


Article

Turnover Intentions and Work Motivations of Millennial Employees in Federal Service

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Abstract

In the face of looming retirements in the federal service, retaining and motivating the next generation of workers has emerged as a critical concern for human resource professionals in federal agencies. While a growing body of work provides advice and strategies on making government work more inviting for the members of the Millennial generation, those born after 1982, not much is known about the turnover intentions of those already in public service. Do Millennial workers in the federal agencies resemble older workers in terms of their work motivations and turnover intentions? This study compares Millennial and older generation workers in U.S. federal agencies, in terms of their turnover intentions and work motivations. The analyses show that they are more likely than their older counterparts to report an intention to leave their jobs, and most work attributes do not matter more for Millennial workers' decisions to leave.

Keywords

turnover, age, Millennials, public service motivation (PSM), government employees

Generational transformations are one of the significant changes that will shape public service in the near future (Perry & Buckwalter, 2010; Svava, 2010). It has been estimated that the federal government will need to hire more than 200,000 individuals to replace the aging and retiring workforce (Government Business Council [GBC], 2012). How the next generation of federal workers is to be attracted has emerged as a

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critical concern for human resource professionals in federal agencies. An increasing number of scholarly articles, as well as briefs and editorials by journalists and consultants, provide advice and strategies on making government work more inviting for the members of the Millennial generation, those born after 1980 who are now in the process of building their careers (Archuleta, 2014; GBC, 2012; Maciag, 2013; Svara, 2010; Textor, 2008). While undoubtedly important, encouraging talented and skilled young individuals to enter public service could only be effective if they want to remain and thrive in their government positions. Research on Millennials has emphasized their preferences for unconfined careers, work-life balance, and extrinsic over intrinsic rewards (Greenberg & Weber, 2009; Howe & Strauss, 1993, 2000; Taylor & Keeter, 2010). Millennial workers are also found to be far more likely than older workers to consider changing careers and employers (Ng, Schweitzer, & Lyons, 2010; Taylor & Keeter, 2010). While Millennials commonly display an interest in public service, it has been shown that "few have entered the federal workforce, or report planning to do so, in the near future" (GBC, 2012, p.1). What are the turnover intentions of Millennials already in government service? We do not yet have any clear answers to this question.

Broader research from the field of public administration has shown that individuals with greater public service motivation (PSM) values are more likely to work for the government due to the public service opportunities these careers provide (Perry, Hondeghem, & Wise, 2010). Does this mean that Millennial workers in the federal agencies will resemble older workers in terms of their work motivation and turnover intentions, or will there be differences between them and their older counterparts along the lines identified in the broader literature on Millennials? This study explores the answers to these research questions by comparing the turnover intentions and work motivations of Millennials with the older generation of workers in U.S. federal agencies, using the 2011 Federal Employee Viewpoint Survey. Public administration researchers have long been investigating several determinants of turnover and turnover intention at the individual and organization levels (Bertelli, 2006; Bright, 2008; Caillier, 2013; Cho & Lewis, 2012; Meier & Hicklin, 2008; Moynihan & Landuyt, 2008; Pitts, Marvel, & Fernandez, 2011). Among demographic factors, age and generational differences are found to influence turnover decisions. Younger employees, on average, have higher quit rates because they typically have more flexibility in terms of career choice and financial or familial obligations (Kellough & Osuna, 1995; Lewis, 1991). Generational differences are also claimed to have a separate effect on work preferences (Bright, 2010) and, potentially, on individual decisions to leave work (Stark, 2007). Some scholars argue that defining events in the formative years of individuals, and the social context in which a generational group develops, creates a "generational personality" (Howe & Strauss, 1993; Lancaster & Stillman, 2002). The generational personality is believed to shape individuals' feelings toward authority, work values, and goals and aspirations for their work life (Smola & Sutton, 2002). The popular literature providing advice on managing Millennial employees in the workplace is based on this premise—that they are different from older generations, in terms of their work values and motivations, and failure to address these differences may lead to turmoil in the workplace, lower job satisfaction, and even lower employee productivity (Jurkiewicz,

2000; Lancaster & Stillman, 2002; Meier & Hicklin, 2008; Smola & Sutton, 2002). If such differences exist, it is reasonable to assume that they would also affect employees' career choices and quit decisions. The federal workforce is particularly vulnerable. Office of Personnel Management (OPM) estimates that more than 48% of all federal employees and the majority of senior leaders will be eligible to retire by 2015 (Partnership for Public Service & Booz Allen Hamilton, 2010, p. 5). As more experienced and skilled employees continue to retire, and the percentage of employees born after 1980 grows in the federal workforce, the human resource managers need to not only attract, but also train, the lesser skilled younger employees. Recruiting and training new employees can be very expensive. For the private sector, average turnover costs have been estimated to range between 50% and 200% of the employee's annual salary (Partnership for Public Service & Booz Allen Hamilton, 2010). If members of the youngest generation do not plan to stay in their jobs for long, replacement costs and knowledge loss will be exacerbated. Despite the growing interest in Millennials, in general, and these immediate repercussions of their increasing presence in public service careers, individual-level analysis focusing on the workplace-related attitudes and opinions of the members of this generation already in government service is still limited. A deliberate focus on Millennials already in public service may prove useful to the fields of public administration and human resource management (HRM). To provide context, before describing the data, methods, and analytical strategy in greater detail, this article will briefly review research findings, first, on social-service orientation and work preferences of Millennials, and then on motivation and turnover intentions in public organizations. After presentation of the results of the empirical analyses, the concluding section provides a discussion of the implications of the findings for the future of public service and for future research.

Social-Service Orientations and Work Preferences of Millennials

Age differences in work values and preferences are sometimes explained by generational differences (Bright, 2010; Lancaster & Stillman, 2002). A generational explanation posits that the era in which a person was born and the significant events that take place as they come of age affect their worldview, as well as their values and attitudes toward work. Mannheim (1928/1952) developed a sociological theory of generations as early as the 1920s, but it was historians Neil Howe and William Strauss who popularized the generational theory in the United States in the 1990s. Howe and Strauss (2000) distinguished between the four generations in the following groups: (a) Silent Generation (those born between 1925 and 1942), (b) Baby Boomer Generation (those born between 1943 and 1960), (c) Generation X (those born between 1961 and 1981), and (d) Generation Y or Millennials (those born after 1982). Currently, individuals from four different generations share the public-sector workplace, and the U.S. Department of Labor (2009) has estimated that the share of the Millennial generation in the workforce will increase by 75% between 2010 and 2020.

Millennials, or Generation Y, those born after 1982,¹ experienced the development and rapid diffusion of communication and social-networking tools during their formative years. They grew up using technological tools and social-networking platforms intensively (Johnson, Grossnickle & Associates [JGA], 2012), to the point that some researchers have referred to them as the "history's first 'always connected' generation" (Taylor & Keeter, 2010, p.1). Other social events that took place during the formative years of the Millennial generation include the events of September 11, the Enron Scandal, and several incidents of school violence (Twenge, Campbell, & Freeman 2012). This generation is also the most ethnically and racially diverse and the most educated generation in the history of the United States (Taylor & Keeter, 2010). Both the popular press and the peer-reviewed literature have provided a series of, at times contradictory, generational claims about members of the Millennial generation. Two areas, the nature of their social-service orientation and their work values, preferences, and aspirations, are of particular importance for the research questions in this article. Unfortunately, the empirical evidence is limited and conflicting for both areas.

One of the most contested characteristic of the members of the Millennial generation is the nature of their social-service orientation. A number of popular experts characterize them as civically involved, socially conscious, and interested in helping others and solving the problems of the world (Greenberg & Weber, 2009; Howe & Strauss, 1993, 2000). They have also been characterized as a "craving community," in contrast to the apathetic position taken by the Gen Xers, or the confrontational position taken by the Boomers (DeBard, 2004; Howe & Strauss, 1993). Greenberg and Weber (2008), coining the phrase "Generation We," argued that the members of this group "believe in the value of political engagement and are convinced that government can be a powerful force for good" (p. 17). Others portray them as the exact opposite, pointing to their narcissism, materialism, lower empathy, declining concern for others, and lower civic engagement (Twenge, 2006 ; Twenge, Campbell, & Freeman, 2012). Using longitudinal data, Twenge et al. (2012) demonstrated that Millennials generally scored lower than previous generations in concern for others, concern for community, civic engagement, and social capital. As a result, they argued that a "Generation Me" label is more appropriate than the "Generation We" label offered by earlier research (Twenge et al., 2012, p. 1). Community service and volunteering was the one exception where they found Millennials scoring higher than previous generations (Twenge et al., 2012). A 2010 survey, conducted by the Pew research organization, also reported that Millennial-generation respondents lagged behind in political activism, but that they volunteered at rates comparable with their elders (Taylor & Keeter, 2010). The discussion about their social-service orientation is far from over. The popular media accounts and a series of popular books consistently argue that Millennials care about social issues, incorporate social responsibility into their everyday activities, and are engaged and giving (Burststein, 2011; Winograd & Hais, 2011). Civic orientations and community involvement, as well as an interest in government, are being highlighted as positive qualities of the younger generation.

Jorgensen (2003) and Wong, Gardiner, Lang, and Coulon (2008) suggested that this discrepancy stems from the fact that much of the discussion on generational characteristics

are based on subjective observation and retrospective comparisons rather than rigorous empirical work, and they cautioned against developing policy based on unsubstantiated differences.

Work preferences of Millennials have been another main topic of interest. Public managers and HRM professionals provide opportunities for workers to find motivation at work. Fostering opportunities that are desirable to all employees may be a challenge, if younger and older employees value different work opportunities. A smaller but growing body of research has investigated the work preferences of different generations (Ng, Schweitzer, & Lyons, 2010; Wong et al., 2008). Fewer studies have focused on public employees and these articles compared members of Gen X and Baby Boomers (Bright 2010; Jurkiewicz, 2000; Jurkiewicz & Brown, 1998). For example, Jurkiewicz and Brown (1998) asked public employees to rank 15 job characteristics on the basis of their desirability and found that employees in each age category were almost identical in their rankings in the public-sector organizational context. Later research by Jurkiewicz (2000) confirmed again a homogeneous pattern of what employees want between Gen Xers and Boomers. A more recent study by Bright (2010) has also compared Gen Xers and Baby Boomers, and found that younger public employees desired personal recognition because of their generational personalities, but that generational cohort was not the best explanation for task meaningfulness or monetary rewards.

Several empirical studies have shown substantial intergenerational differences in work preferences outside the public-sector organizational context but, again, with a conflicting mix of results. DeBard (2004) and Howe and Strauss (1993) have suggested that Millennials value "meaningful work" the most, as opposed to "freedom" (associated with Gen Xers), or "money, title and recognition" (associated with Boomers). Later research has also contested these observations. Studies by psychologists have shown that the younger generation exhibits higher rates of narcissism, materialism, and inflated expectations compared with older individuals (Twenge & Kasser, 2013). Comparing Millennials with the young generations of the past, Twenge et al. (2012) demonstrated that the "importance of having a job worthwhile to society" and the "importance of hard work" were both declining over the years. They also reported that members of the Millennial generation are less likely to express a desire to work in a social-service organization or become a social worker. A few studies provide insights from outside the U.S. context. Ng et al. (2010) examined career expectations and priorities data from more than 20,000 Canadian Millennial undergraduate university students. Among the factors they rated as the most desirable work-related attributes, the most important were opportunities for advancement, having good people to work with and report to, and professional growth opportunities, whereas traditional attributes such as pay, benefits, and security ranked in the middle, and commitment to social responsibility ranked at the bottom. Dries, Pepermans, and De Kerpel (2008) found that Belgium Millennials placed a higher level of importance on job security as a career influence, than did Boomers or Gen Xers. Wong et al. (2008) studied the differences in personality traits that may affect workforce outcomes among 3,535 managers from Australia, and argued that the differences in personality and motivational drivers

among the generations were negligible. Taylor (2012) examined the work preferences and PSM levels of Australian Millennials and found that those with higher PSM are more likely to work for the public sector, as opposed to the private sector. While no significant difference was observed between them and older workers, in terms of preference for extrinsic motivators, such as income or job security, they are found to place a much higher value on job advancement and having an interesting job.

We also do not know much about their opinions toward government. According to a recent report from Pew research center, Millennial respondents were significantly less critical of government, more likely to support an active government, and less likely to agree that government is often wasteful and inefficient, compared with any other age cohort (Taylor & Keeter, 2010). Another survey of U.S. adults also reported that Millennial respondents give the government more positive performance ratings and more strongly favor a significant role for government in addressing national challenges than other respondents (Molyneux, Teixeira, & Whaley, 2010). In sum, the debate over contradictory portrayals of Millennials and the nature of their social-service orientation is ongoing. Are they altruistic and civic-minded or materialistic and self-absorbed? Are they cynical or optimistic about government? Do they value extrinsic rewards and opportunities for fast promotions or having an interesting job, good people to work with, and a focus on solving societal problems more? Do they value job security or career flexibility more? Some evidence exists to support either answer for each question. In interpreting the literature, it is important to note that, first, many studies rely on either subjective observations or cross-sectional samples, so conflicting findings may partly be related to the issues of representativeness or capturing age affects versus cohort effects. Second, many studies rely on attitudinal surveys, and focusing on attitudes rather than on behavior, might be misleading.

Work Motivation and Turnover

Motivation is a key element of employee performance and productivity, making it a central part of HRM. Work motivation factors include both intrinsic factors, desires from within to perform a particular task, and extrinsic factors, influences external to the individual and unrelated to the task they are performing (Ryan & Deci, 2000). In the workplace, intrinsic motivation emphasizes rewards derived from the work itself, as well as the need for appreciation, achievement, and creativity, whereas extrinsic motivation emphasizes external rewards such as pay, monetary rewards, benefits, workplace characteristics, and relationships with colleagues and supervisors (Pinder, 2008). As people are motivated by a variety of needs, different work motivation theories are developed to capture different aspects of motivation and productivity relationship. In the field of public administration, scholars have developed a theory of Public Service Motivation (PSM) which posits that public-sector employees are more likely to be motivated by intrinsic rewards compared with employees in the private sector (Perry et al., 2010). Subsequent empirical research has shown that government employees put greater emphasis on the desire to help others and to be useful to society through their jobs than their private-sector counterparts (Houston, 2006; Lewis &

Frank, 2002). So, what evidence do we have that connects internal factors such as PSM and external factors such as pay and benefits to turnover intentions of public employees?

Scholars of public administration, HRM, and organizational studies have examined the associations between turnover, turnover intention, and several intrinsic and extrinsic motivations, as increasing turnover has been documented as a critical problem in federal service (Lewis, 1991; Partnership for Public Service & Booz Allen Hamilton, 2010). Tracking longitudinal personnel records from the fiscal years of 2006 to 2008, it has been documented that 24.2% of newly hired employees left their jobs within 2 years (Partnership for Public Service & Booz Allen Hamilton, 2010). During the same period, one third of even the carefully selected Presidential Management Fellows (PMFs) left their agency (Partnership for Public Service & Booz Allen Hamilton, 2010). While the quit rates are quite high for newly hired employees, a wave of retirements for long-time federal employees are also projected in the near future. The government-wide implications of the overall attrition are serious. Turnover creates serious consequences for all, but especially for managers of human-service organizations, as the work in the public service sector is built around people. High turnover may also have a negative effect on the morale of the remaining employees, especially if the work relies on a positive team dynamic. Research on turnover has shown that in the process, agency productivity, and performance often decreases (Cho & Lewis, 2012) and the transmission of knowledge and institutional memories to new employees is put at risk (Moynihan & Landuyt, 2009). When an employee leaves, the resources invested into that employee through training and education is lost. The agency incurs the time and money costs of advertising, hiring, and training a replacement. Productivity levels and continuity of services may be affected while replacement employees settle in. In addition, unexpected turnover may lead to disruptions in service delivery (Cho & Lewis, 2012). A high turnover rate typically indicates that employees are not satisfied with their position or their organization, yet this dissatisfaction could be caused by several factors. They may feel underpaid, undervalued, or not challenged enough. They may see limited opportunities for career growth and advancement. They may have a bad relationship with their co-workers, supervisors, or managers. Individuals with low job satisfaction typically lack motivation to perform at their best and this lack of motivation can lead to increased employee turnover. In general terms, motivation is satisfied by having the opportunity to meet individuals' needs. As each individual is different, they may place different values on different needs and consequently on each motivating factor at the workplace.

A handful of studies examined the influence of PSM on turnover intention. It should be noted that turnover intention does not necessarily turn into actual turnover decisions, but five meta-analyses showed that intention and actual behavior are highly correlated (Cotton & Tuttle, 1986; Dalton, Johnson, & Daily, 1999). Although an active network of scholars studies the determinants and consequences of PSM for public employees, the relationship between PSM and turnover is not yet clear. Crewson (1997) concluded that PSM is associated with higher organizational commitment and, consequently, lower turnover in the federal service. Naff and Crum (1999) found that

higher PSM leads to higher job satisfaction and, in turn, lower turnover intentions for federal government employees. Studying state-level public employees, Bright (2008) concluded that PSM had no significant relationship to job satisfaction and turnover intentions when the person–organization fit was controlled. Steijn's (2008) analyses of Dutch workers, however, showed that employees with high PSM are more satisfied and less inclined to leave their jobs. While scholars continue to clarify the relationship among PSM, organizational commitment, and turnover, empirical research on external factors and turnover intention suggest some consistent results. Workplace satisfaction factors, in particular, job satisfaction and pay dissatisfaction, were reported as consistent predictors of turnover and turnover intention. Job satisfaction was consistently found to reduce turnover intention (Bertelli, 2006; Bright, 2008; Cotton & Tuttle, 1986; Kim, 2005; Lee & Jimenez, 2011; Moynihan & Landuyt, 2008; Cho & Lewis, 2012; Lee & Whitford, 2008; Pitts et al., 2011). "Discontent with pay" was found to increase turnover intention (Blau & Kahn, 1981; Cotton & Tuttle, 1986). An increasing number of studies on turnover examined the effect of HRM policies on the propensity to quit. Opportunities for promotion and advancement (Selden & Moynihan, 2000), opportunities for training and professional development (Kim, 2005), and the existence of family-friendly policies (Caillier, 2013; Selden & Moynihan, 2000) are found to reduce turnover intention. Another group of studies focuses on the effects of relational factors. Empirical research findings support the fact that good relationships with other employees and supervisors (Cotton & Tuttle, 1986), friendship solidarity (Bertelli, 2006), and open and frequent communication (Scot et al., 1999) are negatively associated with turnover.

Demographic variables, including age, are used in several models that examine the relationship among the workplace or HRM characteristics, PSM, and turnover intention as a control variable (Bertelli, 2006; Bright, 2008; Caillier, 2013; Cho & Lewis, 2012; Lee & Whitford, 2008; Pitts et al., 2011). The age and experience of the employee, on average, are found to be negatively correlated with turnover (Blau & Kahn, 1981; Lewis & Park, 1989; Lewis, 1991; Kellough & Osuna, 1995). Examining multi-year trends, Lewis (1991) demonstrated the existence of "a quiet crisis" in federal service, in the form of an upcoming exodus from federal service in the 1990s. His trend analyses suggested a statistically significant and real increase in exits led, not by young or old employees at the onset or the end of their careers, but by people in the middle of their careers (p. 153). In a more recent study, Cho and Lewis (2012) tested whether turnover intention and actual turnover behavior correlate by using two large federal employee data sets. When they used age as the unit of analysis—in other words, compared a proportion of employees indicating an intention to leave, with the proportion that actually left—the correlations were quite high (Lewis & Cho, 2011, p. 11). They also found that younger age groups were positively and significantly more likely to both report an intention to leave their agencies within the coming year and actually leave their agencies. Pitts et al. (2011) also included age groups as predictors of turnover intention for federal employees. They found younger employees to have a higher probability of expressing an intention to leave their agency compared with those above 50 years old. When they modeled whether there was an intention to leave

the federal government for a job in another level of government, the magnitude of this relationship was largest for the 50 to 59 age bracket—in other words, this group had lower probability of turnover intention. In sum, age diversity is identified as a major issue in the American public-sector workplace. Several studies include age as a demographic control in studies focusing on turnover behavior, but none of the published studies examine the relationship between age and turnover intention in public service jobs from a generational perspective. The only report that refers to Millennials in federal service was published in October of 2014 by OPM. The report provides descriptive statistics from the Federal Employees Viewpoint Survey and emphasizes the relatively high turnover intentions of Millennial federal employees in infographics. A Federal News Radio article covering the story quoted John Palguta, the vice president of policy at the Partnership for Public Service, as saying: “The boomers are going to leave one way or another, we should be paying disproportionate attention to the millennials. If they leave, or they burn out, then we’re shooting ourselves in the foot.” (Kopp, 2014). A familiar concern for strategies to retain, engage, and maintain members of the Millennial generation seems to be also emerging for federal agencies.

Data and Method

The research questions were examined using data from the Federal Employees Viewpoint Survey. The survey was primarily conducted electronically via the Internet during April and May 2011, and 266,000 full-time, permanent employees of several federal agencies replied (a response rate of 49.3%). The Federal Employee Viewpoint Survey was used to measure employees’ perceptions of several aspects of their organization and to generate indicators of HRM effectiveness in federal government agencies.² Although the literature sometimes provides inconsistent conclusions, studies are clear on two points. First, young people are more likely to indicate an intention to leave their jobs, and the Millennial generation values career flexibility. Second, individuals prefer to work in agencies that offer good working conditions, such as fair compensation packages, good supervisory relationships, opportunities for growth, good relationships with colleagues, and meaningful work. Consequently, the following two hypotheses are constructed to guide the analyses:

Hypothesis 1: Millennial federal employees will have higher turnover intentions than older federal employees.

Hypothesis 2: Higher evaluations of work motivation factors will be associated with lower turnover intentions.

First, the two groups were compared based on their quit intention and perceptions of several workplace characteristics. Then a logistic regression model was performed to predict turnover intention, while controlling for effects of covariates, described in more detail in the next section. Next, the overall quit intention and the intention to leave the sector were modeled separately. If PSM was a factor in these young individuals’ choice

to begin their careers in federal service, then they may have different feelings between considering sector switching and job switching. A separate multinomial model distinguished between turnover intention to switch to another job and overall turnover intention. In the regression models, interaction terms between workplace and motivation measures and the Millennial indicator were added to examine whether the effect of these desirable work attributes varies for Millennials and others.

Dependent Variables

The primary dependent variable in the analysis was turnover intention. The answer to the question: "Are you considering leaving your organization within the next year, and if so, why?" was used to create two versions of the turnover intention variable. The available answer categories were (a) No, (b) Yes, to retire, (c) Yes, to take another job within the Federal Government, (d) Yes, to take another job outside the Federal Government, and (e) Yes, other.

In the first specification, similar to Selden and Moynihan (2000) and Caillier (2013), employees stating an intention to leave their agency were coded as 1, whereas those indicating that they wanted to remain (No) were coded as 0, and the respondents reporting they were going to retire were removed from the sample (as this study only focuses on voluntary turnover). The second specification aimed to capture the intention to change sectors, so a three-category variable was created. Employees stating an intention to leave to take another job outside the Federal Government were coded as 2, those who intend to leave to take another job within the Federal Government were coded as 1, and those indicating that they wanted to remain (No) were coded as 0.

Independent Variables

The primary independent variable in the analysis was a dichotomous variable indicating whether the respondent is a Millennial or an older respondent. Howe and Strauss (1993, 2000), Twenge (2006), and Twenge et al. (2012) used 1982 as the Millennials' starting birth year. The age variable in the Federal Employees Viewpoint Survey (FEVS) survey was coded using categories 29 and less, 30 to 39, 40 to 49, 50 to 59 and 60 or above. Those born in 1982 would have been 29 years old when the survey was conducted in 2011, so those respondents in the first age category are coded as Millennials, and other categories are coded as older workers.

Individual characteristics. Individual characteristics that have been found to affect turnover in previous research are also controlled for in this study (Moynihan & Landuyt, 2008; Selden & Moynihan, 2000). The sex variable was coded with 1 for male and 0 for female. The minority variable was coded with 1 for minorities and 0 for others. A dichotomous indicator showing supervisory or manager status was also included.

Workplace characteristics. Simple additive indices similar to the ones in Caillier (2013) and OPM (2012) were constructed using several items from the survey as measures of

fairness, skills' development, having good people to work with and report to, professional growth opportunities, work-life balance, and creativity. All items were measured using a five-point agree-disagree scale, where higher scores in the resulting index indicates more positive reviews of the construct. Details of the items used and the diagnostic statistics, such as item-to-total correlations and Cronbach's alpha, are described below to give some idea about the reliability and validity of the measures.

Fairness. This index is a measure of employee perception of the fairness of performance appraisal and promotions in the workplace and is constructed using the items: "My performance appraisal is a fair reflection of my performance" and "Promotions in my work unit are based on merit" ($\alpha = .6489$).

Skill development. To capture skill-development opportunities, an index composed of three items was used, designed for this study: "I am given a real opportunity to improve my skills in my organization," "My training needs are assessed," and "My supervisor/team leader provides me with opportunities to demonstrate my leadership skills" ($\alpha = .7915$).

Creativity. This index is a measure of employee perception of openness to creativity and innovation. It is composed of three items: "I feel encouraged to come up with new and better ways of doing things," "My talents are used well in the workplace," and "Creativity and innovation are rewarded" ($\alpha = .8347$).

Work-life balance. This index assesses the degree to which employees felt they had support from their supervisors with regard to work-life balance, using two items: "My supervisor supports my need to balance work and other life issues" and "Senior leaders demonstrate support for Work/Life programs" ($\alpha = .6569$).

Work group. This aims to measure the sense of camaraderie in the work group and is composed of three items: "The people I work with cooperate to get the job done," "Employees in my work unit share job knowledge with each other," and "In my organization, leaders generate high levels of motivation and commitment in the work-force" ($\alpha = .7286$).

Meaningfulness. This index measures the sense of personal gratification with the meaningfulness of the work. The following four items are used to construct this measure: "My work gives me a feeling of personal accomplishment," "I like the kind of work I do," "I know how my work relates to the agency's goals and priorities," and "The work I do is important" ($\alpha = .7680$).

Diversity. A few other job characteristics were also used as control variables. To control for an employee's perception of diversity in the workplace, the level of agreement with the item: "Policies and programs promote diversity in the workplace (for example, recruiting minorities and women, training in awareness of diversity issues, mentoring)" is used.

Table 1. Descriptive Statistics.

Variables	Older workers (n = 231,628)	Millennial (n = 13,626)
	%	%
Turnover intention (overall)	24	31
Turnover (leaving public sector)	7	12
Turnover (another government job)	17	19
Male	53	47
Minority	34	34
Supervisor	29	3
	M	M
Fairness	3.42	3.59
Skills' development	3.61	3.73
Creativity	3.44	3.42
Work-life balance	3.80	3.99
Work group	3.65	3.75
Meaningfulness	4.17	4.02
Diversity	3.61	3.75
Job satisfaction	3.81	3.80
Pay satisfaction	3.65	3.64

Job satisfaction. This is measured using the question, "Considering everything, how satisfied are you with your job?"

Pay satisfaction. The item, "Considering everything, how satisfied are you with your pay?" is used. Employees rated their satisfaction on a Likert-type scale from 5 "very satisfied" to 1 "very dissatisfied."

Results

Table 1 shows the turnover intentions, demographic characteristics, and the means of all workplace perception variables for Millennial and older workers. About 5.6% of the sample were members of the Millennial generation. As hypothesized, Millennial federal government workers were more likely to report an intention to leave their jobs than their older counterparts (31% vs. 24%). In addition, a higher proportion of Millennial federal workers reported their intention to leave the public sector altogether (12% vs. 7%). Millennial employees were also more likely to indicate a desire to switch to another government job than older federal employees (19% vs. 17%). The chi-square tests were significant, suggesting real differences among the younger and older federal workforce with regard to their turnover intentions. However, the large

sample size may enlarge the value of the statistical tests, as the value of chi-square can reflect both strong associations between variables and the large sample size (Acock, 2008). For categorical turnover intention variables, gamma values, and for *t* tests, *Cohen's d* values were also calculated. These statistics indicated very small to small associations. To validate models, random subsets were also drawn. Initially a 1% random sample was selected from the original data and all the analyses and models were reproduced to compare with the original results. Later, another sample was selected to keep 10% of each of the age categories. Proportions of Millennial and older employees indicating turnover intention were similar in both subsets (30.80%, 31.29%, and 30.38 % of Millennial workers, respectively, and 23.59%, 24.09%, and 23.14% of older workers, respectively). This difference was statistically significant in all samples. All the *t* tests produced similar numbers but the differences were significant only for skills' development, work-life balance, and meaning in all samples.

Table 1 also shows other differences in demographic and background variables as well as perception of workplace characteristics. A higher proportion of older workers were male and supervisors as compared with Millennial workers (53% vs. 47% and 29% vs. 3%, respectively). About the same proportion of both groups were minorities. The mean scores on the perception of the fairness of the performance appraisal and promotions in the workplace, skills' development, support for work-life balance, appreciation of the work group, and diversity in the workplace were higher for Millennials, compared with older workers. Older workers scored slightly higher on creativity and meaningfulness. Millennial and older federal workers did not differ in terms of their job or pay satisfaction. The regression models controlled for these characteristics, which may affect an individual's likelihood of turnover.

Table 2 presents the results from the logistic regression model. The dependent variable was the dichotomous turnover intention measure. The model controlled for demographic factors, supervisory status, job satisfaction, pay satisfaction, and the entire series of workplace perceptions of work motivation characteristics. To test whether the relationship between work motivation factors and turnover intention was moderated by being a member of the Millennial generation, an interaction term between each index and Millennial status was included. The entries in the table are in the form of odds ratios (ORs). An OR represents the ratio of the odds of an event occurring in one group to the odds of it occurring in another group. The raw coefficients in the logistic regression model represent the change in log odds. The exponentials of the coefficients—in other words, ORs—are presented in the table to aid with interpretation.³ An OR of 1 means that the two groups were equally likely to experience the outcome. An OR higher than 1 means that the first group (Millennial workers) was more likely to experience the event than the second group (older workers). An OR of less than 1 means that the first group was less likely to experience the event than the second group.

The odds of turnover intention for Millennials were about 5 times as large as the odds for an older employee after controlling for all other factors, and this difference is statistically significant, indicating support for the first hypothesis. As job satisfaction and pay satisfaction increased, turnover intention decreased for all workers. Higher

Table 2. Predicting Intention to Quit, Logistic Regression Results.

Variables	OR	SE
Millennial	5.078***	(2.119)
Fairness	0.961*	(0.0199)
Skills' development	0.884***	(0.0223)
Creativity	0.802***	(0.0198)
Work-life balance	1.022	(0.0214)
Work group	0.903***	(0.0219)
Meaningfulness	1.046*	(0.0275)
Diversity	1.005	(0.0162)
Job satisfaction	0.509***	(0.0105)
Pay satisfaction	0.845***	(0.0113)
Male	1.160***	(0.0307)
Minority	1.309***	(0.0363)
Supervisor	1.102***	(0.0311)
Fairness × Millennial interaction	0.920	(0.0740)
Skills' development × Millennial interaction	0.924	(0.0924)
Creativity × Millennial interaction	1.234**	(0.120)
Work-life balance × Millennial interaction	1.090	(0.0892)
Work group × Millennial interaction	0.910	(0.0855)
Meaningfulness × Millennial interaction	1.030	(0.114)
Diversity × Millennial interaction	1.056	(0.0651)
Job satisfaction × Millennial interaction	0.700***	(0.0599)
Pay satisfaction × Millennial interaction	0.952	(0.0506)
Constant	20.10***	(1.936)
Observations	165,100	

Note. OR = odds ratio.

* $p < .1$. ** $p < .05$. *** $p < .01$.

perceptions of fairness of the performance appraisal and promotions in the workplace, opportunities for skills' development, support for creativity, and appreciation of the work group were associated with lower turnover intentions. Support for work-life balance and perception of diversity in the workplace did not have significant odds ratios. The odds ratio for meaningfulness of work was slightly above one and is significant, indicating an increased likelihood of quit intention for older respondents. Only two of the interaction terms are significant. Creativity has a positive coefficient on quit intentions for Millennial employees. This means that the retreating effects of lack of support for creativity on turnover was much smaller for younger federal workers, compared with their older counterparts. However, overall job satisfaction mattered more for Millennials than older workers.

With interaction terms, coefficients of variables that are involved in interactions do not have a straightforward interpretation. As the shift from log odds to probabilities is a nonlinear transformation, the interactions are no longer a simple linear function of

the predictors. To ease interpretation, a series of predicted probabilities were calculated for hypothetical individual profiles.⁴ The overall probability of indicating turnover intention was 34% for a Millennial respondent and 18% for an older respondent. A one-standard-deviation increase in the support for creativity rating was associated with a 3.4% decrease for older workers, but only a 0.67% decrease for Millennial workers. However, overall job satisfaction mattered more for Millennials than older workers. A one-standard-deviation increase in job satisfaction was associated with a 10.2% decrease in quit intention for older workers, and a 15.2% decrease for Millennial respondents. For an older White male worker, the probability of turnover was about 17%. If the same respondent is a Millennial, holding other variables at their means, the predicted probability of quit intention increased to 51%, a difference of 34 percentage points. For an older minority male, the predicted turnover intention was 21%. For a Millennial federal employee, the probability increased to 51%. Only two of the interaction terms were significant. Creativity had a positive coefficient on quit intentions for Millennial employees. This meant that the retreating effect of lack of support for creativity on turnover was much smaller for younger federal workers, compared with their older counterparts.

Next, the polytomous turnover variable was used as the dependent variable in a multinomial logistic regression model to examine whether Millennial workers are also more likely to quit to look for another government job, or whether there are different factors at play in the turnover decision for those who plan to take a job within the federal government or outside. Table 3 presents the results. Logistic regression can be extended to handle responses that are polytomous by the use of a multinomial regression model. This model is analogous to two logistic regression models that compare the odds of intention of switching to another government job and the odds of intention of switching to another job outside of government, in comparison with the reference category "no quit intention." The Small-Hsiao statistics⁵ indicate that the independence of irrelevant alternatives (IIA) assumption has not been violated (Long & Freese, 2006). The results suggested that the odds for Millennial federal workers were about 4.4 times as large as the odds for an older employee to consider leaving their work for another job in the federal government, and 6.1 times as large for leaving for a job outside the government. A Millennial federal employee seems to be more likely than his or her older counterpart to indicate a desire to leave the public sector or to switch to another government job. Similar to the previous model, job satisfaction and pay satisfaction reduced turnover intention for all workers. In addition, there were some noteworthy differential effects when comparing those considering another government job or considering quitting government careers altogether. The OR for meaningfulness of work was significant and positive for those considering other government jobs, but not significant for those quitting altogether, suggesting that the individuals who value the public service opportunities, which their jobs provide them, may be more likely to look for other opportunities to continue serving in another government job. A higher assessment of work-life balance slightly increases the likelihood of quit intention to switch to another government job, but decreases the likelihood of sector change. Fairness, skill development, and appreciation of the work group was associated with lower turnover

Table 3. Predicting Intention to Quit, Multinomial Regression Results.

	Another government job vs. No quit intention		Intention to quit vs. No quit intention	
	OR	SE	OR	SE
Millennial	4.442***	(2.047)	6.096***	(3.078)
Fairness	0.958*	(0.0218)	0.970	(0.0345)
Skills' development	0.856***	(0.0239)	0.961	(0.0398)
Creativity	0.829***	(0.0226)	0.734***	(0.0296)
Work-life balance	1.073***	(0.0247)	0.901***	(0.0303)
Work group	0.871***	(0.0234)	0.995	(0.0383)
Meaningfulness	1.074**	(0.0307)	0.976	(0.0368)
Diversity	0.983	(0.0174)	1.063**	(0.0261)
Job satisfaction	0.522***	(0.0116)	0.478***	(0.0155)
Pay satisfaction	0.858***	(0.0126)	0.808***	(0.0171)
Male	1.130***	(0.0332)	1.246***	(0.0540)
Minority	1.452***	(0.0442)	0.965	(0.0454)
Supervisor	1.042	(0.0328)	1.269***	(0.0586)
Fairness × Millennial interaction	0.943	(0.0826)	0.865	(0.0958)
Skills development × Millennial interaction	0.889	(0.0928)	0.997	(0.149)
Creativity × Millennial interaction	1.208*	(0.133)	1.322**	(0.173)
Work-life balance × Millennial interaction	1.014	(0.0911)	1.307**	(0.143)
Work group × Millennial interaction	0.870	(0.0879)	0.999	(0.134)
Meaningfulness × Millennial interaction	1.011	(0.116)	1.074	(0.172)
Diversity × Millennial interaction	1.131*	(0.0772)	0.889	(0.0741)
Job satisfaction × Millennial interaction	0.790***	(0.0714)	0.546***	(0.0678)
Pay satisfaction × Millennial interaction	0.955	(0.0561)	0.946	(0.0691)
Constant	11.79***	(1.220)	9.275***	(1.402)
Observations	4.442***	(2.047)	6.096***	(3.078)

Note. Reference group: No quit intention. OR = odds ratio.

* $p < .1$. ** $p < .05$. *** $p < .01$.

intentions for those considering other government jobs. Same factors were not significant predictors for those who want to quit public sector. Only three interaction terms were significant in the model comparing intention to switch to another government job with no quit intention: creativity, diversity, and job satisfaction. The effect on turnover of support for creativity was much smaller for younger federal workers and the effect on turnover of job satisfaction was bigger. In the model comparing intention to quit government career altogether with the intention to stay, both support for creativity and work-life balance interactions were positive and significant, indicating that these factors were much less important for younger Millennial workers, as compared with older respondents.

Conclusion

These findings have several theoretical and managerial implications. Before enumerating them, however, it must be noted that, like any other study, this study has limitations that should be taken into account in interpreting the results and drawing out their implications. First, the data have been collected at one particular time, so to the extent that differences are due simply to age, as opposed to generation, the differences should disappear as the young workers grow older. Cross-sectional data do not allow comparison of young federal employees with the young workers of one or two decades ago. In the future, studies relying on time-series data will be able to isolate changes over time from the influence of age. Second, the survey used was not designed for theoretical research purposes, so not all factors that may affect turnover intentions are available in the data. Third, the study focuses on federal employees in the United States. It should be kept in mind that the analyses here are not necessarily representative of workers in other sectors or generational differences in other cultures. A comparative study of Millennial workers in all sectors, or from different countries, would be useful in expanding our understanding. Despite these limitations, this study makes a contribution to the literature on Millennials in public service. As discussed above, studies on generational differences are rare in the field of public administration. As more Millennials enter adult life and become a dominant share of the workforce, their views, attitudes, and behaviors are going to shape public agencies and the future of public service. Turnover rates have been, and will continue to be, a critical factor in the effectiveness of government agencies. This study provides an examination of the values and attitudes of the members of the Millennial generation who are already in government careers. A few findings are noteworthy.

First, similar to members of the Millennial generation in any sector, federal-sector Millennial workers were also found to have a significantly higher likelihood of turnover compared with their older counterparts. From an organizational perspective, this suggests several challenges for human resources. The workforce is rapidly changing, as the Baby Boomer generation is retiring at an increasing rate and workers in governmental agencies are being replaced by a large cohort of Millennial workers. Dealing with the needs and demands of the younger workers, as well as a more rapidly changing workforce, may mean increased recruitment efforts, additional training, re-engineered initiatives and workplace arrangements, and alternative management strategies. It is advisable to consider the preferences and values of young people to lay the foundations of an efficient management strategy and so ensure a satisfied and productive workforce.

However, other factors, primarily job satisfaction, pay satisfaction, creativity, professional development, promotion based on merit, and having a good work group were found to have a substantial impact on the turnover intentions of all federal employees, regardless of age. In general, younger workers do not seem to differ drastically from older workers in terms of their work motivations and evaluations. Their evaluations of several workplace characteristics were identical or similar to older workers. Effect size statistics suggested small but significant differences between Millennial and older federal workers,

especially in their ratings of meaningfulness of work, skills' development, and support for work-life balance. Older workers exhibited a higher sense of personal gratification with meaningfulness of work, than did younger workers. Younger workers expressed a sense of a higher degree of support from their supervisors with regard to work-life balance, than did older workers. Job satisfaction still appeared as the most important predictor in the models, similar to previous work focusing on public agencies (Caillier, 2013; Moynihan & Landuyt, 2008). Factors such as creativity, opportunities for professional development, work-life balance, appreciation of the work group, or meaningfulness of work were not particularly more important for Millennial workers. These results suggest that organizations seeking to reduce turnover should improve, or at least maintain, the quality of all such factors for all employees. It may not be possible to improve all factors—for example, to improve pay in the face of declining budgets—however, creative managers might be able to improve job satisfaction by improving or modifying other aspects, such as meaningfulness of work or assessment of training needs.

Finally, when the turnover intention is examined more closely, the associations between several factors and intention to quit are clarified further. The models showed that younger Millennial workers were more likely than older workers to indicate an intention both to leave for another government job and to leave the public sector altogether. More support for work-life balance led to lower quit intentions for all in the regression models. Higher assessments of meaningfulness led to higher intention to change to another government job, but not to quit altogether. This may simply suggest that the career expectations of the current workforce is different, in the sense that an increasing number of individuals may no longer plan on staying with the same organization for extended periods of time. Increasing numbers of younger individuals establish networks, and develop career and personal development skills, that they can use to move on to the next opportunity to gain more skills and experiences. Still, the motivational aspect of a public service career seems to remain important. More than individuals in other sectors, public-sector employees are found to be motivated by intrinsic rewards, such as helping others and doing something meaningful (Perry et al., 2010). These dynamics may together explain why those federal employees who value meaningfulness of the work, were more likely to express a desire to switch to another governmental job.

In sum, despite the higher levels of turnover intentions of Millennial federal employees, predictors of turnover intention did not differ significantly between older and younger employees. The most important predictor of quit intention is overall job satisfaction, so the findings imply that managers and organizations should strive to improve workplace characteristics that are valued by all employees and develop HRM practices and policies to handle an increasingly mobile workforce. People are motivated to satisfy their needs and motivation is key to worker productivity and performance. Previous public administration literature demonstrates the importance of pro-social motivations for individuals choosing a government career. Previous literature on the Millennial generation suggests members of that generation value working toward causes they care about, developing professional skills, and a balance between work and personal life. Work environments that offer meaningful rewards and recognition,

opportunities for challenge and training, friendly and flexible workplace relations, and assignments that allow for making meaningful contributions to society are likely to be attractive and motivating for all job seekers.

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Notes

1. Different authors prefer slightly different cutoff dates (typically 1980, 1981, or 1982). One well-known typology by Howe and Strauss (2000) distinguishes between the four generations in the workplace into the following groups: (a) Silent generation (1925-1942), (b) Baby Boomer (1943-1960) generation, (c) Generation X (1961-1981), and (d) Generation Y or Millennial (1982-present). In this article, members of the Millennial generation are identified as those born after 1982, following this categorization.
2. The estimates are weighted using the weights developed by the OPM—based on characteristics such as gender, race, supervisory status, age, and agency size—to represent all federal employees covered by the survey.
3. Traditional goodness-of-fit tests, the Hosmer–Lemeshow tests, are not appropriate to determine whether the fitted model adequately works for the weighted models that take the survey sampling design into account. Following Archer and Lemeshow (2006), Stata ado-command, `svylogitof` was used to estimate the F -adjusted mean residual goodness-of-fit test, and the test result ($p = .38$) suggested no evidence of lack of fit.
4. Stata software was used to run the empirical analyses. The post-estimation commands `prchange` and `prvalue` are used to compute discrete and marginal change for regression models.
5. The tests statistics are negative and Hausman and McFadden (1984) interpret negative test results as evidence that the independence of irrelevant alternatives (IIA) has not been violated (another government job: $\chi^2 = -700.5$, $p = 1.000$; Intention to leave: $\chi^2 = -4.0$, $p = 1.000$).

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