reciprocation, thereby leading to lower voluntary turnover (Ng & Butts, 2009).

**Hypothesis 10:** States with a higher percentage of new hires receiving a performance evaluation within the first twelve months of employment will have lower voluntary turnover.
Data and Methods

The model and numerous hypotheses are tested using data from the following sources: the 2006 Government Performance Project and the Book of States. 42 of the 50 states answered the survey, which corresponds to an 84% response rate.

We created an index of benefits to represent a state government's commitment to providing employees with better benefits. We used 29 measures to create a theoretically driven additive index of employee benefits. Previous research has used additive indexes in which higher scores meant greater investment in making more benefits available to more employees (Delery, 1998; Batt, 2002). Such indexes are the preferred method for creating a single measure from a series of underlying dimensions (Shaw, Gupta, & Delery, 2005; Trevor & Nyberg, 2008). To compute our index of benefits, we asked the following question, “Which of the following benefits are offered for Executive Branch employees (excluding higher education)?” The individual benefits were tallied using the following scale: 1 - no employees; 2 - some employees (5-49%); 3 - most employees (50-99%); 4 - all Executive Branch employees. We summed the benefits and subtracted 28, which created an index with a possible scale of 1 to 88. The actual range is 24-77. Thus, our index of benefits reveals the presence and coverage of benefits available to state government employees. See Appendix 1 for more information regarding the index of benefits.

The model is tested using ordinary least squares (OLS) regression, estimating the effects of each independent variable on voluntary turnover for new hires while holding all other independent variables constant. Specifically, we measure voluntary turnover as the proportion of employees leaving voluntarily in the first twelve months of employment. Table 1 describes how
the dependent and independent variables are operationalized, and lists means and standard deviations for each.

**Findings and Discussion**

Table 2 reports the results of the OLS regression equation predicting voluntary turnover rates for new hires in state governments. The independent variables together explain 64 percent of the variation in levels of voluntary turnover for the different states. The equation is found to be statistically significant at the .05 level. The results of the analysis are mainly as expected. However, the average age of new hires and unionization are the two primary exceptions; with both showing an insignificant, positive effect on new hire quit rates.

We find support for our hypothesis that states with higher unemployment rates have lower new hire quit rates. The results suggest that a negative and statistically significant relationship exists between unemployment and voluntary turnover. Indeed, our analysis indicates that a 1 percent increase in a state’s unemployment rate results in a 1.07 percentage point decrease in new hire quit rates. This result supports previous research that studied the effect unemployment rates have on turnover (Price, 1977; Cotton & Tuttle, 1986; Park, Ofori-Dankwa, & Bishop, 1994). It just makes sense that new employees would be less willing to quit their jobs when the economy is underperforming and unemployment rates are high.

Our analysis does not find support for our hypothesis that the presence of unions, measured by the percentage of employees covered by collective bargaining agreements, improves the retention of newly hired employees. We find the relationship between unionization and voluntary turnover for new hires is not statistically significant. The most sensible explanation is that a clear unidirectional relationship does not exist between the effects of unionization and employee turnover. Unionization has long been associated with allowing
employees to gain higher wages. However, since we find that pay has a very weak negative effect on turnover, we must find other reasons why unionization appears to have no significant effect on quit rates. Our analysis suggests that unionization empowers employees to develop a stronger voice in order to demand better benefits and training programs because they are now formally involved in developing and choosing certain workplace policies. We believe that the training programs' positive relationship with new hire quit rates counteracts the negative relationship associated with greater benefits.

Contrary to our hypothesis, we not find that states with older new hires on average had lower quit rates. However, this relationship between age and turnover is not statistically significant. Consequently, our results do not confirm the findings from previous studies in the public sector (Lewis, 1991) and private sector (Cotton & Tuttle, 1986). We believe this is because new hires are younger on average than state employees in general and should be less likely to have familial obligations and financial responsibilities that come with being the head of a household. Therefore, they are more likely to leave behind the security of their state civil service jobs and face the risks associated with starting over in a different organization.

We find support for six out of the eight independent HRM variables included in our turnover model. Our analysis provides mixed results for our two recruiting variables. Contrary to our expectations, we find signing bonuses for eligible new hires are positively related to voluntary turnover, although it is not statistically significant. We reason that signing bonuses may attract the type of person already monetarily driven and always looking for more money. Therefore, these individuals might quit their jobs if they found better money elsewhere (Schulz, Camp, & Waltman, 2008). On the other hand, we find centralized college recruitment programs have a significant relationship to new hire quit rates. The coefficient is negative, as expected,
statistically significant at the .05 level. The presence of a centralized college recruitment program is associated with a 1.60 percentage point decrease in voluntary turnover. States with a centralized college recruitment program are better able to retain new employees because they are more likely to have a better fit in their new job (Mitchell, Holtom, & Lee, 2001; Trevor & Nyberg, 2008).

We find a negative and statistically significant relationship between information sharing and new hire quit rates, as predicted. Like previous studies linking information sharing with lower quit rates (Price, 1977; Mobley, Griffeth, Hand, & Meglino, 1979; Vandenberg, Richardson, & Eastman, 1999; Ng & Butts, 2009), we find that states featuring a dedicated HRMIT web portal, which allows employees direct access to important organizational-level information, experience lower turnover. The existence of an HRMIT web portal is associated with a 2.30 percentage point decrease in voluntary turnover. When new employees can easily access important information from the organization they are likely to have increased perceptions of organizational membership, which leads to lower quit rates (Ng & Butts, 2009).

We measured the effect training programs have on voluntary turnover by testing for the average amount a state spent on training per employee. Since we hypothesized a possible curvilinear relationship between training and voluntary turnover, we also test for the U-shaped relationship by squaring the total amount a state spent on training per employee. Like previous studies (Shaw, Delery, Jenkins, & Gupta, 1998; Selden & Moynihan, 2000; Ito, 2003; Curry, McCarragher, & Dellmann-Jenkins, 2005; Moynihan & Landuyt, 2009), we find mixed results concerning the effects of training on quit rates. The coefficient for the average amount spent on training per employee is positive and statistically significant at the .05 level. We find a weak negative and statistically significant relationship between training and voluntary turnover when
testing for the curvilinear effect. The most probable explanation for the positive relationship between training and quit rates is that states which spend more on training and development programs may lose their investments as employees will be more likely to quit their positions since they are likely to be more marketable to outside organizations with their newly expanded knowledge, skills, and abilities. The positive relationship between the amount spent on training per employee and new hire quit rates likely moderates the curvilinear coefficient.

We find that average salary is negatively related to new hire quit rates, statistically significant at the .05 level. The results show that states that pay their employees more on average have lower turnover rates for new employees. The negative relationship is consistent with previous research on turnover in the private sector (Park, Ofori-Dankwa, & Bishop, 1994; Shaw, Delery, Jenkins, & Gupta, 1998) and the public sector (Kim, 1999). State governments offering higher pay are able to lower voluntary turnover because the employee’s self-interest is maximizes through staying.

We find support for our hypothesis that states with a higher percentage of new hires receiving a performance evaluation within the first 12 months of employment will have less voluntary turnover. The coefficient for performance evaluations is negative and marginally significant at the .10 level. When performance evaluations are given to new hires during their first year of employment state governments can help reinforce organizational membership if management is able to offer positive feedback during the evaluation process. When new employees perceive that they are supported and cared for, they will be more likely to stay with the organization as a form of reciprocation, thereby leading to lower voluntary turnover (Ng & Butts, 2009).
The final HRM variable to show a significant relationship to new hire quit rates is the index of benefits offered to employees. The coefficient is negative, as expected; however, it is only marginally significant at the .10 level. States that offer their employees better benefit packages are better able to retain new hires. This finding is consistent with previous research linking better benefits with lower turnover in the private sector (Powell, Montgomery, & Cosgrove, 1994; Trevor & Nyberg, 2008; Hausknecht, Rodda, & Howard, 2009). As mentioned earlier, states that provide family-friendly benefits to its employees are likely to increase retention since such benefits enable employees to better balance the demands of work and family life (Ezra & Deckman, 1996; Selden & Moynihan, 2000; Mitchell, Holtom, Lee, Sablynski, & Erez, 2001; Trevor & Nyberg, 2008).

Conclusion

This paper identified a model of voluntary turnover for new hires based on previous research, and tested this model using data from 42 out of the 50 states. Our focus was on environmental, individual, organizational, and human resource management factors, and the results provide information on whether previous claims about turnover apply to state employees within the first twelve months of employment. Since we tested for nearly all of the state governments and found most of the variables had predictable results, we suggest that the factors that lower turnover for new hires in state governments can be applied to other situations.

One area where our results differ from much of the previous research is in the relationship between age and turnover. An important finding is that older new hires are more likely to voluntarily quit their jobs. The counterintuitive nature of this result suggests that the field has a weak understanding of the factors that drive retention for the Millennial generation.
As with any finding that challenges previous research, we suggest that the relationship between the age of new hires and voluntary turnover demands more research.

HR managers have little control over some of the factors that are important in predicting voluntary turnover. Organizational, individual, and environmental factors, especially the unemployment rate, are clearly important. However, there is nothing HR managers can do to control these variables. Of course, HR managers have the most control over HRM policies. These state government results provide practical direction for state governments with respect to HRM practices. HR managers can focus their attention and resources on the HRM policies and practices that our results suggest will lower voluntary turnover for new hires. For instance, since our results indicate that the presence of an information sharing HRMIT web portal is associated with a 2.30 percentage point reduction in voluntary turnover, it would make sense that all state governments implement a dedicated web portal that allows new hires access to important organizational-level information.

Further, as state governments continue to struggle with turnover, compensation will continue to remain an essential tool for retaining new hires. Our study indicates that both greater salary and benefits are significantly related to lower quit rates. Therefore, state HR managers can offer pay increases and/or a better benefit package to increase retention. A performance evaluation is a cost-effective HRM practice that reinforces organizational membership and reduces voluntary turnover for new hires. We believe that organizations should monitor all aspects of performance. State governments can become more effective and increase overall performance by monitoring the performance of all of its new hires and by giving them a performance evaluation within the first twelve months of employment.
Perhaps the most important finding of this study, in terms of contribution to research and practice, is the impact of the centralized college recruitment program variable. Our research indicates that utilizing a centralized college recruitment program has a substantial impact on the percentage of new hires that quit their state government jobs voluntarily. Previous turnover research has done little to examine the impact of centralized college recruitment programs. However, this new factor should be included in the future study of voluntary turnover in both the public and private sector. While many other studies have considered other recruiting methods such as employee referrals and newspaper advertisements (see for example, Breaugh & Mann, 1984) this research suggests that a centralized college recruitment program has a large and positive influence on retention for new employees. In terms of practice, the impact of implementing a centralized college recruitment program provides a clear suggestion to employers. For state governments that are having difficulties retaining employees, implementing a centralized college recruitment program may provide a manageable and effective solution.

While this study adds to our understanding of new hires quit rates for state government employees, additional research is needed to explore other forces influencing voluntary turnover for new employees in the public sector. At a minimum, researchers should further investigate the impact of training on the retention of new hires. Since this article examines turnover at an organizational or macro level, perhaps future studies should explore the dynamics and patterns of voluntary turnover in the public sector from the perspective of the individual newly-hired employee. The possibility of increasing the retention of new hires through the implementation of certain HRM policies provides considerable incentive for such efforts.
### Table 1: Means and Standard Deviations of Dependent and Independent Variables

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voluntary Turnover: Percentage of employees leaving within the first twelve months of employment (Number of classified employees who left/Total number of classified employees)(^A)</td>
<td>5.04</td>
<td>3.54</td>
<td>.89</td>
<td>15.97</td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment Rate 2006</td>
<td>4.38</td>
<td>.99</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Average age of new hires</td>
<td>37.09</td>
<td>3.38</td>
<td>30.00</td>
<td>50.00</td>
</tr>
<tr>
<td>Labor - percent unionized EB</td>
<td>41.07</td>
<td>39.38</td>
<td>.00</td>
<td>95.35</td>
</tr>
<tr>
<td>Employs a centralized college recruitment program</td>
<td>.44</td>
<td>.50</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Percent of employees who were eligible for a signing bonus when hired</td>
<td>13.10</td>
<td>32.88</td>
<td>.00</td>
<td>100</td>
</tr>
<tr>
<td>Average salary of state employs (adjusted for cost of living)</td>
<td>$41,423.81</td>
<td>7,145.47</td>
<td>31,554.89</td>
<td>67,518.22</td>
</tr>
<tr>
<td>Index of benefits offered to employees(^B)</td>
<td>52.76</td>
<td>12.50</td>
<td>24.00</td>
<td>77.00</td>
</tr>
<tr>
<td>Average amount state spent on training per employee</td>
<td>$431.29</td>
<td>295.66</td>
<td>17.80</td>
<td>1365.12</td>
</tr>
<tr>
<td>Average amount state spent on training per employee squared</td>
<td>$296,811.18</td>
<td>3.58(^E5)</td>
<td>316.88</td>
<td>1,863,551.48</td>
</tr>
<tr>
<td>Information sharing HRMIT web portal</td>
<td>.82</td>
<td>.40</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Percent of new hires receiving a performance evaluation within the first 12 months of employment</td>
<td>80.69</td>
<td>25.14</td>
<td>15.15</td>
<td>100.00</td>
</tr>
</tbody>
</table>

\(^A\) Since Georgia has terminated its classified service and no longer hires employees in the classified service, the study uses turnover of nonclassified employees during the first year for Georgia.

\(^B\) The higher the number the more benefits offered to more employees.
Table 2: Predicting 2006 Voluntary Turnover for New Hires in State Government

<table>
<thead>
<tr>
<th>Factor</th>
<th>Unstandardized Coefficient</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>13.81***</td>
<td>6.73</td>
</tr>
<tr>
<td><strong>Environmental Factor</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment Rate 2006</td>
<td>-1.07***</td>
<td>.45</td>
</tr>
<tr>
<td><strong>Individual Factor</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average age of new hires</td>
<td>.17</td>
<td>.15</td>
</tr>
<tr>
<td><strong>Organizational Factor</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor - percent unionized EB</td>
<td>.00</td>
<td>.01</td>
</tr>
<tr>
<td><strong>Human Resource Management Factors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employs a centralized college recruitment program</td>
<td>-1.60**</td>
<td>.89</td>
</tr>
<tr>
<td>Percent of employees who were eligible for a signing bonus when hired</td>
<td>.02</td>
<td>.02</td>
</tr>
<tr>
<td>Average salary of state employees (adjusted for cost of living)</td>
<td>-.00**</td>
<td>.00</td>
</tr>
<tr>
<td>Index of benefits offered to employees</td>
<td>-.07*</td>
<td>.04</td>
</tr>
<tr>
<td>Average amount state spent on training per employee</td>
<td>.02**</td>
<td>.00</td>
</tr>
<tr>
<td>Average amount state spent on training per employee * Average amount state spent on training per employee</td>
<td>-.00**</td>
<td>.00</td>
</tr>
<tr>
<td>Information sharing HRMIT web portal</td>
<td>-2.30**</td>
<td>1.12</td>
</tr>
<tr>
<td>Percent of new hires receiving a performance evaluation within the first 12 months of employment</td>
<td>-.03*</td>
<td>.02</td>
</tr>
</tbody>
</table>

$R^2=.64$; Adjusted $R^2=.41$; $F$ value=2.8**

* Significant at .10; ** Significant at .05; *** Significant at .01
Figure 1: Model of Voluntary Turnover for New Hires in State Government

*Individual factors*
- Age

*Environmental factors*
- State Unemployment

*Organizational factors*
- Unionization

*HRM factors*
- Centralized College Recruitment Program
- Signing Bonus When Hired
- Pay
- Benefits
- Training
- Information Sharing HRMIT Web Portal
- Performance Evaluations

Voluntary Turnover for New Hires in State Government
Appendix 1: Index of Benefits

Which of the following benefits are offered for Executive Branch employees (excluding higher education)?

Scale: 1 - No employees; 2 - Some employees (5-49%); 3 - Most employees (50-99%); 4 - All Executive Branch Employees

- Pre-tax dependent care account
- Before/after school care
- Subsidy of child care
- On-site child care center
- Domestic partner benefits (opposite sex partners)
- Domestic partner benefits (same sex partners)
- Family leave above required by FMLA
- Paid family leave
- Health insurance
- Dental insurance
- Vision insurance
- Life insurance
- Prescription drug program coverage
- Long-term care insurance
- Employee Assistance Program
- Medical flexible spending accounts (IRC Section 125, for all expenses)
- Full flexible benefits plan (formerly Complete Cafeteria plan)
- Retiree health care benefits
- Defined benefit retirement plan
- Defined contribution retirement plan
- On-site fitness center or membership subsidy/reimbursement
- Wellness program/resources and information
- Flextime
- Job sharing
- Leave sharing
- Compressed work weeks
- Telecommuting
- Tuition assistance
- Other work/life benefits

We summed the above benefits and subtracted 28, which created an index with a possible scale of 1 to 88. The actual range is 24-77.

NOTE: The higher the number the more benefits offered to more employees. We could add 28 and divide by 29 to get the average on the original scale.
References


Notes

\(^{1}\) We use an index assessing the amount of benefits available to state government employees taken from the 2006 Government Performance Project.