EXIT, VOICE, AND LOYALTY WITH MULTIPLE EXIT OPTIONS: EVIDENCE FROM THE U.S. FEDERAL WORKFORCE

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Abstract
We assess Hirschman’s theory of exit, voice and loyalty in the context of voluntary exit from organizations in the public workforce when respondents have multiple exit options. Specifically, we follow other studies that have tested the effects of loyalty and voice on the likelihood a person states their intention to leave. However, using data from the Federal Human Capital Survey, we are able to assess the impact of loyalty, voice, and other factors (including assessments of pay) on the likelihood that a respondent will retire, leave for another federal agency, or leave for another sector. Our data come from two years of large-scale survey evidence from the federal workforce. Our statistical analysis provides evidence that perceptions about voice and loyalty limit exit. Yet, the effect of voice, loyalty and pay vary with exit option.
INTRODUCTION

In 1970, Albert O. Hirschman argued in *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States* that response to a decline in the quality of an organization by causes people to choose from the actions of exit, voice, and loyalty. Loyalty keeps one from leaving an organization going in the “wrong direction”; exit and voice are alternatives to loyalty (Hirschman 1970, 78). Unfortunately, “empirical studies have not been as extensive or as thorough as the number of citations to Hirschman (1970) would lead one to expect” (Dowding et al. 2000, 469). In contrast, most of the over 1,500 general studies on turnover have been on private sector organizations (Muchinsky and Morrow 1980). Researchers often mix voluntary turnover (e.g., quits) and involuntary turnover (e.g., discharges) (Shaw et al. 1998). Yet, a person’s stated intention to leave helps predict actual turnover (Hom et al. 1984; Mobley 1977; Steel and Ovalle 1984; Steers and Mowday 1981; Van Breukelen et al. 2004).

Historically there were few public sector studies of intent to leave (Cotton and Tuttle 1986; Selden and Moynihan 2000; Tett and Meyer 1993), though this has changed recently. Core themes remain the organizational traits of agencies losing employees (Kellough and Osuna 1995), the characteristics of those who exit (Lewis 1991; Lewis and Park 1989) and the role of voluntary turnover (Kellough and Osuna 1995; Lewis 1991; Lewis and Park 1989; Selden and Moynihan 2000).

In 2009, Lee and Whitford argued that the exit, voice, and loyalty framework was useful for understanding turnover in the case of the public sector. That paper offered statistical evidence showing exit varies with perceptions about voice and loyalty. Yet, dissatisfaction with pay is also a substantial cause of intention to leave. Finally, the article showed evidence for “motivation crowding” when pay-based motivation is emphasized.
This paper fills a gap in the literature on public sector turnover by moving beyond the study of “intent to leave” in broad terms. Instead, we focus attention on the intent to leave when there are multiple exit options. Realistically, employees do not just leave organizations: they go somewhere else. This “else” is the focus of our paper. Specifically, we test whether an individual’s intention to leave (exit) for a specific option depends on the organization’s commitment to responding to voice and organizational attempts to build loyalty. Turnover intention is a conscious and deliberate determination to leave the organization (Tett and Meyer 1993). However, because employees face multiple options, intention could be “to leave to retire”, “intention to leave to take another job within the federal government”, or “intention to leave to take another job outside the federal government”, instead of just the choice of leaving or not leaving.

This study addresses two research questions. First, what are the differences among the federal employees who choose the four different exit options? For this question, we describe and compare the federal employees across their four types of responses to the exit option question in terms of their empowerment, commitment, and satisfaction with the organization and pay. We will analyze this question by using descriptive statistics and analysis of variance. Second, what are the relationships among the four kinds of exit choices, voice, loyalty, and pay? To address this question, we use the “no intention to leave” response as a base group for comparison to test whether an individual’s exit choices depend on the organization’s commitment to responding to voice and organizational attempts to build loyalty.

We also ask whether the exit intention depends on the individual’s hierarchical status as non-supervisor or team leader, supervisor or manager, and/or executive. In contrast to Hirschman, we test whether exit depends on the use of extrinsic incentives like pay. Last, we ask whether the
specific exit intention depends on the respondent’s time horizon – whether it depends on their place in the age strata.

We provide evidence for this position using a statistical model of data from the 2008 Federal Human Capital Survey; a future version of this paper will also include the 2010 version, the new Federal Employee Viewpoint Survey. Our dependent variable is the respondent’s stated intention to leave for a specific exit option, and so is an unordered polychotomous variable; using a multinomial logit model, we estimate effects across individuals working at different levels the organization’s hierarchy, and accounting for structural aspects of the sampling frame.

We show direct effects for both voice and loyalty on exit. We show that pay also motivates these individuals. Finally, we show that these effects are different for different exit options.

Our article proceeds as follows. In the next section, we discuss Hirschman’s approach to understanding exit in organizations, and we offer our specification of a model of the intention to leave when there are multiple exit options. After that, we estimate the effects of voice, loyalty, pay, and several other alternative causes of the intention to leave and assess the results of our statistical model. Finally, we discuss the results of our theory and test for understanding the intention to leave in the public workforce.

**THEORY**

To exit means to leave an organization; expressing voice means bringing one’s dissatisfaction with the organization directly to management (or through a process that makes management subordinate) (Hirschman 1970, 4). Exit, voice, and loyalty are substitutes, though exit is a “reaction of last resort” (1970, 37). Loyalty is allegiance – in groups or organizations; and “loyalty makes exit less likely” (Hirschman 1970, 77). For instance, voice for workers may
come through a trade union if unionization enhances negotiated relations with management (Freeman 1976, 1980; Freeman and Medoff 1984), but voice is usually more than just union membership (Dowding et al. 2000, 486). More broadly, studies added to this triumvirate the concept of neglect, which is similar to “shirking” in Brehm and Gates (1997) (see also Farrell 1983; Rusbult and Farrell 1982; Rusbult and Lowery 1985; Rusbult et al. 1982; Withey and Cooper 1989). Most studies offer the EVLN (exit, voice, loyalty, and neglect) components as dependent variables (e.g., Daley 1992).

In this paper, our claim is that the likelihood of exit depends on the access to mechanisms that support exercising voice, or that enhance obligations like loyalty. The role of unionization in supporting voice is less relevant in the federal workforce because of limited variation in unionization status. But managers regularly try to enhance voice in organizations without relying on unionization – witness the growth of “employee empowerment” during the 1990s. Likewise, managers try to build commitment among the members of their workforce to the organization where they work.

As noted, numerous scholars in public administration and public management have studied employee turnover in the public sector because turnover increases the costs of hiring and training new employees and lowers productivity (Kim 2005; Lee and Whitford 2008). Table 1 summarizes previous studies on employee turnover in the public sector. These focused on actual turnover rates or public employees’ turnover intentions, usually to explain factors causing actual turnover or intentions.

[Insert Table 1 about here.]

As Table 1 shows, little previous research, especially with regard to the public sector, has focused on employees having several alternatives when they decide to leave their organizations.
The broader management literature has considered this possibility. For instance, Carruthers and Pinder (1983) and Mueller and Price (1989) argued that employees consider and create alternatives (or job choices) across organizations as well as within the same organizations when they decide to leave their current job. Yet, “Most turnover models predicting job change decisions concentrate on employee’s leaving an organization and rarely take into account the employee’s destination choice” (Kirschenbaum and Weisberg 2002, 109). No large-scale statistical studies have paid attention to alternative forms of turnover destinations.

This is the case even though, as Miller (1996, 24) argued, turnover is “any voluntary movement out of a job” and most studies define it as “movement across the boundaries of an organization – or quitting.” He even includes in his definition movement within organizational boundaries such as quits, transfers, and promotions – aspects overlooked in a traditional definition of turnover as movement across organizational boundaries. In other words, turnover incorporates the mobility out of a job within the organization as well as any movement leaving their organization. Therefore, researchers should realize that employees can have a set of turnover options such as quits, transfers and promotions within the organization, or planned retirement and “it is important to examine turnover by contrasting homogeneous groups of employees, based on their having experienced similar types of turnover” (Miller 1996, 24). For this reason, Miller (1996) identified four types of turnover: no turnover (staying), promotion, transfer, and resignation (quitting). Exit happens in all organizations (Kellough and Osuna 1995; Tett and Meyer 1993), including retirements, quits, transfers, reductions in force, death, and terminations after temporary appointments (Lewis 1991).

Kirschenbaum and Weisberg (2002, 110-111) argued that “Employees’ movements from their current job or position could be within the same organization or crossing boundaries to
another organization, or even withdrawing totally from the labor market,” which implies three types of turnover options such as quits, internal organizational destination options (e.g., another job in the same department, the same job in a different department, or a different job in a different department), and external destination choices involving inter-organizational movements (e.g., the same job in a different organization or a different job in a different organization).

According to Hom, et al. (1992), these turnover options depend on the nature of the labor market and employees’ perception of their organization. In other words, employees’ perceptions of specific factors in their work environment affect their turnover choices. “Those employees, whose career aspirations are best met by moving across or within their work organization … will be more sensitive to signs at their work place that will either reinforce or dampen their destination options” (Kirschenbaum and Weisberg 2002, 110).

Doeringer and Piore (1970) also pointed out that these turnover options come from the nature of the labor market in which work conditions and work-related behaviors are different according to career pathways. That is, the innate dynamics of labor markets provide different opportunity structures and working conditions for different career options (Spilerman 1977) and employees will be respond to contrasting conditions between their present status and available opportunities (Kirschenbaum and Weisberg 2002). From this perspective, Kirschenbaum and Weisberg (1994) stated that intentions to improve employment conditions (including working conditions) and perceptions of other organization-related factors may decide a choice of one turnover option over another. In their view, it is natural for employees to try to move up to a better position and move out of a current organization for a better job in order to match their improved skills and knowledge with alternative job opportunities involving career and residential changes.
We argue that attempts to alter the psychological states of employees occur against the backdrop of an employee’s overall satisfaction with the organization – the employee’s perception that the organization is in decline or improving. In Hirschman’s view, a person’s choice of exit, voice, or loyalty occurs within the context of that person’s assessment of an organization (e.g., a consumer’s assessment of a product supplier, or an employee’s assessment of an employer). We begin our analysis of the intention to leave by building on the employee’s perception of organizational satisfaction. This forms a baseline for the employee’s calculus for exit: we control for the employee’s satisfaction with the organization in our models below in order to control for the employee’s overall psychological state of affect toward the organization. Our hypothesis is:

\[ H_1: \text{An employee is less likely to state her intention to leave for any given exit option when her satisfaction with the organization is high.} \]

Our approach is different from that followed by other studies. Typical studies define job satisfaction as an employee’s affective reaction to a job based on their comparison of desired outcomes and actual outcomes (e.g., Cranny et al. 1992); studies show that job satisfaction reduces an employee's intention to leave a firm (Gray-Toft and Anderson 1981; Mobley 1977; Murphy and Gorchels 1996; Ostroff 1992;). Yet, multiple aspects of an employee’s job may make them dissatisfied; for example, Rosse and Miller (1984) identify aspects of a lack of satisfaction (such as salary or career opportunities) that are associated with an employee’s intent to leave.

This is different from Hirschman’s argument, which centers on organizational satisfaction and not job satisfaction per se (see Driscoll 1978). We measure key aspects of a lack
of satisfaction (such as voice, loyalty, pay, physical conditions, and benefits), but control for the employee’s overall organizational satisfaction. We do not include a broad measure of “leadership”, mainly because many models of leadership are built on enhancing voice and loyalty (Ashour 1982; Larson 1986; Locke and Latham 1990; Mumford 1986; O’Driscoll and Beehr 1994; Tjosvold 1984; Williams and Hazer 1986). Instead, we test propositions derived from Hirschman’s work.

Do organizational attempts to increase voice (to empower employees) reduce the likelihood of exit? As noted, other studies use unionization as a coarse proxy for mechanisms that increase an employee’s ability to use voice in an organization (Freeman 1976, 1980; Freeman and Medoff 1984). Given unionization, what other mechanisms are available to increase voice?

Hirschman sees voice as “any attempt at all to change, rather than to escape from, an objectionable state of affairs” (1970, 30). In firms, employees can use voice to express their dissatisfaction with management or to bring those views to others who have the power to change the state of affairs. Specifically, to resort to voice is to “make an attempt at changing the practices, policies, and outputs of the firm from which one buys or of the organization to which one belongs” (1970, 30). Hirschman’s theory sees parallel relationships: between customers and firms, and between employees and organizations. The “consumer revolution” (part of a larger “participation explosion”) provides consumers with a new channel for “making their voice heard” (1970, 42). In general, voice is the attempt to achieve change “from within” (1970, 38).

Hirschman’s exercise of voice connects directly to the empowerment of employees in organizations. Specifically, empowerment is the “process of enhancing feelings of self-efficacy among organizational members through the identification of conditions that foster powerlessness
and through their removal by both formal organizational practices and informal techniques of providing efficacy information” (Conger and Kanungo 1988, 474). Empowerment is itself “based on the assumption that individuals can have a high level of ‘voice’ in shaping and influencing organizational activities” (Spreitzer 1996, 484). Employees exercise Hirschman’s voice when they choose to attempt to change the organization; empowerment is an “active, rather than a passive, orientation to a work role” (Spreitzer 1995, 1444). The empowerment literature is lengthy and broad, traversing the power of participatory management in enhancing empowerment, its impact on both affective reactions, and workplace outcomes like turnover and absenteeism (Eby et al. 1999; Liden et al. 2000; Thomas and Velthouse 1990;). Our measurement strategy (discussed below) for identifying “voice” is connected to the measurement of empowerment. Because Hirschman argues that voice can be a substitute for exit (1970, 37), our second hypothesis is:

$$H_2: \text{An employee is less likely to state her intention to leave for any given exit option when she perceives increased opportunities to express voice.}$$

Third, does the presence of loyalty make exit less likely? For Hirschman, loyalty is neither exit nor voice; in contrast, loyalists “suffer in silence, confident that things will soon get better” (1970, 38). Loyalty is the willingness to trade off the certainty of outcome that would result from exit and the uncertainty from remaining in an organization and hoping things will get better. Of course, loyalty also can be a defense against outside forces; loyalty can be a stand on behalf of an organization facing outside criticism (Daley 1992).
Loyalty is directly related to the employee’s expression of commitment to an organization (even a declining one). Employees are committed when they strongly believe in and accept the organization’s goals and values, they exert effort for the organization, and they maintain membership in the organization (Mowday et al. 1979). Studies have tried to describe all the ways commitment can operate (e.g., Angle and Perry 1981), but “in a very broad sense, organizational commitment refers to an individual’s loyalty or bond to his or her employing organization” (Bozeman and Perrewé 2001); indeed, a main way of conceptualizing commitment as a normative concept is that an employee “should be loyal to his organization, should make sacrifices on its behalf, and should not criticize it” (Wiener and Vardi 1980, 86). Previous research shows that organizational commitment underpins a number of organizational constructs, including turnover intention (Mathieu and Zajac 1990). Of course, managers may try to increase an employee’s loyalty/commitment to the group by inducing a psychological state in employees (Menon 2001). The measurement strategy we discuss below for loyalty takes advantage of this literature on the measurement of commitment. Our hypothesis is:

\[ H_3: \text{An employee is less likely to state her intention to leave for any given exit option when she perceives the organization as attempting to foster loyalty among members of the workforce.} \]

Together these hypotheses are consistent with the Hirschman framework and attempt to test the framework by connecting it to multiple literatures with long traditions in organizational behavior (e.g., Mathieu and Zajac 1990; Steers 1977).
We also want to test a claim about the power of voice and loyalty on the likelihood a person expresses their intention to exit an organization. Specifically, recent studies argue that the use of monetary incentives may undermine more “intrinsic” types of motivation that mostly drive the decisions of employees – even employees in firms. To be specific, financial incentives can be a substitute (not a complement) for social motivation in a hierarchical/principal-agent relationship (Miller and Whitford 2002). The power of monetary incentives may be at odds with the power of intrinsic motives like voice and loyalty – motives that social psychologists have shown to operate in many organizations. Bertelli (2007) shows that increased accountability increases turnover among subordinates only; supervisors facing paybanding are less likely to leave than those who do not.

We test for a direct effect of satisfaction with pay on intention to leave. It is important to note that despite the possible relative decline in federal wages compared to private sector wages, voluntary turnover has been relatively stable (Lewis 1991), suggesting at least at the aggregate level that turnover does not move with pay. However, many scholars contend pay is an important determinant of turnover (Blau and Kahn 1981; Kim 1999; Leonard 1987; Utgoff 1983) and studies confirm the importance of pay in reducing quit rates (Park et al. 1994; Powell et al. 1994; Shaw et al. 1998). Our hypothesis is:

\[ H_4: \text{An employee is less likely to state her intention to leave for any given exit option when her pay is satisfactory.} \]

We also address a few other probable causes of turnover intention in order to make our model robust. We assess the hypotheses listed H5 to H10 below because they represent probable
causes of turnover intention that other studies have addressed. In our approach these are mostly included as control variables since our primary focus is on the impact of voice, loyalty, and pay on the likelihood of intending to exit the organization. The alternative – not including these variables and ignoring these other possible causes – would represent a form of excluded variable bias; we also would not be able to infer what is the relative contribution of voice, loyalty, and pay in a process like turnover intention when compared to other traditional concerns that studies have centered on. This approach also allows us to “bridge” Hirschman’s approach with other traditional approaches to understanding turnover.

For example, using meta-analysis, Cotton and Tuttle (1986) categorize some of the correlates of turnover into external (union presence, unemployment rate), work-related (pay, overall job satisfaction, role clarity), and personal (age, education, gender) correlates. Kellough and Osuna (1995) show that voluntary turnover is a function of organizational factors (size, unionization), work force characteristics (professional/administrative proportion) and individual factors (age, gender, race). Selden and Moynihan (2000) examine the impact of environmental factors (unemployment, region), organizational factors (size, unionization), and human resource management practices (pay, training) on voluntary separation in state government. We also recognize that external labor market prospects, which will depend on broader economic growth, may cause a person to leave the public sector workforce; of course, the data we use here are from a single point in time and are not geo-coded so we are unable to address such dynamic effects in our data.

Research indicates that investments in human capital such as benefits reduce voluntary turnover (Osterman 1987) and that policies that support worker flexibility and those with
families can increase retention (Durst 1999; Ezra and Deckman 1996; Newman and Mathews 1999). We assess the hypothesis:

$$H_5: \text{An employee is less likely to state her intention to leave for any given exit option when she is more satisfied with family-friendly benefits.}$$

Private sector research indicates that training predicts involuntary turnover but not voluntary turnover: firms with more training had significantly higher discharge rates (Shaw et al. 1998). However, we also expect that this relationship is less powerful for the exit option of retirement.

Other research indicates that businesses without attractive career development programs lose good workers to competitors (Rita and Kirschenbaum 1999). We assess the hypothesis:

$$H_6: \text{An employee is less likely to state her intention to leave when training is present.}$$

In addition, past analysis by meta-analysis shows a moderate, negative relationship between satisfaction with promotion opportunity and turnover (Cotton and Tuttle 1986). We assess the hypothesis:

$$H_7: \text{An employee is less likely to state her intention to leave for any given exit option when promotion is merit-based.}$$

Past research found that, in the case of clerical staff, conditions like office darkness were significantly and negatively correlated with turnover (Oldham and Fried 1987), although there is
no consistent, negative relationship between poor physical work conditions and intent to leave (Koh and Goh 1995). We assess the hypothesis:

$$H_8: \text{An employee is less likely to state her intention to leave when physical conditions in the workplace are acceptable.}$$

Finally, we also assess the role of the respondents’ racial and gender characteristics. Blau and Kahn (1981) note that quit rates are lower for minority employees than for whites, once personal and job characteristics are held constant; other studies also find that blacks have lower quit rates (Datcher 1983; Haber et al. 1983; Weiss 1984). Other studies show higher quit rates due to a number of factors, including commuting time, local unemployment, and at-work racial harassment (Shields and Price 2002; Zax 1989). Our hypothesis is:

$$H_9: \text{Minority employees are less likely to state their turnover intention for any given exit option.}$$

Previous private sector studies report gender is strongly correlated with turnover (women are more likely to leave than men), especially for professional jobs, probably due to different job-matching processes for women and men (Cotton and Tuttle 1986; Meitzen 1986). Aggregate statistics usually show turnover to be much higher for women than for men (Kellough and Osuna 1995). The hypothesis is:

$$H_{10}: \text{Women are more likely to state their intention to leave for any given exit option.}$$
We discuss the full specification of our hypotheses in terms of the measurement of concepts below, but we first turn to a key design element of our study. Rather than take the position of other studies intent to leave is a single exit option, we argue that the intent to leave varies across exit options: e.g., retirement, for another agency, or outside the federal workforce. Accordingly, we move beyond previous studies that use federal workforce data to account for a peculiar potential cause of exiting through retirement: the respondent’s age. In this case we account for the respondent’s location in four age strata. We discuss these strata below. We expect that the likelihood of selecting retirement increases with movement through these age strata. At a minimum, not accounting for age is a form of omitted variable bias.

We also account for the respondent’s work status: e.g., non-supervisor/team leader, supervisor/manager, and executive. Knowledge of a person’s hierarchical level helps us understand perceived exit options. We expect that those inhabiting the lowest of the three hierarchical tiers – non-supervisors and team leaders – are least likely to state intent to leave. Those in the higher tiers are more likely to respond as intending to leave. Such intent would suggest position-specific retention methods. Differences exist between top-level and lower-level workers in terms of their time horizon for the organization, with lower-level workers less affected by long-term strategic considerations (Brinkerhoff 1972).

**Model Specification**

Our data on employees’ perceived intention to quit come from two sources: the 2008 Federal Human Capital (FHC) Survey; future versions of this paper will also discuss its 2010 counterpart: the Federal Employee Viewpoint (FEV) Survey (the results for that survey are available from the authors). Both were conducted by the U.S. Office of Personnel Management.
More than 210,000 Federal employees responded to the 2008 FHCS, for a government-wide response rate of 51 percent (Office of Personnel Management 2008).

We start with a brief discussion of our dependent variable. Typically, the dependent variable *Intention to leave* is measured as a dichotomous response (1 for yes, 0 for no) to the survey item “Are you considering leaving your organization?” For example, in the 2004 FHC, the proportions of respondents responding “yes” are: 36.1 percent (non-supervisors and team leaders), 33.5 percent (supervisors and managers), and 38.7 percent (executives); the overall turnover intention is 35.4 percent.

In this paper, we recognize that our dependent variable mixes a number of different kinds of turnover, including different types of intentional separations. To the degree that other reasons for turnover are mixed in with the individual responses (e.g., planned retirement), those factors could bias effects toward zero or inflate standard errors. The dependent variable in our paper is federal employees’ exit choices (i.e., types of turnover), measured by an item asking “Are you considering leaving your organization within the next year, and if so, why?” The response categories of this question are “no”, “yes, to retire”, “yes, to take another job within the federal government”, and “yes, to take another job outside the federal government”. The original survey item also includes another response category (“yes, other”); we omit since we cannot interpret what this clearly means.

As Table 2 shows, the number of respondents of the dependent variable by response categories (i.e., exit choices) in the original survey. In the 2008 FHC, the proportions of respondents responding “no” are 74.6 percent, “to retire” 6.1 percent, “for another agency” 17.0 percent, and “to leave federal government” 2.3 percent. In contrast, in the 2010 FEV, the

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1 Details on the FEV survey are available from: http://www.fedview.opm.gov/2010/.
proportions of respondents responding “no” are 75.4 percent, “to retire” 6.8 percent, “for another agency” 16.0 percent, and “to leave federal government” 1.8 percent.²

[Insert Table 2 about here.]

We note that we do not address actual exit in this study, but instead concentrate a person’s stated intention to exit the organization. We address the stated intent for a number of important reasons. First, there remains little research on federal employees’ intent to leave; most research has examined actual turnover rates. One recent study of intent to leave centers on recent attempts to make federal employees more fiscally accountable (Bertelli 2007), rather than assessing the Hirschman framework, and does so in the case of only two agencies. Second, studies of turnover rates examine measures usually calculated some time after employees’ separation from their organizations, and such rates are organizational-level data. Third, turnover intention is an immediate and accurate predictor of actual turnover (Hom et al. 1984; Mobley 1977; Steers and Mowday 1981; Stell and Ovalle 1984; Van Breuklen et al. 2004).

Our variable Organizational Satisfaction is by the following single item: “Considering everything, how satisfied are you with your organization?” This item was measured by a Likert-type five-point scale from “strongly disagree” (1) to “strongly agree” (5). This variable taps into our first key concept – the respondent’s perception of the ascent or decline of the organization. Again, this forms the baseline of the employee’s calculus for exit.

Voice is constructed from four items by dividing the sum of the responses to the items by the number of the items. Hirschman’s exercise of voice connects directly to the empowerment of employees in organizations (Lee and Whitford 2008) and empowerment is the “process of

² The responses in this table may be different from those in our model since some items for the independent variables have ‘Do not know’ or ‘No basis to judge’ response categories that we removed for this analysis and some respondents did not answer this question.
enhancing feelings of self-efficacy among organizational members” (Conger and Kanungo 1988, 474). The Cronbach’s α for the scale is 0.87. The items are: “employees have a feeling of personal empowerment and ownership of work processes”, “I feel encouraged to come up with new and better ways of doing things”, “My talents are used well in the workplace”, and “supervisors/team leaders in my work unit provide employee(s) with the opportunities to demonstrate their leadership skills.” This variable taps into our second key concept – the respondent’s perception of their ability to express voice.

Our third variable *Loyalty* is constructed from two items by dividing the sum of the responses to the items by the number of the items. It is directly related to the employee’s expression of commitment to an organization (even a declining one). Bozeman and Perrewe (2001, 161) defined organizational commitment as an individual’s loyalty or bond to his or her employing organization in a very broad sense. The Cronbach’s α for the scale is 0.77. The items are: “in my organization, leaders generate high levels of motivation and commitment in the workforce”, and “I recommend my organization as a good place to work.”

We want to be clear that our measures of *Voice* and *Loyalty* are not perfect or direct – that they are coarse representations of the range of considerations that Hirschman packaged into theoretical framework. Of course, this is not unusual in empirical research that bridges past theoretical work with specific cases drawn from the world of public management. However, we note that this problem is frequently encountered when using existing data like the Merit Principles Survey or Federal Human Capital Survey, which was specifically constructed for purposes other than the illumination of academic concerns about human motivation. We recognize that these two variables might be improved upon, and we hope that other approaches
that follow this paper will move the measurement of exit, voice, and loyalty in new and fruitful directions.

We measure a respondent’s perception of the pay component of their work relationship \((Pay)\) by their response to the question: “considering everything, how satisfied are you with your pay?” This item is measured on a five-point scale from “strongly disagree” (1) to “strongly agree” (5). We attempt to examine a claim about the power of voice and loyalty on the likelihood a person expresses their intention to exit their organization by testing for a direct effect of satisfaction with pay on intention to leave. In our previous study, we found that extrinsic motivation such as pay in the Senior Executive Service crowds out other important intrinsic motivating factors like voice and loyalty. We try to investigate this motivation crowding-out effect, given several kinds of exit destination choices.

This study includes six control variables. We constructed our variable \(Benefits\) from two items by dividing the sum of the responses to the items by the number of the items. The Cronbach’s \(\alpha\) for the scale is 0.73. The four items are: “how satisfied are you with child care subsidies?” and “how satisfied are you with work/life programs (for example, health and wellness, employee assistance, eldercare, and support groups)?”\(^3\)

\(Training\) addresses whether an employee’s professional development makes the individual more likely to stay (Huselid, 1995). Our scale is constructed following two items (Cronbach’s alpha = 0.80): “how satisfied are you with the training you receive for your present job?”; and, “my training needs are assessed”.

\(^3\) Elder care includes services like assisted living, day care, and long-term care that the Federal Government offers to those employees who are caregivers for senior relatives. See U.S. Office of Personnel Management (2006).
Merit Promotion represents perceptions of merit-based promotion and is measured by the employees’ response to the statement “promotions in my work unit are based on merit.” We measure the respondents’ perceptions of the physical conditions of the workplace by their response to the statement “physical conditions (for example, noise level, temperature, lighting, cleanliness in the workplace) allow employees to perform their jobs well” (Physical Conditions).

Finally, in our analysis Race is recorded “0” for white and non-Hispanic, non-Latino, and non-Spanish respondents, and “1” for others. Women are coded “1” for the variable Gender.

Respondents’ positions are also divided into three categories: non-supervisor and/or team leader, supervisor and/or manager, and executive. A non-supervisor does not supervise other employees. Team leaders provide employees with day-to-day guidance in conducting work projects, but do not have supervisory responsibilities and are not official supervisors. Supervisors oversee employees but not other supervisors; managers oversee one or more supervisors. Finally, an executive is a member of the Senior Executive Service (SES) or its equivalent.

Our age strata come from responses to the following question: “what is your age group?” Age stratum 1 is composed of those responding “29 and under”; 2 is “30-39”; 3 is “40-49”; 4 is “50-59”; and 5 is “60 or older”. Table 3 shows the descriptive statistics.

[Insert Table 3 about here.]

MODEL ESTIMATION AND RESULTS

For the analysis, we will use multinomial logit model because our dependent variable (i.e., exit destination choices) is an unordered polychotomous variable with four response categories (Long and Freese 2006, 223). We are interested in the effects for the variables Organizational Satisfaction, Voice, Loyalty, Pay, Benefits, Training, Merit Promotion, Physical
Conditions, Race, Gender, Age, and Status. Table 4 shows the model for the 2008 FHC data in three columns. The baseline effect is for the option of “do not leave”. The entry for each variable in the column “retirement” indicates the relative risk ratio for that variable for the exit option of retiring, and so on; below we interpret these option-specific effects in relation to the option of not leaving. We also account for the fact that some groups were under-sampled by including survey weights in our estimation.

[Insert table 4 about here]

All of the effects are represented as relative risk ratios. Multinomial logit is a nonlinear estimation routine, so the effect of an independent variable on the probability a person expresses a specific intent to leave varies across the range of that variable. Because of this, the effects of a variable in terms of the probability of the dependent variable taking a specific, unordered value “1” are better expressions of the variable’s explanatory power. The relative risk ratio approach helps make such a probability statement, but it only does so at the mean value of that variable. In future versions of this paper, we will interpret these effects in terms of the change in probability of a person stating an exit-specific intent to leave, when evaluated across the range of the independent variable. To provide a complete picture, we will represent the explanatory power of an independent variable across its entire range graphically by using King et al.’s stochastic simulation approach (2000). We also estimate our models with agency-specific fixed effects to account for heterogeneity that depends on unobservable agency-level characteristics. Generally, the model fits well, with the proportional reduction in error being in the 20 percent range. Note that pseudo-$R^2$ as a fit measure is bounded at some point below 1; upper bounds must be calculated for each individual application.
First, we find that satisfaction with the organization reduces the likelihood of stating intention to leave for all three exit options. Indeed, high organizational satisfaction translates into a much lower risk of leaving for a position outside government than in leaving for a position in another agency. A Wald test of the equality of the coefficients for the satisfaction variable in the “leave agency” and “leave government” equations shows that the latter is more negative (lower in terms of relative risk ratios) (Wald $\chi^2 = 10.15$). Similarly, a Wald test of the equality of the coefficients for the satisfaction variable in the “retire” and “leave agency” equations shows that the latter is more negative (lower in terms of relative risk ratios) (Wald $\chi^2 = 8.55$). This is robust evidence for the dependence of exit on perceptions of the ascent or decline of the organization.

Given the effect of this perception, what are the roles of voice and loyalty in reducing the use of exit in organizations? We find compelling evidence for the reduction in the likelihood of exit based on individual-level perceptions of management’s dedication to both expanding the use of voice and enhancing employees’ sense of loyalty to the organization. With regard to Hypothesis 2 above, Table 4 also shows that the effects of voice are the same for both the “leave agency” and “leave government” equations, although the effect is not significant for the “retirement” equation. A Wald test of the equality of the coefficients for the voice variable in the “leave agency” and “leave government” equations shows that the latter is more negative (lower in terms of relative risk ratios) (Wald $\chi^2 = 21.26$). Similarly, a Wald test of the equality of the coefficients for the voice variable in the “retire” and “leave agency” equations shows that the latter is more negative (lower in terms of relative risk ratios) (Wald $\chi^2 = 73.39$).

Table 4 shows that the effects of loyalty are also in the predicted direction and significantly different from zero, and that the effects vary across exit option. The magnitudes of these effects are smaller than for satisfaction with the organization, but are important when one
considers which factors are more available to managers concerned about exit from the organization. Interestingly, a Wald test of the equality of the coefficients for the loyalty variable in the “leave agency” and “leave government” equations shows that we can only distinguish between the two at the 0.10 significance level (that they are not so different in terms of relative risk ratios) \((\text{Wald } \chi^2 = 3.52)\). Similarly, a Wald test of the equality of the coefficients for the loyalty variable in the “retire” and “leave agency” equations shows that the two are statistically equivalent (the same in terms of relative risk ratios) \((\text{Wald } \chi^2 = 0.07)\).

Table 4 show unusual variation in the effects of pay – that pay satisfaction reduces the likelihood a respondent reports an intention to leave, except in the case of retirement. Pay satisfaction increases the likelihood of planning retirement (though this could be due to the higher pay status of those people who are planning retirement). Table 4 shows that the effect is significant at the 0.001 level (two-tailed test). In contrast, pay satisfaction reduces the odds of leaving the agency or leaving the government for another position.

A Wald test of the equality of the coefficients for the pay variable in the “leave agency” and “leave government” equations shows that the latter is more negative (lower in terms of relative risk ratios) \((\text{Wald } \chi^2 = 93.12)\). Not surprisingly, a Wald test of the equality of the coefficients for the pay variable in the “retire” and “leave agency” equations shows that the latter is more negative \((\text{Wald } \chi^2 = 318.82)\). This is robust evidence for the dependence of exit outside government on pay satisfaction. No study has ever modeled all three exit options together and assessed the role of pay on intent to leave using this kind of nonlinear model. It is possible that other papers fail to find similar effects due to differences in modeling strategies.

We next address our subsidiary Hypotheses 5 through 10 and show that other effects are also present. Increases in the benefits index reduce the odds of exit to another agency or outside
government (but curiously increase the probability of retirement). Increases in the training index increase the odds of retirement or exit outside of government (but reduce it for exit to another agency). Merit-based promotion reduces exit (except for retirement, in which case there is no effect); better physical conditions reduce the odds of exit to another agency or outside government (but curiously increase the odds of retirement). Minorities have a greater odds of exit to other agencies (but lower risk to leaving the government) than do white employees. Women’s risks of exit are lower in the case of retirement and leaving government employment.

We also note that significant differences remain even after we account for status-level motivations for exit, with those in the second stratum more likely to retire, to leave for another agency, and to leave government employment. Age strata effects are also present in the case of leaving for other agencies and leaving government (but not for retirement; in that case, while the estimated effects are huge, we have great uncertainty about their magnitudes).

What can we say about the relative performance of voice, loyalty, and pay as explanations for exit? The variables are measured so that they have the same support or range [1,5], so we can test the coefficients directly. Is the coefficient for loyalty larger than that for voice? The Wald test of the estimated parameters can reject the null hypothesis of no difference in the effects of voice and loyalty in the exit option of leaving government ($\chi^2(1) = 47.16$) and in the exit option of leaving for another agency ($\chi^2(1) = 26.02$). Is the coefficient for voice larger than that for pay satisfaction? For the exit option of leaving government, the coefficient for voice is more negative than that for pay at the 0.001 level ($\chi^2(1) = 17.75$); the total explanatory power also depends on the standard error of the estimate and the descriptive characteristics of the variable. The latter are roughly similar across the groups, but the variables have different means and standard deviations.
for the case of the leaving government employment, the coefficient is more negative than that for pay only at the 0.10 level (Wald $\chi^2(1) = 3.45$).

Is the coefficient for loyalty larger than that for pay satisfaction? For the case of the leaving government employment, we can reject the null that the coefficients are the same at a conventional level (Wald $\chi^2(1) = 65.90$); the same is in the case of leaving for another agency (Wald $\chi^2(1) = 11.22$). Together these results suggest that in aggregate, voice and loyalty are more important than pay.

**DISCUSSION**

Hirschman’s theory narrows the gap between study environment and causal mechanism. A distinct contribution of this study may be in the realization that the effects of exit, voice, and loyalty are similar for different exit options. Lee and Whitford (2009) called for additional research into how programs like the SES affect the long-term development of perceptions of voice and loyalty, and what the potential costs are of pay mechanisms dictated by politicians for such cohorts. What is interesting is that the effect of pay and the EVL components have different effects for the likelihood of leaving government versus moving to other agencies. Our study also helps show the relative performance of pay vis-à-vis loyalty and EVL components of motivation, considerations currently lacking in principal-agency theory.
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Independent Variables (*Control Variables)</th>
<th>Dependent Variable(s)</th>
<th>Data</th>
<th>Unit of Analysis</th>
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<tbody>
<tr>
<td>Lewis &amp; Park (1989)</td>
<td>Sex (Are women more likely to quit than men?) *Control Variable: Age, Education, Experience, Salary</td>
<td>Exit (the employee either did or did not exit federal service)</td>
<td>1% random sample of the Central Personnel Data File (US)</td>
<td>Individual</td>
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<td>Kim (2005)</td>
<td>Job characteristics (Work exhaustion, Role clarity, Role conflict), Work environment (Participatory management, Resources), Human resource management (Advancement opportunities, Training &amp; development, Pay &amp; rewards satisfaction) *Control Variable: Perceived job alternatives, Gender, Age, Years of work education</td>
<td>Turnover intentions of IT employees</td>
<td>Survey of central IT department employees (State governments of Nevada and Washington, 2003, US)</td>
<td>Individual</td>
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<td>Bertelli (2007)</td>
<td>Functional preferences (JIM: Job Involvement and Intrinsic Motivation), Friendly workplace, Quality of workgroup output, Poor performance is addressed, Quality of pay, Quality of immediate supervisor, Managerial review of goals and evaluation, Supervisors receptive to change, Hold leaders in high regard, Reasonable workload, Work-life balance supported, Promotions are merit based, Timely rewards for high performance, Appraisal reflects performance, Awards incentivize high performance, Accountability for results, Information regarding benefit changes *Control Variable: Gender, Minority</td>
<td>Turnover intention</td>
<td>2002 Federal Human Capital Survey (US)</td>
<td>Individual</td>
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<td>Study</td>
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<td>Turnover Intention</td>
<td>Dataset</td>
<td>Level</td>
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<td>Lee &amp; Jimenez (2011)</td>
<td>Performance-based rewards system &amp; Performance-supporting supervision &amp; *Control Variable: Work-related variables (job satisfaction, training, job position, year of employment, salary, union membership) &amp; Socio demographic variables (gender, age, race)</td>
<td>Turnover Intention</td>
<td>2005 Merit Principles Survey (US)</td>
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<td>2008</td>
<td>2010</td>
<td></td>
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<td>--------</td>
<td>--------</td>
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<td>Do Not Intend to Leave</td>
<td>74.63</td>
<td>75.42</td>
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<td>Intend to Retire</td>
<td>6.07</td>
<td>6.81</td>
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<td>Intend to Leave for Another Agency</td>
<td>17.01</td>
<td>16.03</td>
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<td>Intend to Leave Federal Government</td>
<td>2.29</td>
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Table 2: Intent to Leave (Weighted)
Table 3: Descriptive Statistics (Weighted)

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<th>2008</th>
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<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
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<tr>
<td>Organizational Satisfaction</td>
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<td>1.074</td>
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<td>Voice</td>
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<td>0.902</td>
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<td>3.651</td>
<td>0.942</td>
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<td>1.070</td>
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<td>1.183</td>
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<td>Benefits</td>
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<td>Training</td>
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<td>Race</td>
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<td>Age Stratum 3</td>
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<td>Age Stratum 4</td>
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Table 4: Model of Intention to Leave (Exit) for 2008 Data (Weighted): Comparison of Effects by Exit Option

<table>
<thead>
<tr>
<th></th>
<th>Retirement</th>
<th>Inside Federal Government</th>
<th>Outside Federal Government</th>
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<tr>
<td></td>
<td>RRR</td>
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<td>RRR</td>
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<tr>
<td>Organizational</td>
<td>0.738</td>
<td>0.014***</td>
<td>0.690</td>
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<tr>
<td>Voice</td>
<td>0.966</td>
<td>0.022</td>
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<td>Loyalty</td>
<td>0.895</td>
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<td>0.014***</td>
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<td>0.987</td>
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<td>0.960</td>
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<td>2.56x10^7</td>
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<td>3.46x10^8</td>
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Agency-Specific Effects Included
N 120547
LR χ^2 36552.26 ***
Log-Likelihood -73338.0
Pseudo R^2 0.1995

*** indicates significant at better than 0.001 (two-tailed test)
** indicates significant at better than 0.01 (two-tailed test)
* indicates significant at better than 0.05 (two-tailed test)
REFERENCES


