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The Impact of Cutback Management Practices on Employee Motivation and Managerial Behavior: Evidence from Three Public Sector Contexts

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ABSTRACT

THE IMPACT OF CUTBACK MANAGEMENT PRACTICES ON EMPLOYEE MOTIVATION AND MANAGERIAL BEHAVIOR: EVIDENCE FROM THREE PUBLIC SECTOR CONTEXTS

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Public organizations regularly face financial challenges associated with tough economic times, governmental funding decisions, or other types of organizational decline or turbulence. Managers respond to these challenges through cutback management, defined as organizational change "toward lower levels of resource consumption and organizational activity" (Levine, 1979, p. 180). This dissertation assesses the consequences of cutback management practices on public work motivation at various organizational levels. The first chapter examines how executives respond to austerity through specific cutback strategies and tactics, as well as the impacts that these measures have on executive perceptions. The next chapter tests how personnel reductions and related cuts to training, development, and diversity management impact public employees in the federal service. The final chapter builds from the results of Chapter II to examine whether state-level perceptions of human resource development quality affect individual-level motivation among workers in state public health agencies.

Taken together, the findings from every chapter provide implications for cutback management research in public administration. First, managers' preferences to cut back office functions in order to maintain front line activities (Chapter I) conflict with employees' preferences to receive high-quality opportunities for training, development, and other human resource management (HRM) functions

(Chapters II and III). While the findings in Chapter II suggest that personnel reductions (e.g., hiring freezes, reductions-in-force, early retirements) may have a slight direct impact on employee motivation, the reduction of HRM opportunities resulting from cuts has a much more noticeable impact on motivation. Previous research (e.g., Levine, 1984; Shafritz, Russell, Borick, & Hyde, 2017) underscores that training and development opportunities are often most attractive areas to apply cuts when austerity occurs, though this work suggests that public managers evaluate the potential impact those cuts may have on the perceptions and well-being of employees. The concluding chapter offers prescriptions for implementing cuts in ways that can minimize the harms of cutback management on executive and employee perceptions.

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ACCEPTANCE

This dissertation was prepared under the direction of the candidate's Dissertation Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Public Policy in the Andrew Young School of Policy Studies of Georgia State University.

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INTRODUCTORY CHAPTER

Background and Rationale

In his seminal work on cutback management, Levine (1978, p. 316) referred to organizational growth as a "common denominator" within management theory and practice, as well as public policy choices. The emphasis on growth as the remedy for organizational problems led management researchers to craft their theories, strategies, and prescriptions around the creation of growth. Unfortunately, hard times over the past five decades prove that organizational growth is not always a given. As Levine notes, "the reality of zero growth and absolute decline… means that management and public policy theory must be expanded to incorporate non-growth as an initial condition that applies in some cases" (p. 317). Treating decline as nothing more than a temporary blip ignores some of the complex issues unique to organizations in decline. As Levine concludes, "organizations cannot be cut back by merely reversing the sequence of activity and resource allocation by which their parts were originally assembled" (p. 317).

While many others also point out that organizational change research mostly focuses on positive circumstances such as growth or innovation (Cameron, Whetten, & Kim, 1987; B. E. Wright, Christensen, & Isett, 2013), studies on cutback management grew rapidly beginning in the 1970s as the reality of lackluster economic conditions took hold, and yet again following the financial crisis of the late 2000s (Bozeman, 2010; Pandey, 2010). Cutback management involves changing organizational structure or operations as a result of a decrease in the number of resources available to the organization (Levine, 1979; E. Schmidt, Groeneveld, & Van de Walle, 2017; Van der Voet & Van de Walle, 2018).

Organizations adjust to diminished resources in many ways, including reducing human capital, cutting or postponing programs, or focusing on different types of activities or services. Individual-level consequences are also common, and can be every bit as harmful to an organization's goals. This study focuses on one of these individual-level consequences, in particular – employee work motivation. Several studies prior to this have noted reasons why employee motivation levels may suffer following the implementation of cutbacks. Following cuts, remaining employees may experience a "survivor's guilt" that affects their day-to-day activities and performance (Brockner, Davy, & Carter, 1985; Brockner, Grover, Reed, DeWitt, & O'Malley, 1987). Cutbacks may also reduce employees' commitment and emotional attachment to their organization (Lavelle, Rupp, & Brockner, 2007) and place more demands on employees with fewer resources at their disposal, increasing job stress and burnout (Arnold B Bakker & Demerouti, 2007).

These essays focus on a central research question: how do cutback management practices impact employee motivation in public sector contexts? The three essays explore different angles associated with this central question by investigating different populations across three separate contexts. The first chapter utilizes a survey of high-level public executives in EU member states to examine their perceptions following the financial crisis of the late 2000s. In addition to understanding how executive perceptions are impacted by cuts, I also investigate the managers' preferences and behaviors regarding how (and to what parts of the organization) their organizations implement cuts. The second chapter examines the impact of personnel reductions on worker motivation in the federal service. The final chapter builds from the findings of Chapter II to examine further how state-level perceptions of training and development in state health agencies is associated with worker motivation. The three studies within this work are intended to produce a more comprehensive understanding of how cutbacks impact the motivation of public servants, while also investigating the claim that that the behavior of managers influences the dominant types of motivation employees experience in response to cutbacks.

Literature Review

In this introductory chapter, I provide overviews of several concepts which all three essays have in common. The review begins with a brief discussion of previous research on organizational decline, a common (but not always necessary) precursor of cutbacks. The next topic focuses on cutback management and some its relevant organizational impacts, particularly changes in human resource management (HRM) strategies. The second half of the review turns to the topic of work motivation in the fields of organizational behavior and public management. I emphasize three concepts that I use to measure work motivation: job satisfaction, organizational commitment, and job involvement. These three concepts represent multi-faceted elements of work motivation, and will be the primary dependent variables of interest across each essay. The final section compiles previous research about cutbacks' impacts on employee motivation and offers broad hypotheses for this research proposal.

Organizational Change, Decline, and Cutback Management

Organizational change and reform practices are common topics in both organization theory (Armenakis & Bedeian, 1999; Van de Ven & Poole, 1995) and public administration (Fernandez & Rainey, 2006; Kuipers et al., 2014), with many of these studies focusing on the impact of change on employee motivation and well-being (Vakola & Nikolaou, 2005; Van der Voet, Kuipers, & Groeneveld, 2016; B. E. Wright et al., 2013) Organizational change is ubiquitous across public organizations and can arise due to a wide variety of circumstances, such as budgetary constraints, political considerations, technological changes, or changes in values or leadership (Kaufman, 1991; Wise, 2002). Change research tends to focus on positive circumstances such as growth or innovation (Cameron, Whetten, et al., 1987; Levine, 1978; B. E. Wright et al., 2013), though research on organizational decline offers insights about the other side of organizational change. Organizational decline is defined by Cameron, Sutton, and Whetten (1988, p. 6) as the process in which "an organization's adaptation to its domain… deteriorates," and consequently "resources are reduced within the organization". Downsizing and other cuts are not inextricably linked to organizational decline – rather, organizations may choose to reduce employment numbers due to factors such as changes in technology (Appelbaum, Everard, & Hung, 1999) or what Cascio (2006, p. 175) refers to as "preemptive layoffs". Similarly, there's no guarantee that decline necessitates an organizational response in the form of cutback management, though the depletion of resources over time typically forces leadership to respond in some sort of method.

Researchers have recognized that organizational decline may arise from numerous sources. Zammuto and Cameron (1985) argue that unique sources of decline inform the types of potential organizational responses – or even whether the organization responds at all. Levine (1978) builds on this idea and offers a typology that distinguishes whether decline occurs due to political or economic/technical conditions, as well as whether the causes are located within or outside the organization. For example, "problem depletion" (political/external) occurs when resources are reduced because the problem that warranted resources and action has either been solved, alleviated, or deemed less important or popular. This is contrasted with the type of decline at the opposite side of Levine's typology, organizational atrophy (economic/internal), resulting from a combination of various internal system or management failures, such as role confusion, weak evaluation methods, or inappropriate incentive systems. While problem depletion results from forces outside the organization, atrophy is typically the product of mismanagement and dysfunction from within the organization. Environmental entropy (economic/external) and political vulnerability (political/internal) are the other two types of decline identified by Levine (1978). These both result from organizational fragility, either from external technological or market changes in the former case, or internal conflict and frequent change in the latter.

Cutback Management

For each type of organizational decline, Levine (1978) offers tactics organizations use to either resist or smooth decline once it is incipient. Resistance and smoothing are distinct types of reactions that occur during the cutback management process designed to mitigate the consequences of decline. When managers attempt to take action to smooth or resist organizational decline, these activities are typically referred to either as cutback management or downsizing. Cutback management looks at organizational change “toward lower levels of resource consumption and organizational activity” (Levine, 1979, p. 180). Cutbacks may occur in various ways, including freezes in hiring or promotions, downsizing, cutting programs, or postponing future programs (Van der Voet & Van de Walle, 2018). The methods of cutting back depend on numerous factors. For instance, depending on whether the desired effects of downsizing are short-, medium-, or long-term, managers may resort to workforce reduction, organization redesign, or systemic changes built around shifting organizational culture (Cameron, Freeman, & Mishra, 1993). Organizations can strategize whether cutbacks should be targeted at particular programs or conducted across-the-board , and they can also determine the degree of openness in terms of participation and input from employees at different hierarchical levels (Van der Voet, 2019). These practices often produce lower levels of job satisfaction, organizational commitment, work engagement and overall well-being (Conway, Kiefer, Hartley, & Briner, 2014; Jick & Murray, 1982; Kiefer, Hartley, Conway, & Briner, 2015; Van der Voet & Vermeeren, 2017).

Early work on cutback management in public management began in the late 1970s and approached a zenith in the early-to-mid 1980s (Bozeman, 2010; Cepiku & Savignon, 2012; Raudla, Savi, & Randma-Liiv, 2015). These authors (e.g., Behn, 1980; Bozeman & Slusher, 1979; Levine, 1978) wrote in response to the unanticipated decline in public organizations following decades of relatively unimpeded growth. Levine’s (1978) seminal work introduced the concept to the field of pubic management and described the ways in which public organizations respond to decline through various cutback management strategies. The focus on cutback management faded as the US economy recovered in the late 1980s, but the financial crisis of the late 2000s spurred renewed interest in the subject (Bozeman, 2010; Pandey, 2010).

The general distinction in cutback management strategies noted throughout the literature differentiates across-the-board, proportional cuts from targeted cuts based on priorities (Raudla, Savi, et al., 2015). The across-the-board strategy, also referred to as decrementalism (Levine, 1984) and the "equal misery" approach (Hood & Wright, 1981), reduces decision-making costs and limits the potential for conflict among organizational stakeholders. However, decrementalism is also easy to apply inappropriately, especially in instances where certain subunits, functions, or services are more critical than others (Banner, 1985; Levine, 1985; C. W. Lewis & Logalbo, 1980). Proportional cuts may be seen as more equitable than targeted cuts, but they also risk hampering the effectiveness of many organizational activities and may be seen as arising from reactive, ad hoc decision-making (Behn, 1980). Targeted cuts arise from the desire to make rational decisions about where to apply cuts within an organization. This strategy may produce more conflict within the organization (Schick, 1988), but the intention is to make cuts to specific areas to reduce organizational consequences related to service delivery or efficiency (G. B. Lewis, 1988). Organizations experiencing longer spells of fiscal stress are more likely to resort to targeted cutback strategies, while the general wisdom holds that across-the-board cuts are appropriate mainly for small cuts to organizational resources (Levine, 1984; Raudla, Savi, et al., 2015; Schick, 1983).

Recent research finds that cutbacks can also affect work motivation (Esteve, Schuster, Albareda, & Losada, 2017; Shim, Park, & Jeong, 2019; Van der Voet & Vermeeren, 2017), employee trust (Feldheim, 2007), innovation (Van der Voet, 2019), the effectiveness of change management techniques (E. Schmidt et al., 2017; Van der Voet et al., 2016), job mobility (Piatak, 2019), and managerial autonomy and motivation (Giauque, 2016; Van der Voet & Van de Walle, 2018). The recent surge in cutback management literature comes off of the heels of the Great Recession of the late 2000s, a global phenomenon that encouraged public administration researchers to take up renewed interest in the topic and craft practical, timely prescriptions to match the contemporary economic environment

(Bozeman, 2010). While the Great Recession resulted in higher degrees of job loss in the for-profit sector, the public sector still saw significant levels of job loss that led many former public employees to ultimately switch sectors at higher rates than former for-profit and nonprofit workers (Piatak, 2019).

Cutbacks and HRM Strategies

Cutback management practices can impede common human resource management practices (Levine, 1984), including human resource development (HRD) practices and diversity and inclusion practices. HRD programs, centered on creating "opportunities in the organization for training, future career growth, and general skill development" (B. E. Wright & Davis, 2003, p. 74), are crucially important for downsizing organizations, because survivors of cutbacks often need to adapt to new roles and responsibilities (Cascio, 2006). Unfortunately, training and development are a major part of what Levine (1979, p. 181) calls the "productivity paradox", where cutbacks make it difficult to justify up-front spending on activities which do not have an immediate return-on-investment. Unfortunately, this inability or unwillingness to provide investment in human resources may cause employees to believe that there is "no sense investing time, energy, and emotional attachment in an organization… whose opportunity structure will be so lean that it cannot reward those who demonstrate commitment" (Levine, 1984, p. 254).

This paradox may enter the calculus of managers during times of decline. Feldman (1995) theorized that as an organization experiences rapid or unanticipated cutbacks, career development and other types of training activities with a long-run focus are expected to decrease. Training budgets – often included as part of an organization's "soft budget" – may be especially susceptible to major reductions when proportional, across-the-board cuts are implemented (Demmke, 2017; Metsma, 2014; Shafritz et al., 2017). This is consistent with the dysfunctions of decline identified by Cameron, Whetten, and Kim (1987), who argue that decline reduces an organization's slack resources and hinders long-term planning. Training and development opportunities are crucial not only to improve employee performance on work tasks (Becker & Gerhart, 1996), but also to foster positive job attitudes (Steijn, 2004; Whitener, 2001). A recent study by Meyer-Sahling and others (2016) found that changes to training policies following austerity had a more negative impact on employee motivation than even personnel changes such as staff reductions or hiring freezes. While HRD programs are vital for longer-term productivity goals, the absence of short-term benefits makes spending on training and development undesirable.

Diversity and inclusion efforts also tend to be more difficult to implement in downsizing organizations (Andrews & Ashworth, 2015). Diversity and inclusion practices reduce turnover (Sabharwal, Levine, D'Agostino, & Nguyen, 2019), increase organizational commitment (Cho & Mor Barak, 2008), and improve decision-making and information-sharing networks, which in turn influence satisfaction, commitment, and well-being (Findler, Wind, & Mor Barak, 2007). However, organizations must also commit time, energy, and resources in order to effectively implement a climate of inclusion (Gasorek, 2000; Shore et al., 2011). Cutbacks make it more likely that inclusionary organizational policies are either neglected or not fully implemented and enforced due to more immediate concerns (Stein, 1994).

Public Sector Work Motivation and Cutback Management

Two influential models inform the ways in which cutbacks may impact work motivation. First, Locke (1997) lays out a comprehensive model of work motivation combining goal-setting theory along with aspects of personality theory, equity theory, organizational justice, and job characteristics theory. Organizations, according to Locke, can assign goals and provide incentives for achieving them. Assigning difficult, specific goals can increase performance and self-efficacy among employees who are successful in achieving the assigned goals. According to the theory, goal attainment not only produces positive affective outcomes such as satisfaction (Locke & Latham, 1990), but it also encourages employees to exert more effort and improve performance.

Locke draws upon other theoretical perspectives to suggest job-related characteristics (Hackman & Oldham, 1980), organizational policies, procedures, and culture (Brockner & Wiesenfeld, 1996) can each impact satisfaction, involvement, and commitment. One of these, job characteristics theory, posits that five "core" characteristics of a job – skill variety, task identity, task significance, autonomy, and job-based feedback – can foster feelings of meaningfulness, significance, and knowledge of work outcomes (Oldham & Hackman, 2010). Thus, organizations can improve employee motivation by creating jobs with meaningful, interesting work. Another theory, organizational justice, focuses on the fairness of pay and resource allocation (distributive justice), as well as the fairness of the procedures followed in allocating those outcomes (procedural justice) (Folger & Greenberg, 1985; Greenberg, 1990). Employees who perceive the policies and practices of the organization as fair may feel commitment and attachment to the organization, a crucial determinant of work motivation.

Second, Wright (2001) builds on Locke to provide a public sector model of work motivation that accounts for internal psychological processes, such as goal commitment, as well as external factors related to job characteristics and organizational context. As with Locke's model, Wright's emphasizes the importance of goals along with job- and organization-level characteristics as a means of impacting employee motivation, but argues public servants may be motivated by unique goals, reward mechanisms, and organizational constraints. In particular, he stresses that "weak relationships between rewards and performance, greater procedural constraints, and goal ambiguity" may be uniquely detrimental to public employee work motivation (B. E. Wright, 2001, p. 581).

Researchers in public administration have long contended that public employees also tend to differ from private sector workers in many respects (Perry & Porter, 1982; Rainey, 1982; Wittmer, 1991). One defining element of public workers is public service motivation. This type of motivation – defined as an "individual's predisposition to respond to motives grounded primarily or uniquely in public institutions" (Perry, 1997, p. 182) – is characterized by an individual's attraction to policy-making, commitment to serving the public interest, compassion, and self-sacrifice (Perry & Wise, 1990). Under conditions of fiscal stress and downsizing, public service motivation may foster greater commitment and effort from employees willing to sacrifice personal benefits in order to accomplish organizational goals (B. E. Wright et al., 2013). On the other hand, cutbacks which hinder service delivery may discourage employees with a public service orientation and reduce their motivation (Moynihan & Pandey, 2007b).

How Do Cutbacks Impact Predictors of Work Motivation?

Cutback management practices can affect many factors included in models of work motivation by Wright (2001) and Locke (1997). Cutbacks exacerbate problems of goal complexity, conflict, and ambiguity, which public sector organizations struggle with even under the best of times (Pandey, 2010). If public managers follow the advice of Levine (1978) and Glassberg (1978) and narrow the scope of activities, they risk reducing emphasis on goals deemed socially important but inefficient. This may negatively impact some employees with high levels of public service motivation, as the newly-emphasized organizational goals could conflict with the professional goals of these employees. Cuts involving employment downsizing may also force remaining employees to broaden the scope of their work tasks. Without sufficient training, these new roles are also likely to lead to more goal ambiguity, less self-efficacy, and lower performance (Locke, 1997). Finally, cuts may create goals that exceed an employee's optimal levels of skill level, knowledge, or commitment.

In addition to problems with goal complexity, conflict, and ambiguity, cutback management practices impact other elements of an organization tied to work motivation. Personnel reductions often force remaining employees to either broaden the scope of their work activities or adjust them to fit revised organizational goals (Cascio, 2006). This process typically changes many characteristics of jobs that Hackman and Oldham (1980) argue are critically important for motivation, satisfaction, and professional growth. Cuts may alter employees' duties in order to handle new responsibilities and organizational objectives (Cameron et al., 1993). The impact that this has on motivation is unclear in the literature. For instance, Petrou, Demerouti, and Xanthopoulou (2017) found that changes in job-related demands for employees undergoing cutbacks were often able to increase work engagement and reduce exhaustion. In his study of organizational death, Sutton (1987) found that the new functions required of employees associated with disbanding and reconnecting activities produced higher levels of skill variety and task significance, which led to positive motivational outcomes. On the other hand, the uncertainty of expanded or unfamiliar job roles also threatens to undermine task identity and reduce knowledge of job processes, especially if the new tasks do not have well-constructed feedback mechanisms or training opportunities. Therefore, it is possible for cutbacks to have either positive or negative consequences related to job characteristics theory, depending on the quality of job redesign and training processes.

A final organizational element impacted by the implementation of cutbacks relates to employee perceptions of organizational justice. When employee expectations of organizational justice are violated, numerous elements of work motivation may be impacted (Colquitt, Conlon, Wesson, Porter, & Ng, 2001). This is especially problematic following cutbacks, because the reallocation of resources or dismissal of personnel may violate many employees' justice expectations and lose trust in the organization and its leadership. Pandey (2010) suggests that cutbacks can violate the "social contract" between and employee and the organization and foster job insecurity and distrust. Cutbacks violate distributive justice perceptions when the reduction of resources (financial or otherwise) allocated to an employee dips below expectations given the perceived worth of their time and effort. Cutbacks violate procedural justice perceptions when the processes involved in making decisions about employee outcomes are perceived as being unfair. Cutbacks do not necessarily need to directly impact the individual in order to violate their justice perceptions. Rather, employees make assessments of an organization's "justice climate" which is informed by the fairness of policies and procedures across the organization (Li & Cropanzano, 2009; Liao & Rupp, 2005; Whitman, Caleo, Carpenter, Horner, &

Bernerth, 2012). This can explain how survivors of cutbacks may still perceive violations of organizational justice because of coworkers or colleagues experiencing poor outcomes.

Three Measures of Work Motivation

Researchers in organizational behavior measure work motivation in seemingly innumerable ways, incorporating multiple concepts. This can cause problems with construct validity and overall replicability when scholars refer to the same latent concept using inconsistent measurement. This dissertation focuses on three components used widely in organizational behavior literature: job satisfaction, organizational commitment, and job involvement. Studies use these components – sometimes in isolation (Meyer & Allen, 1991; Rabinowitz & Hall, 1977; Steers, 1977), but also in conjunction with one another (Brooke, Russell, & Price, 1988; Hallberg & Schaufeli, 2006; Morrow & McElroy, 1987) – to measure unique elements of work motivation (Locke, 1976), and research provides evidence of the discriminant validity of these constructs (Brooke et al., 1988; Mathieu & Farr, 1991). Locke (1997) notes in his integration of the research that these are well-established, highly correlated, conceptually distinct attitudes that arise as a result of individual- and organization-level characteristics related to work. As such, these attitudes are crucial components that fit well into a broad characterization of work motivation consistent with earlier conceptions in organizational psychology (Locke & Latham, 2004).

Job satisfaction. Locke (1969, p. 316) defines job satisfaction as "the pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values". He also characterizes satisfaction as "a function of the perceived relationship between what one wants from one's job and what one perceives it as offering or entailing". Wanous & Lawler (1972) distinguish overall job satisfaction from "job facet satisfaction," which is satisfaction with a particular aspect of a job such as pay or advancement opportunities. Public administration researchers have used both concepts in the past to measure job satisfaction (e.g., Choi & Rainey, 2014).

Several personal, job-related, and organizational characteristics can foster job satisfaction (Glisson & Durick, 1988; Locke, 1997). Personality-based antecedents of job satisfaction include positive affectivity, emotional stability, and variations of the "Type A" personality (Bruk-Lee, Khoury, Nixon, Goh, & Spector, 2009; Judge, Heller, & Mount, 2002). While these characteristics are largely out of an organization's control (with the exception of recruitment and retention strategies), organizations can influence many other antecedents of job satisfaction through policies and practices. Hackman and Oldham (1980) posit that aspects of an employee's work such as autonomy, task variety, and task significance can increase general job satisfaction. Dailey and Kirk (1992) found that an organization's commitment to fair outcomes and procedures for its employees is a predictor of employee satisfaction. Job satisfaction is generally strongly related to organizational outcomes such as organizational citizenship behavior (Bateman & Organ, 1983) and decreased avoidable turnover (Abelson, 1987).

Organizational commitment. Organizational commitment is defined as "the relative strength of an individual's identification with and involvement in a particular organization" (Steers, 1977, p. 46). Operationalizations of the concept vary, but the most well-known model of organizational commitment divides the concept into three dimensions: affective, normative, and continuance commitment (Meyer & Allen, 1991). Affective commitment is most closely associated with emotional attachment to an organization and typically fosters the strongest protection against turnover (Mowday, Steers, & Porter, 1979). Normative commitment relates to perceived obligations to organizational members or clients. Continuance commitment involves remaining with an organization because the perceived costs associated with leaving outweigh the potential benefits. Organizational commitment has robust impacts potential organizational outcomes that result from organizational commitment. A meta-analysis conducted by Meyer and others (2002) found that organizational commitment, particularly affective and normative types, improves organizational citizenship behaviors, reduces turnover and absenteeism, and even increases job performance in the case of affective commitment.

Job involvement. Job involvement is defined by Lawler and Hall (1970, p. 310) as "the degree to which a person's total work situation is an important part of his life". Dubin (1956) and Lodahl and Kejner (1965) introduced the concept, though Kanungo (1979, 1982) narrowed its definition to emphasize a psychological identification with work which satisfies salient needs and expectations (S. P. Brown, 1996; Hallberg & Schaufeli, 2006). People displaying high levels of job involvement typically consider their work to be a central life interest (Dubin, 1956). In terms of job characteristics, Rabinowitz and Hall (1977) suggest that job roles that encourage autonomy and opportunities for participation are more likely to foster job involvement.

Researchers debate whether job involvement arises from personal or job-related characteristics (Rabinowitz, Hall, & Goodale, 1977). Moynihan and Pandey (2007a) indicated that an employee's job involvement was relatively unaffected by job characteristics. Their finding is consistent with the definition offered by Kanungo (1982) that emphasizes involvement as being a product of intrinsic drives for professional growth and development. In the other extreme, Knoop (1986) found that job characteristics such as participation in decision making were much more predictive of job involvement than personal indicators. Despite the inconsistent evidence, there seems to be the potential for some job characteristics to impact job involvement. Rabinowitz and Hall (1977) suggest that job roles that encourage autonomy and opportunities for participation are ultimately more likely to foster job involvement.

While job performance is an important outcome measure used widely throughout management literature, it should be noted that the three work motivation indicators used in this study have all been shown to have only a tenuous relationship with performance (Meyer et al., 2002; B. E. Wright, 2001). While organizations undergoing cutbacks will undoubtedly hope for high performance from employees following implementation, these other outcomes are important for organizations under pressure to improve operations and efficiency. Research has consistently shown that satisfaction, job involvement, and organizational commitment are each strongly related to organizational outcomes like turnover and absenteeism (G. J. Blau & Boal, 1987; Farrell & Stamm, 1988; Tett & Meyer, 1993; B. E. Wright & Kim, 2004; B. E. Wright & Pandey, 2008). Additionally, retaining experienced employees who have tacit knowledge of organizational operations is crucial during times when there are less resources available for recruitment and training of new employees.

Cutbacks and Motivational Outcomes

Even before organizations react to decline through downsizing, there are numerous individual-level job attitudes which suffer from organizational decline, alone. Cameron, Whetten, and Kim (1987) describe twelve organizational dysfunctions associated with decline. The reduction in available resources which accompanies decline threatens to increase conflict among organizational members, particularly when there is competition between two or more interest groups for vital resources (Levine, 1978; Pfeffer & Salancik, 2003; Thompson, 1967). Some of the dysfunctions relevant to individual-level work motivation include low morale, fragmented pluralism, and subunit conflict (Cameron, Whetten, et al., 1987). Despite this potential for decline to impact employee motivation on its own, there is strong evidence to suggest that the actions taken by organizational leadership in response to decline produce more potent effects on employee well-being.

Cutbacks typically produce negative attitudinal consequences for all types of employees across an organization. Kets de Vries and Balazs (1997) categorize employees of downsized organizations into three groups: (1) “victims” who were let go; (2) “survivors” who remained with the company following cuts; and (3) “executioners” responsible for the implementation of cuts. While the consequences of cutbacks are perhaps most severe for victims (Bennett, Martin, Bies, & Brockner, 1995; Piatak, 2019), survivors and executioners who remain with an organization following cutbacks have been described as suffering from a “survivor’s guilt” which, among other consequences, has been shown to increase the quantity – but not necessarily the quality – of their work (Brockner et al., 1985). In cases where survivors identify strongly with victims and perceive their severance as unfair, performance and organizational commitment may both suffer (Brockner et al., 1987). Executioners – the managers and executives responsible or cutback implementation – may also experience attitudinal consequences despite typically not suffering the same threats to their job security. Van der Voet and Van de Walle (2018) found that cutback management practices were likely to reduce managers' perceptions of autonomy, which negatively impacted their job satisfaction. Additionally, a deteriorating organizational climate caused by scapegoating behaviors or increased subunit conflict (Cameron, Whetten, et al., 1987) may also contribute to poorer work motivation among managers.

Two theoretical perspectives provide insight into how cutback management practices may impact the motivation and well-being of surviving employees. First, the job demands-resources (JD-R) model (Arnold B Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) states that the demands and resources of the job interact to produce risk factors associated with job-related stress. Whereas job demands may increase job stress when they require inordinate amounts of effort, job resources – the "physical, psychological, social, or organizational aspects of jobs" that help workers achieve organizational goals (Arnold B Bakker & Demerouti, 2007, p. 312) – are said to increase worker motivation and alleviate the impact that heavy job demands have on job stress. As it relates to cutback management practices, public management scholars have used JD-R to justify hypotheses that cutback management practices can worsen worker outcomes such as job satisfaction (Van der Voet & Van de Walle, 2018) and work engagement (Van der Voet & Vermeeren, 2017).

Second, social exchange theory emphasizes the importance of a series of interdependent interactions between organizational actors which generate obligations over time (Cropanzano & Mitchell, 2005; Emerson, 1976). These social interactions, as opposed to arms-length economic exchanges, typically involve exchanges of mutual trust and open, long-term commitments (P. Blau, 1964). Employees engage in social exchanges with coworkers, supervisors, or the organization as a whole (Lavelle et al., 2007; Wayne, Shore, & Liden, 1997). These distinct exchanges allow employees to maintain different qualities of relationships with each of these foci. Employees who perceive positive exchanges with their organization and its policies and practices typically exhibit higher levels of organizational commitment, satisfaction, and trust (Aryee, Budhwar, & Chen, 2002). During cutbacks, however, the quality of exchange between employee and organization can deteriorate. Cutbacks violate the "psychological contract" (Levinson, Price, Munden, Mandl, & Solley, 1962) between employees and their organization when the outcomes of cuts are perceived by employees as unfair either towards themselves or other members of the organization (Brockner et al., 1986; Brockner et al., 1987; Brockner et al., 1994). This violation of the psychological contract could decrease perceptions of organizational fairness, trust, and commitment to the organization (Brockner, 1990; Lavelle et al., 2007).

Managers and executives – often referred to as the executioners of cutback decisions and implementation – may also experience poorer job attitudes following cuts for some of the same reasons lower-level employees experience poorer perceptions. Cutbacks often motivate organizations to centralize decision-making and increase managers' stress while having less resources available for finding solutions to problems (Arnold B Bakker & Demerouti, 2007; Cameron, Whetten, et al., 1987; Levine, 1978; Van der Voet & Van de Walle, 2018). Managers may also experience "survivor's guilt" since they are similarly likely to identify with victims of cuts (Sahdev, Vinnicombe, & Tyson, 1999).

Other factors may impact the way managers perceive organizational culture and climate. The increasing subunit conflict and tension following cutbacks may have a negative impact on managers tasked with improving organizational conditions and operations. Managers' work motivation could be negatively impacted by perceptions of low employee commitment or poor organizational climate (Van der Voet & Van de Walle, 2018). Some argue that these negative assumptions about other employees in the organization may foster a "self-fulfilling prophecy" in which employees live down to the expectations of managers and reinforce the negative climate within the organization (Andersen, Pedersen, & Petersen, 2018; Le Grand, 2010; McGregor, 1960).

Research Outline

This dissertation builds to the base of knowledge described in the literature review in the form of three chapters. In Chapter 1, I use a survey of EU public executives to understand the perceptions and behaviors of managers following times of austerity. I examine whether the strategies or tactics associated with cutbacks impact managers' motivation. Additionally, I identify practices that managers and their organizations initially use more often in response to austerity, both in terms of the overarching approach to cuts and the specific cutback practices. In Chapter 2, I use several years of data from the US Office of Personnel Management (OPM) to test how personnel reductions, including reductions-in-force (RIFs) and early retirement programs, impact federal employee motivation. Within this, I also examine whether personnel reductions are associated with poorer agency-level perceptions of training and development or diversity and inclusion. I expect that these HRM-related policies and programs will play an equally important role in affecting employee motivation. Chapter 3 continues the theme of examining HRM quality at the individual- and organization-level and its impact on public health worker motivation.

General Propositions

Several propositions inform important research objectives. These propositions will be revisited in the concluding section to discern which were supported, as well as their relative implications for cutback management research and practice. First, managers and subordinate employees should experience many similar perceptions following cutbacks according to the JD-R model, as demands increase every bit as much for managers as for subordinates when an organization is forced to cut back. Subordinates will be forced to do more with less, which can create onerous demands while removing resources to cope with them (Breaugh, 2020; Webster, Beehr, & Love, 2011), while managers and executives are likely to centralize decision-making responsibilities and take on new, complex tasks during crisis (Raudla, Douglas, Randma-Liiv, & Savi, 2015; Savi & Randma-Liiv, 2015; E. Schmidt & Groeneveld, 2019). This increased workload is likely to reduce job satisfaction for managers and subordinates, alike (M. D. Jones, Sliter, & Sinclair, 2016).

While JD-R implies managers and subordinates will experience similar motivational consequences of cutbacks, social exchange theory – and the psychological contract breaches that cutbacks can create (Aryee et al., 2002; Conway et al., 2014; Vantilborgh, Bidee, Pepermans, Griep, & Hofmans, 2016) – may explain potential differences between how managers and subordinates experience cutbacks. Whereas subordinates – the proverbial "survivors" of cutbacks – may experience reduced organizational trust and commitment following cutbacks (Brockner et al., 1987), high-level managers will likely identify more as "executioners" responsible for applying cuts (Kets de Vries & Balazs, 1997). The role of executioner as opposed to survivor may cause managers to not experience the same losses in perceived job security and organizational support as their subordinates (Armstrong-Stassen, 1993; Fuller, Barnett, Hester, & Relyea, 2003). This could impact their commitment to the organization in different ways from subordinates, and could even increase managers' normative commitment to remain with the organization during its recovery from financial hardship. With this in mind, I offer two propositions that characterize this division between managers and lower-level employees:

P1: Cutback management practices reduce employee job satisfaction and job involvement at all organizational levels.

P2: Cutback management practices reduce organizational commitment among low-level employees and increase commitment among executives.

Another set of propositions concerns the role of HRM practices during difficult financial circumstances. Many note that HRM programs, particularly those involving training and development, are one of the first things to go when cuts are implemented in an organization (Demmke, 2017; Levine, 1984; Shafritz et al., 2017), and across-the-board cuts often have a disproportionately severe impact on training and development budgets (Metsma, 2014). The financial struggles introduced by the Covid-19 pandemic in 2020 support this notion, as recent reports display that the number of government employees reporting inadequate opportunities for training and development in their organization doubled compared to the previous year (Training Magazine, 2019, 2020). Cutting training budgets may be an attractive alternative to cutting staff (Smith, 2012) or core organizational services and products (Meier & O'Toole Jr, 2009), but it is also likely to harm employees if done without a careful assessment of which programs are needed to promote competency and task clarity. Meyer-Sahling and others (2016) found that training and development-related cuts produced greater motivational consequences for employees than salary- and promotion-related measures. Jones, Sliter, and Sinclair (2016) also found that reducing training opportunities during recession-related cuts increased employee strain and decreased satisfaction. In spite of these effects, training budgets are still one of the most vulnerable areas of organizations to be cut during tough times. The disconnect between organizational preferences and employee needs creates potential problems following retrenchment. I offer three propositions to characterize this problem:

P3: Managers will apply cuts to HRM policies and practices in organizations faced with cutbacks, even when few other practices are used.

P4: Employee motivation is positively associated with high-quality HRM practices.

P5: Employees in organizations faced with cutbacks will report fewer opportunities for training and development.

The first chapter applies a test of Propositions 1-3, while the two subsequent chapters examine Propositions 3-5. The concluding chapter discusses the integrated findings of the study and provides an evaluation of each proposition. I will assess the theoretical and practical implications based on each chapter's results, as well.

CHAPTER I: LEAVE MY MISSION OUT OF IT: HOW CUTBACK MANAGEMENT STRATEGIES AND PRACTICES IMPACT MANAGERIAL MOTIVATION AND PERCEPTIONS

Introduction

The financial crisis of the late 2000s and early 2010s forced many public organizations to cut services and expenses, and reintroduced the issue of cutback management back into the forefront of public management research (Bozeman, 2010; Pandey, 2010; Van der Voet & Van de Walle, 2018).To this point, this dissertation focused on employee well-being in response to cuts, in line with a trend from previous research (Kiefer et al., 2015; Van der Voet & Vermeeren, 2017). Many other scholars also seek to understand how high-level officials behave in the face of cutbacks (Van der Voet & Van de Walle, 2018). Executives are tasked with guiding the organization through hard times and implementing measures to effectively respond to austerity (E. Schmidt, 2019a; E. Schmidt & Groeneveld, 2019). These decisions are often made under time-sensitive circumstances (Bozeman & Pandey, 2004) and with varying degrees of autonomy (E. Schmidt, 2019b; E. Schmidt & Van de Walle, 2020; Van der Voet & Van de Walle, 2018).

The fiscal crisis severely impacted most countries around the globe, though some argue that the crash hit Europe particularly hard in many countries (Novotný & Centre for European Studies, 2013). Despite the EU's later guidance and assistance to form a united response to the crisis among member states (Fletcher, 2009), many European countries were uniquely impacted by the crisis and therefore devised different means to react to the issue. Some countries (e.g., Poland and Norway) experienced only mild impacts (Novotný & Centre for European Studies, 2013), allowing them to maintain or increase government expenditures in policy areas such as social spending (OECD, 2012). However, a much longer list of countries (e.g., Iceland, Ireland, Italy, and Spain) experienced prolonged impacts that forced government agencies to reduce their operating expenses, service levels, and staffing numbers (Kickert, Randma-Liiv, & Savi, 2015; Masters, 2009; Novotný & Centre for European Studies, 2013; OECD, 2012).

Even the hardest hit countries in Europe did not conduct austerity uniformly, with some asserting that there “have been as many responses as there are countries” (Peters, 2011, p. 76). The EU and other IGOs forced Spain and Italy to impose certain austerity measures in exchange for economic assistance. Baltic countries such as Estonia and Lithuania imposed severe, across-the-board cuts in the early stages of the crisis (Kickert et al., 2015). Still, there were particular similarities across many European states in the style and order of administrative cuts to the public sector. Virtually every country applied freezes to hiring and pay, using these methods as a hopeful attempt to stave-off more serious measures (Kickert et al., 2015). These across-the-board policies sometimes led to more targeted, permanent measures to reduce expenses in later stages of the crisis, particularly in the hardest-hit countries. With this context in mind, it is important to look back at which practices produced poorer motivation and perceptions for executives in the aftermath of austerity measures.

This chapter addresses four research questions. First, does either the general approach to cuts, or the specific methods used, affect managers’ motivation levels? General approaches to cutbacks include proportional (across-the-board), targeted, and savings-based strategies. Previous literature (Levine, 1984, 1985; G. B. Lewis, 1988; Raudla, Savi, et al., 2015) has explored the comparative advantages of the proportional and targeted strategies, but has not looked at their impact on managerial motivation. Despite this, executive motivation may be affected by the choice of either strategy for several reasons. Managers who used a proportional approach may be relieved to avoid political debates between subunits through an “equal-misery” strategy (Hood & Wright, 1981), but they also may feel less autonomy or control over the cutback process (Van de Walle & Jilke, 2014; Van der Voet & Van de Walle, 2018). The targeted approach could provide managers more felt control over the process, but it also could make them feel like "executioners" deciding which organizational units bear the brunt of cuts (Kets de Vries & Balazs, 1997).

Beyond the proportional-targeted debate, four categories of practices to implement these strategies: personnel reductions (e.g., layoffs, hiring freezes), changes in compensation (e.g., pay cuts/freezes), programmatic changes (e.g., cuts to existing programs, postponing/cancelling new ones), and organizational restructuring (e.g., downsizing back office functions, reducing front line presence). Overreliance on any of these practices could produce consequences for managers' well-being. Managers with no options but to reduce the operational capacity of their organization (perhaps through programmatic changes or decreased front line capacity) could experience poorer perceptions due to worse organizational performance. Personnel reductions could also reduce motivation by leading managers to believe they were the executioner who was responsible for the loss of staff in the organization. Finally, pay cuts and freezes are likely to be applied to upper management as well as other organizational levels (EPSU, 2012; E. Schmidt & Groeneveld, 2019), meaning managers could feel personally impacted by these practices.

The second research question is whether the various cutback approaches and practices affect managers' perceptions of employees' motivation. Managers are more likely to centralize decision-making and tighten control over subordinates during the implementation of cutbacks (Stoker, Garretsen, & Soudis, 2019), but does this translate to distrust of subordinates? To address this, I look at survey questions that ask whether employees cooperate and coordinate their efforts (which I call group climate), as well as about employees' commitment to accomplishing organizational goals (mission alignment). While this would ideally serve as a proxy for actual coordination and commitment among subordinates, managers' perceptions may also be important ends in themselves. Managerial relationships with subordinates are an especially strong predictor of subordinate job satisfaction (Taylor & Westover, 2011). Further, managers who distrust subordinates are more likely to display controlling or overly punitive behavior towards them, which may exacerbate interpersonal tensions and reduce subordinate commitment to organizational goals (Gouldner, 1954; March & Simon, 1958). Low-quality relationships between organizational leadership and subordinates also negatively affect the cutback management process by making subordinates more resistant to organizational change (Furst & Cable, 2008). Additionally, theories by McGregor (1960) and Le Grand (2010) posit that if employees feel that management views them as self-interested, lacking direction, and in need of external rewards and sanctions to perform, they will "live down" to those expectations and reduce their overall motivation. In this way, managers' poor views of subordinates could create a sort of self-fulfilling prophecy whereby employees reduce commitment to organizational goals (Andersen et al., 2018). While the available data makes it difficult to test for this self-fulfilling prophecy, we can still examine whether specific cutback strategies or practices worsen managers' perceptions of subordinates.

Third, this study examines whether any specific cutback practices appear preferred by managers. When austerity is required, which practices do managers resort to most often? This can indicate the range of behaviors managers are likely to pursue when implementing cuts. For instance, Meier and O'Toole (2009) claim that executives make decisions about resources allocation and personnel management that protect core products, activities, and services at the expense of peripheral activities during times of financial stress. Managers may also be more inclined to implement "milder" policies – such as freezes to hiring and pay – over layoffs and pay cuts, which cause immediate and noticeable consequences for subordinates (Natunann, Bies, & Martin, 1995). This analysis could suggest a form of "best practices" used by experienced public managers to execute cutbacks. More importantly, though, it could also indicate if certain practices are simultaneously being used frequently *and* leading to negative attitudinal outcomes among managers. The combination of frequent use and negative outcomes could either signal that managers' hands are tied in making some cutback decisions, or they do not anticipate the negative consequences of a practice prior to its implementation. For these reasons and more, the preferences of managers in which cuts to apply (and how frequently) may inform scholars and practitioners alike about which behaviors are probable in future instances of austerity.

Finally, this study seeks to understand the cumulative impact of cutback practices on managers' perceptions. In other words, does the heavy use of multiple cuts negatively affect managers' motivation or perceptions of subordinates? Previously mentioned research questions should indicate which practices independently produce poor outcomes, but the heavy use of numerous practices could also take a toll on managers tasked with major cutback efforts. The stress of devising multiple means of reducing operating expenses could produce feelings of inefficacy or a lack of support towards achieving their organization's mission. If several of these measures are imposed on the organization by legislators or other politicians, this could also reduce managers' satisfaction or commitment through a perceived loss of autonomy (Gagné & Deci, 2005; Van der Voet & Van de Walle, 2018). However, there is no guarantee that every aspect of motivation may be negatively impacted by the accumulation of practices. Organizational commitment – particularly the type of normative commitment measured in this study – could increase in the aftermath of severe cutbacks. Normative commitment to an organization is conceptualized in the literature as a sense of "moral duty" or "indebtedness" to the organization (Meyer & Parfyonova, 2010). Whereas subordinate employees – the "victims" or "survivors" of cutbacks – are likely to experience less indebtedness or moral duty to the organization following a round of cuts (Conway et al., 2014), managers who play the role of executioners may increase their sense of moral duty to the organization after being forced to hamper its operations (E. Schmidt & Groeneveld, 2019). This is especially likely in public organizations, which tend to attract people with strong senses of civic duty and self-sacrifice (Perry, 1997; B. E. Wright, 2007). Therefore, I expect managers' normative commitment to their organization to increase as the severity of cuts increases due to a perceived obligation to "right the ship" and achieve organizational goals.

Hypotheses

Several distinct hypotheses guide the research and are based around the various ways to measure and evaluate cutback strategies and tactics. The first of these involve general strategies that organizations adopt to implement cutbacks, which include proportional approaches (i.e., making cuts across-the-board for all departments), targeted cuts (i.e., cutting according to priorities), and efficiency and productivity savings (i.e., making adjustments at the margins of budgets). Logically, the most desirable option for managers is efficiency savings, though this practice is difficult to rely on for two reasons. First, this strategy is generally not suitable in scenarios where substantial cuts need to be made to fit new budgetary constraints. Second, lean and efficient organizations may not have many additional ways to free up necessary resources using this approach (Levine, 1979). As a result, while the savings-based approach should yield the best motivational outcomes for executives, it is also likely to be less utilized relative to the proportional and targeted approaches. Between the other two strategies, I hypothesize that the targeted approach will be associated with more favorable executive perceptions than the proportional approach. While the proportional approach has the benefit of decreasing interdepartmental conflict in the beginning stages, previous research shows that the targeted approach commonly produces more benefits to the organization, especially in more severe circumstances (Raudla, Savi, et al., 2015).

H1: The targeted and savings-based approaches are associated with higher motivation than the proportional approach.

General cutback strategies are also expected to impact perceptions of subordinates within the organization. In response to cutbacks, organizational leaders typically try to centralize decision-making procedures and monitor the activities of subordinates more closely (Staw, Sandelands, & Dutton, 1981; Stoker et al., 2019). While this is done with the intent of retaining some level of organizational control that is lost during an exogenous shock like a financial crisis (Sutton & D'Aunno, 1989), the increased supervision and control over subordinate activities can paradoxically lead to employees seeking to find more ways to subvert that supervision and furthering individual (rather than organizational) goals (Andersen et al., 2018; Gouldner, 1954; McGregor, 1960). Since proportional cuts are hypothesized to produce poorer satisfaction among executives, this may have a spillover effect towards producing less trust of subordinates in the organization, as well.

H2: The proportional approach is associated with poorer executive perceptions of employees than the targeted and savings-based approaches.

Each of the general strategies involve the use of one or more specific practices as a way of implementing cuts. None of the practices are ideal for managers to implement, but some likely produce fewer consequences for managerial perceptions and organizational operations than others. I propose that practices which hinder organizational effectiveness or directly impact service delivery will be associated with poorer perceptions among executives. Some of the practices which affect the organization's service delivery include programmatic changes (e.g., cutting existing programs or postponing new ones) and certain types of organizational restructuring (e.g., reducing front line presence).

H3: Cutting current programs, postponing future programs, and reducing front line presence impact executive perceptions more negatively than other types of practices.

Managers may also display a preference for certain practices over others, regardless of the impact a practice has on their motivation levels. For instance, executives will likely prefer to opt for practices that harm current subordinates in the organization least. This means implementing hiring freezes and pay freezes before layoffs and pay cuts (Kickert et al., 2015). It could also mean cutting prospective programs rather than cutting current programming.

H4A: Hiring freezes will be implemented more often than staff layoffs. Layoffs will be used mainly after freezes have already been used.

H4B: Pay freezes will be implemented more often than pay cuts. Pay cuts will be used mainly after pay freezes have already been used.

H4C: Prospective program cuts will be implemented more often than existing program cuts. Cuts to existing programs will be used mainly after postponements have already been used.

Finally, I propose that using several types of practices to implement cutbacks will have a cumulative impact on the perceptions of managers. While this cumulative use is likely to decrease job satisfaction due to the increased challenges associated with recovering from accumulated cuts, executive commitment may actually increase as the organization incurs more cutbacks. Managers with an orientation towards public service may want to see the organization recover from a series of severe cuts, and may feel an obligation to enact those improvements rather than exit the organization.

H5A: As the severity of cutback practices increase, executive job satisfaction decreases.

H5B: As the severity of cutback practices increase, executive organizational commitment increases.

Research Design & Methodology

This study uses data from the Executive Survey on Public Sector Reform in Europe, a survey of high-level public managers across 20 European Union member states. The survey was conducted by Coordinating for Cohesion in the Public Sector of the Future's (COCOPS) in 2012 and includes items measuring managers' perceptions of their organizations in the aftermath of the fiscal crisis of the late 2000s. In particular, the survey collects important information about how organizations chose to approach making cuts (e.g., targeted vs. across-the-board), as well as the types of specific practices used during the cutback management process. In all, the survey includes nine distinct types of cuts: laying off staff, freezing hiring, cutting pay, freezing pay, cuts to existing programs, postponing or cancelling new programs, downsizing back office functions, reducing front line presence, and increased fees and charges for users. The survey also asks about managers' satisfaction, commitment, and perceptions of people in their organization, among other information.

The analysis is divided into two primary steps. The first phase uses the organization's general cutback management strategies as the primary independent variable. Respondents report one of three options describing their organization's overarching approach to cutting back as a result of the fiscal crisis. I use a series of OLS regression models to test if any of these approaches are associated with significantly lower job satisfaction, organizational commitment, or perceptions of other employees within the organization. I also examine the possibility that perceptions of reform (as either poorly planned or poorly implemented) may moderate the relationship between any general cutback management approach and managers' perceptions and motivation.

The second phase of the analysis repeats several of the analyses in the first phase but replaces general cutback management strategies with specific practices used to implement cutbacks. While respondents were required to select one general strategy employed by their organization, with respect to specific practices, they could report the extent to which the organization used each practice on a 1-7 scale. A respondent could report using an across-the-board cutback strategy that included a great deal of cancelling or postponing new programs and staff layoffs, but not much use of pay cuts, for instance. This allows us to examine whether specific cutback practices produced poorer perceptions among managers. Like the previous phase, I incorporate a series of OLS regression models using job satisfaction, organizational commitment, and perceptions of employees as dependent variables. I also create an index which combines the usage of a collection of practices to test whether the accumulation of different practices harms executive perceptions.

Cutback Management Indicators

I measure an organization's cutback management practices in two ways. The first measure identifies the general strategy an executive's organization relied on to implement cutbacks during the financial crisis. Three options were listed as possible responses: proportional cuts, targeted cuts according to priorities, productivity and efficiency savings.[1] Previous research argues that different forms of cutback management strategies arise from different sources of decline or turbulence (Cameron, Kim, & Whetten, 1987) and produce different organizational outcomes (Van der Voet, 2019). I extend this research by examining how these strategies affect executive motivation and their perspectives of employees in the organization. Many countries and public organizations during the fiscal crisis did not purely use one strategy in the complete absence of the others. For instance, proportional cuts were often used in the beginning stages of the fiscal crisis with the expectation that the cuts would be temporary and reversible (Kickert et al., 2015). As time moved on, many hard-hit countries switched to more permanent, targeted changes to adjust their operations and expenses. Therefore, this independent variable should be viewed as the executive's account of the *dominant*, rather than *sole*, approach to administering cuts.

The next proxies evaluate the extent to which an executive's organization resorted to specific types of cutback management practices. I use eight of the nine specified cutback practices used in the survey ("increased charges and fees for users" is omitted). Managers described on a 7-point scale the frequency with which these practices were used as a result of the fiscal crisis ("Not at all" to "To a great extent"). These strategies may represent personnel reductions (staff layoffs and hiring freezes), changes in pay structures (pay cuts and pay freezes), programmatic changes (cuts to existing programs and postponing new ones), or organizational restructuring (downsizing back office functions and reducing front line presence).

[1] "None/No approach needed" was listed as a fourth possible response. Given that it is difficult to distinguish what a respondent means when selecting that option, those observations were excluded from the analysis.

Managerial Perception Indicators

As with the independent variables, I use several dependent variables to measure the impact of cutbacks on executive perceptions. The item listings and factor loadings for these variables is available in Table 1. Two factors measure executives' work perceptions. Job satisfaction is comprised of three items which produced a Cronbach's alpha of .83 (e.g., "I get a sense of satisfaction from my work"). Organizational commitment is made up of five items which produced a Cronbach's alpha of .71 and most closely align with normative commitment (e.g., "I was taught to believe in the value of remaining loyal to one organization"). Job involvement, which was used in the previous two essays as another component of motivation, is not measured by this survey.

Another set of items represent executive perceptions of the other people in their organization. The first, referred to as "group climate," measures the extent that employees communicate and cooperate with each other. Six items in this scale produced a Cronbach's alpha of .94 (e.g., "People in my organization engage in honest and open communication with one another"). The second, referred to as "mission alignment," measures how well employees' personal goals align with organizational goals. Three items produced a Cronbach's alpha of .90 (e.g., "People in my organization enthusiastically pursue collective goals and mission").

I also measure how executives perceive the quality of reforms in their agency in two types of reform perceptions, both measured as factor variables using sets of 10-value items that each begin with the prompt, "Please indicate your views on public sector reform using the scales below. Public sector reforms in my policy area tend to be…". Executives answer these questions by reporting perceptions of their policy area between a set of extreme categories (e.g., between "Top-down" on one extreme and "Bottom-up" at the other). The first factor variable represents executives' views on whether reforms are *planned for* appropriately. I use five items to represent this factor. Extremes on the low-end of the scale represent reforms being planned, geared towards service improvement, incorporating public involvement, and being successful, while high-end categories included reforms being crisis-driven, geared towards cost-cutting, not involving the public, and unsuccessful. The second factor variable measures executives' views on whether reforms are *implemented* appropriately. The three items in this scale range from "consistent" to "inconsistent," "comprehensive" to "partial," and "substantive" to "symbolic." To aid in the interpretation of the constant coefficient in regression analyses, these variables are centered. Rather than a 1-10 scale, responses are placed on a -4.5-4.5 scale, with responses of poor planning or implementation represented by greater values.

Controls

I use several control variables throughout the analysis. First, I include the respondent's country to control for fixed-effects. Additionally, I control for respondents' organization type (ministry at central government level, agency at the central government level, or agency at state or regional government level), hierarchical level (first-, second-, or third-highest organizational level), and organization size (ranging from "fewer than 50 employees" to "more than 5,000 employees).

Results

The findings are divided into several sections. The first of these begins with a discussion of descriptive statistics in Table 2, as well as three cross-tabulations in Tables 4 through 6. The next section covers information in Tables 7 and 8 and analyzes the relationships between general cutback management strategies and managerial perceptions. The final section includes information on Tables 9 and switches the focus of analysis toward specific cutback practices used in response to the fiscal crisis.

Table 1. Perception Variable Item Descriptions and Factor Loadings

Factor Variable	Items Used	Factor Loading (Pattern-Matrix)[1]
Job Satisfaction (3 items, alpha=0.83)	I get a sense of satisfaction from my work	0.79
	I feel valued for the work I do	0.75
	I would recommend it as a good place to work	0.73
Organizational Commitment (5 items, alpha=0.71)	I really feel as if this organization's problems are my own	0.49
	I would be very happy to spend the rest of my career with this organization	0.55
	It would be very hard for me to leave my organization right now, even if I wanted to	0.61
	I was taught to believe in the value of remaining loyal to one organization	0.58
	Things were better in the days when people stayed with one organization for most of their career	0.57
Group Climate (6 items, alpha=0.94)	People in my organization engage in open and honest communication with one another	0.83
	People in my organization share and accept constructive criticisms without making it personal	0.82
	People in my organization willingly share information with one another	0.85
	People in my organization have confidence in one another	0.91
	People in my organization have a strong team spirit	0.81
	People in my organization are trustworthy	0.80
Mission Alignment (3 items, alpha=0.90)	People in my organization share the same ambitions and vision for the organization	0.84
	People in my organization enthusiastically pursue collective goals and mission	0.88
	People in my organization view themselves as partners in charting the organization's direction	0.82

[1] Factor loadings represent analysis including only the items used to create that specific factor variable

Descriptive Statistics

After removing observations with missing information from the dataset, the full sample of respondents includes 4,508 executives of public organizations within the EU. Almost all executives in the sample either operate within the central ministry of their country (39.2 percent) or central government agencies below the ministry-level (55.2 percent), while a small portion represent ministries at the state or regional level (5.7 percent). Over half (56.1 percent) work in agencies with less than 500 employees. Approximately one-fifth (22.5 percent) of executives reported being in the top hierarchical level, 42.2 percent are in the second hierarchical level, and 35.3 percent are in the third hierarchical level.

Table 2 shows a comparison of means and standard deviations for several categories of variables based on the type of cutback strategy applied by an executive's organization. Nearly half of the respondents (45.5 percent) reported using a targeted approach to cuts, while one-third of executives (33.2 percent) implemented a proportional strategy and one-fifth (21.3 percent) utilized efficiency savings. This distribution of strategies was largely unaffected by an executive's position within the hierarchy or the size of the organization. Executives in regional-level ministries were disproportionately likely to use the targeted strategy (61.7 percent).

The first two rows in Table 2 compare mean job satisfaction and organizational commitment perceptions according to approach. Job satisfaction varies substantially among executives depending on their reported cutback approach. The mean job satisfaction of executives using the proportional approach is 5.2 on a scale of 1 to 7 – the lowest mean score of any strategy and 0.2 lower than the overall mean. Executives using other two strategies report higher job satisfaction, with the savings-based strategy leading to the highest ratings (5.6). The disparities in organizational commitment are smaller, though the targeted strategy was associated with the most positive ratings. The following two rows depict those using the proportional approach as also having poorer views subordinates in their organizations. These executives report that subordinates in their organization coordinate their efforts less effectively and are less committed to achieving organizational objectives. Those using the efficiency strategy reported the most favorable perceptions of subordinates.

Table 2 also suggests that perceptions of how reforms have been carried out within an executive's organization vary based on the dominant approach to cuts. Using a -4.5 to 4.5 scale, with larger numbers representing poorer perceptions of reform, the proportional approach is associated with mean perceptions of planning and implementation that are 0.3 and 0.4 poorer than the average across the entire sample, respectively. The efficiency savings strategy is associated with far more favorable views of reform, while the targeted approach is closer to the overall average.

Managers using the proportional approach made heavier use of every type of cut than those using more targeted approaches. Looking at the index measure in the bottom row of Table 2, the aggregate use of every practice is 29.2 on average for those who used the proportional approach, compared to 27.1 and 24.8 for the targeted and efficiency approaches, respectively. The differences across each individual practice paint a similar picture of the proportional strategy utilizing every practice more than the other two approaches.

These patterns persist even after controlling for perceptions of reform, country, and organization characteristics. Table 3 uses a series of regression analyses to compare practice usage for the other two approaches relative to targeted cuts. Proportional approaches were especially related to more frequent use of hiring freezes, reducing front line presence, and staff layoffs compared to the other approaches. The targeted and savings-based approaches only differ significantly in that efficiency savings users were less likely to cut existing programs, postpone new programs, or implement staff layoffs. Interestingly, upon controlling for other relevant factors, the likelihood of pay cuts is quite similar across all three approaches, as the proportional and savings-based strategies' difference was only barely significant at the 0.1 level.

Table 2. Means and Standard Deviations by Cutback Approach

Variable	Proportional Approach (n=1,497)	Targeted Approach (n=2,049)	Efficiency Savings (n=962)	Total (n=4,508)
Executive Motivation				
Job Satisfaction (1-7)	5.20 (1.30)	5.43 (1.18)	5.62 (1.13)	5.39 (1.22)
Organizational Commitment (1-7)	4.18 (1.26)	4.34 (1.28)	4.19 (1.25)	4.25 (1.27)
Perceptions of Subordinates				
Group Climate (1-7)	4.90 (1.22)	5.02 (1.17)	5.16 (1.08)	5.01 (1.17)
Mission Alignment (1-7)	4.50 (1.38)	4.63 (1.32)	4.81 (1.25)	4.63 (1.33)
Perceptions of Reform				
Poorly Planned Reforms (-4.5 – 4.5)	1.29 (1.56)	0.89 (1.64)	0.62 (1.61)	0.97 (1.63)
Poorly Implemented Reforms (-4.5 – 4.5)	0.44 (2.00)	-0.03 (1.98)	-0.38 (2.01)	0.05 (2.02)
Cutback Practice Usage				
Staff Layoffs (1-7)	3.31 (2.23)	2.89 (2.10)	2.92 (2.07)	3.04 (2.15)
Hiring Freezes (1-7)	5.34 (1.89)	4.85 (2.10)	4.55 (2.15)	4.95 (2.06)
Pay Cuts (1-7)	3.28 (2.41)	3.03 (2.36)	2.48 (2.14)	3.00 (2.35)
Pay Freezes (1-7)	4.27 (2.45)	4.09 (2.49)	3.54 (2.49)	4.03 (2.49)
Cuts to Existing Programs (1-7)	4.76 (1.83)	4.56 (1.82)	4.15 (1.90)	4.54 (1.85)
Postponing/Cancelling New Programs (1-7)	4.81 (1.82)	4.60 (1.81)	4.14 (1.85)	4.57 (1.84)
Downsizing Back Office Functions (1-7)	4.32 (1.93)	4.01 (1.97)	4.02 (1.94)	4.11 (1.95)
Reducing Front Line Presence (1-7)	3.44 (1.88)	3.05 (1.81)	3.02 (1.81)	3.18 (1.83)
Overall Cutback Severity				
Severity Index (1-49)[a]	29.22 (8.60)	27.08 (9.04)	24.79 (9.08)	27.30 (9.05)

[a] The severity index excludes "Downsizing Back Office Functions" due to its opposing impact on executive perceptions

Hiring freezes were the most common cutback practice (5.0 on a 1 to 7 scale), while pay cuts were used least (3.0). Cuts to both existing and prospective programs were also quite common relative to other practices (4.5 and 4.6, respectively). A correlation matrix (not shown) indicated that certain practices tended to be used in conjunction, such as cutting existing programs while also postponing future programs (r=0.71). The use of both pay cuts and pay freezes are also strongly related (r=0.56), as are downsizing back office functions and reducing front line presence (r=0.48).

Tables 4 through 6 offer a series of cross-tabulations to gauge managers' preferences regarding several strongly-related sets of practices. In other words, while certain practices are used in conjunction, these tables indicate which of the two practices are utilized *first* or *more often.* While the original coding of one ("not at all") to seven ("to a great extent") is used in all other tables, here I simplify the output by creating dichotomous variables to represent the usage of each practice. The values for each variable differentiate between responses of 1-4 for a practice and responses of 5-7, which indicate heavy usage of a cutback method.

Pay freezes were clearly used prior to pay cuts in the vast majority of instances (Table 3). Three-quarters of the managers reported either heavy use of both or light use of both, but 22.3 percent implemented pay freezes but light use of pay cuts. In contrast, only 3.8 percent of managers in the sample reported minimal usage of pay freezes alongside of pay cuts. While pay cuts and freezes were frequently used in conjunction to respond to austerity, freezes were seen as the more preferred method to pay cuts in most instances.

In contrast, programmatic changes look to be a mostly both-or-neither choice (Table 5). 48.2 percent of the sample reported cutting both current and prospective programs, while only a much smaller group of managers (19.0 percent total) reported using one practice without the other. On average, managers preferred to either leave programs untouched in their cutback strategy, or opted to implement cuts to existing and future programs in roughly equivalent amounts.

Managers clearly preferred to cut back office functions before making cuts to the front line of the organization (Table 6). Only 5.2 percent of the entire sample cut front line capacity without downsizing back line operations, but 28.4 percent reduced only back office functions. Indeed, cutting just back office functions was much more popular than cutting both (19.9 percent of the sample). Clearly, managers did what they could to apply cuts to back office functions prior to reducing front line capacity, perhaps in an attempt to maintain service levels and continue achieving organizational goals in the short-term.

General Cutback Management Strategies

Tables 7 and 8 focus on general cutback management strategies as the primary independent variable. Both test the impact of general cutback strategies on a separate outcome variable representing either executives' motivation (Table 7) or their perceptions of agency employees (Table 8). Each table contains two dependent variables and includes two models per dependent variable. Model 1 for each dependent variable looks at how executive perceptions differ according to the general cutback strategy used. The second model adds the cutback severity index – which aggregates the usage of seven cutback management strategies – as well as perceptions of reform planning and implementation. These additional variables serve two purposes. First, the coefficients for cutback severity provide insight about how the accumulation of practices impact motivation and perceptions of subordinates. Second, controlling for these perceptions reduces the likelihood that executives with especially poor perceptions of reform overstate the effects of a particular approach on motivation or views of subordinates. Other controls used in every model include hierarchical level, organization type, organization size, and country.

Table 3. Use of Cutback Tactics by General Strategy

	Staff Layoffs	Hiring Freezes	Pay Cuts	Pay Freezes	Cuts to Existing Programs	Postponing Future Programs	Downsizing Back Office Functions	Reducing Front Line Presence
Proportional Cuts	0.25***	0.38***	0.14***	0.09	0.10*	0.11*	0.20***	0.24***
	(4.27)	(5.90)	(2.75)	(1.39)	(1.75)	(1.81)	(3.21)	(4.04)
Targeted Cuts	--	--	--	--	--	--	--	--
Efficiency Savings	-0.13*	-0.09	-0.06	-0.04	-0.35***	-0.29***	-0.10	-0.05
	(-1.92)	(-1.22)	(-0.95)	(-0.58)	(-5.19)	(-4.19)	(-1.41)	(-0.68)
Constant	3.59***	5.51***	2.31***	6.93***	4.89***	4.70***	5.39***	2.97***
Observations	4,508	4,508	4,508	4,508	4,508	4,508	4,508	4,508
R-squared	0.38	0.20	0.60	0.45	0.19	0.15	0.19	0.12

Controls: Reform Planning & Implementation Perceptions, Agency Type, Agency Size, Hierarchical Level, Country

t-statistics in parentheses

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 4. Cross-Tabulation between the Two Types of Compensatory Cuts

Cross-Tabulation		Pay Freezes		
		Less Use (1-4)	Greater Use (5-7)	Total
Pay Cuts	Less Use (1-4)	48.5%	22.3%	70.7%
	Greater Use (5-7)	3.8%	25.5%	29.3%
	Total	52. 3%	47.7%	100% (4,508)

Table 5. Cross-Tabulation between the Two Types of Programmatic Changes

Cross-Tabulation		Cancelling/Postponing New Programs		
		Less Use (1-4)	Greater Use (5-7)	Total
Cuts to Existing Programs	Less Use (1-4)	32.8%	9.5%	42.3%
	Greater Use (5-7)	9.5%	48.2%	57.7%
	Total	42.4%	57.7%	100% (4,508)

Table 6. Cross-Tabulation between the Two Types of Organizational Restructuring

Cross-Tabulation		Reducing Front Line Presence		
		Less Use (1-4)	Greater Use (5-7)	Total
Downsizing Back Office Functions	Less Use (1-4)	46.4%	5.2%	51.6%
	Greater Use (5-7)	28.4%	19.9%	48.4%
	Total	74.8%	25.2%	100% (4,508)

Job Satisfaction

The first dependent variable – shown in the left-half of Table 7 – is executive job satisfaction. The baseline model clearly suggests that a proportional, across-the-board cutback management approach was associated with the lowest levels of job satisfaction. Executives using the proportional approach, on average, rated their job satisfaction .27 lower than those using targeted cuts and .34 lower than those using savings approaches. The targeted and savings-based approaches did not differ significantly from one another, according to Stata's lincom command. The disparities between the proportional strategy and the other two approaches decrease in Model 2 after incorporating perceptions of reform and cutback severity, though targeted cuts and efficiency savings still produce higher levels of executive job satisfaction (again, targeted and savings strategies did not differ significantly). Controlling for these perceptions served to shrink the gap between the best and worst cutback management strategies, from .34 in the baseline model to .17 in the second model. Portions of the total effect of cutback approach can therefore be explained by cutback severity and views of reform, but there are still apparent disadvantages associated with the proportional strategy. As expected, as managers thought reforms in their area were increasingly poorly planned or poorly implemented, job satisfaction decreased substantially. Satisfaction was also negatively affected by the accumulation of cuts. Each coefficient in Model 2 was significant at the .01 level.

Organizational Commitment

The second half of Table 7 follows the same process with organizational commitment as the dependent variable. The targeted and savings-based approaches were again related to the higher levels of organizational commitment than the proportional approach, though the gulf between the proportional approach and these other two strategies was only roughly half as large as the comparative impacts on job satisfaction. Targeted and savings-based strategies again did not differ significantly, according to Stata's lincom command. Though perceptions of poorly planned and poorly implemented

Table 7. Regression Analysis: Executive Motivation

	Job Satisfaction		**Organizational Commitment**	
	Model 1	Model 2	Model 1	Model 2
Cutback Approach				
Proportional Cuts	--	--	--	--
Targeted Cuts	0.27***	0.16***	0.13***	0.10**
	(6.50)	(3.88)	(3.23)	(2.43)
Efficiency Savings	0.34***	0.17***	0.15***	0.11**
	(6.93)	(3.57)	(3.17)	(2.29)
Cutback Severity				
Severity Index (1-49)[a]		-0.01***		0.01***
		(-2.81)		(3.17)
Perceptions of Reform				
Poorly Planned Reforms		-0.09***		-0.05***
		(-6.64)		(-4.08)
Poorly Implemented Reforms		-0.12***		-0.04***
		(-10.91)		(-4.08)
Constant	5.69***	5.88***	3.72***	3.75***
Observations	4,508	4,508	4,508	4,508
R-squared	0.09	0.16	0.23	0.24

[a] Index centered at mean (27.3) to maintain interpretable constant
Controls: Agency Type, Agency Size, Hierarchical Level, Country
t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

reforms were negatively related to organizational commitment in Model 2, targeted cuts and efficiency savings were still significantly associated with higher levels of commitment than the proportional approach. Interestingly, cutback severity produced the opposite impact on organizational commitment as what was found regarding job satisfaction. As the cumulative number of cuts increased, executives' commitment to the organization also increased significantly. This finding warrants further examination in later sections, as it provides early evidence of a form of "executioner's guilt" among executives following cutbacks.

Group Climate

Moving to executive perceptions of subordinates in their agency, Table 8 begins with a set of analyses on perceptions of group climate. Positive coefficients in this table indicate that executives believe subordinates work as a cohesive unit and coordinate to achieve organizational goals. The baseline model in this table indicates that the targeted and savings-based strategies produce significantly better perceptions of group climate than the proportional approach. Incorporating cutback severity and perceptions of reform in Model 2 reduce the disparities between the proportional approach and the other two strategies, though the differences remain significant at the 0.05 level. Poor perceptions of planning and implementation are both significantly related to worse views of group climate, though cutback severity appears unrelated to this outcome. When controlling for all of the other factors in the model, increases in the overall severity of cutback measures used did not contribute to poorer views of coordination and cooperation among people in their organization.

Mission Alignment

The second half of Table 8 uses perceptions of agency employees' mission alignment as the outcome variable. Positive coefficients indicate executives believe that subordinates are motivated towards accomplishing the primary objectives of the organization. As with the other three dependent

Table 8. Regression Analysis: Perceptions of Subordinates

	Group Climate		Mission Alignment	
	Model 1	Model 2	Model 1	Model 2
Cutback Approach				
Proportional Cuts	--	--	--	--
Targeted Cuts	0.19***	0.10**	0.24***	0.13***
	(4.79)	(2.55)	(5.48)	(3.07)
Efficiency Savings	0.23***	0.11**	0.32***	0.17***
	(4.93)	(2.26)	(5.96)	(3.11)
Cutback Severity				
Severity Index (1-49)[a]		-0.00		-0.00
		(-1.07)		(-0.46)
Perceptions of Reform				
Poorly Planned Reforms		-0.09***		-0.13***
		(-7.29)		(-9.88)
Poorly Implemented Reforms		-0.08***		-0.09***
		(-9.18)		(-8.48)
Constant	5.90***	6.05***	5.47***	5.67***
Observations	4,508	4,508	4,508	4,508
R-squared	0.11	0.15	0.11	0.17

[a] Index centered at mean (27.3) to maintain interpretable constant
Controls: Agency Type, Agency Size, Hierarchical Level, Country
t-statistics in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

variables, targeted and savings-based strategies were associated with higher levels of mission alignment perceptions than the proportional approach, but did not differ significantly from each other. The effect size of these coefficients is reduced by half in Model 2, though the two approaches still produce significantly better perceptions at the 0.01 level. Elsewhere in Model 2, poorly planned reforms negatively impact mission alignment in a stronger fashion than poorly implemented reforms. Thus, executives who felt that reforms were poorly planned (e.g., crisis-driven, geared towards cost-cutting, and not involving the public) appear much more likely to believe that other organizational members lack a commitment to achieving organizational goals. Cutback severity was not significantly related to perceptions of mission alignment. Taken with the other result in Table 8, it is clear that the marginal impact of additional cutback management practice usage did little to impact executives' perceptions of subordinates.

Specific Cutback Management Practices

The next set of analyses focuses on the eight specific cutback practices included in the survey. Unlike the general strategy, these practices were not mutually exclusive, allowing respondents to answer the extent that their agency used these practices following the fiscal crisis on a 1-7 scale. Table 9 focuses on how the frequency of using a particular strategy is related to executives' motivation, perceptions of employees, and perceptions of reform. Six separate linear regression models test the impact of each practice, while holding constant the use of the other seven practices. The first two columns include variables related to executives' motivation (job satisfaction and organizational commitment), the third and fourth columns represent managers' perceptions of other agency employees (group climate and mission alignment), and the final two columns examine executives' perceptions of reform (poorly planned and poorly implemented reforms). I group the findings into four categories based on the type of cutback practice implemented: personnel reductions, changes to pay structures, programmatic changes, and organizational restructuring.

Personnel Reduction Practices

Personnel reductions did little to impact executive perceptions when controlling for the other factors (Table 9). Hiring freezes were significantly associated with the likelihood of perceiving reforms as being poorly planned, but there was little evidence elsewhere in Table 9 that personnel reductions fostered poorer executive perceptions. In fact, there was even a positive association between the use of staff layoffs and organizational commitment. While the coefficient is significant only at the .1 level, this finding could be indicative of the type of "executioner's guilt" in which executives tasked with reducing personnel during hard times feel obligated to remain with an agency. This possibility will be revisited in the discussion.

Changes to Pay Structure

The implementation of pay cuts was negatively related to job satisfaction and the quality of reform plans, but pay freezes, on the other hand, were associated with poor perceptions of reform planning and implementation, as well as lower perceptions concerning employees' mission alignment. When compared against results from Table 3, it is interesting to note that the more commonly used practice of pay freezes produces worse perceptions of reform than pay cuts, which are the least used of any practice, on average.

Programmatic Changes

Of the eight cutback practices in this analysis, postponing or cancelling new programs was associated with the most negative executive perceptions. This practice significantly impacted job satisfaction, organizational commitment, perceptions of subordinate mission alignment, and both types of reform perceptions. Postponing new programs may symbolize that organizational progress is either stalling or regressing, and may be especially frustrating to managers intent on accomplishing organizational objectives. The practice of cutting existing programs was less predictive of poorer perceptions than postponing new ones, though it was negatively associated with managers' perceptions

Table 9. Regression Analyses: Specific Cutback Practices

	Job Attitudes		Organizational Climate		Perceptions of Reform	
	Job Satisfaction	Organizational Commitment	Group Climate	Mission Alignment	Poorly Planned	Poorly Implemented
Cutback Practice						
Staff Layoffs	-0.01	0.02^{*}	-0.02	-0.02	0.01	0.01
	(-0.74)	(1.68)	(-1.60)	(-1.62)	(0.51)	(0.45)
Hiring Freezes	-0.01	0.02	0.01	0.00	0.06^{***}	0.02
	(-1.23)	(1.54)	(1.47)	(0.16)	(4.47)	(1.37)
Pay Cuts	-0.02^{*}	-0.00	-0.00	-0.01	0.03^{*}	0.00
	(-1.93)	(-0.16)	(-0.36)	(-0.55)	(1.89)	(0.14)
Pay Freezes	-0.01	0.00	-0.00	-0.02^{**}	0.05^{***}	0.05^{***}
	(-1.43)	(0.18)	(-0.24)	(-2.10)	(3.40)	(3.09)
Cuts to Existing Programs	0.01	0.00	-0.03^{*}	0.00	0.02	0.01
	(0.46)	(0.01)	(-1.80)	(0.25)	(1.10)	(0.41)
Cutting/Postponing New Programs	-0.03^{**}	-0.03^{*}	-0.01	-0.03^{**}	0.09^{***}	0.09^{***}
	(-2.14)	(-1.86)	(-1.09)	(-2.16)	(5.05)	(3.76)
Downsizing Back Office Functions	0.03^{**}	0.02^{*}	0.02^{**}	0.04^{***}	-0.07^{***}	-0.09^{***}
	(2.46)	(1.92)	(2.25)	(2.85)	(-4.67)	(-4.51)
Reducing Front Line Presence	-0.05^{***}	0.00	-0.03^{***}	-0.02^{*}	0.05^{***}	0.06^{***}
	(-4.24)	(0.36)	(-3.00)	(-1.70)	(3.47)	(3.09)
Constant	6.30^{***}	3.66^{***}	6.23^{***}	5.94^{***}	-0.28	-0.88^{***}
Observations	4,508	4,508	4,508	4,508	4,508	4,508
R-squared	0.09	0.23	0.11	0.11	0.14	0.07

Controls: Agency Type, Agency Size, Hierarchical Level, Country
t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

of group climate. The contrast in how these two practices impact executive perceptions is one of the most interesting takeaways from Table 9, as previous analyses from Table 5 indicated that these two types of cuts are typically coupled together, rather than being used in isolation.

Organizational Restructure

The two components of organizational restructure – downsizing back office functions and reducing front line presence – produced cross-cutting effects on managerial perceptions. Reducing front line presence was associated with significantly worsened perceptions across every dependent variable with the exception of organizational commitment, but downsizing back office functions actually improved many of these perceptions. This practice led to significant and favorable outcomes across each dependent variable, thus introducing the possibility that it may be the most desirable practice for executives to implement during hard times. This is also consistent with results from Table 6 indicating that executives much more readily cut back office functions prior to reducing front line presence.

Discussion

This study attempts to understand the relationship between cutback management practices and managerial perceptions through an analysis of both the general strategies and specific practices available to executives during hard times. The financial crisis of the late 2000s created challenges globally for public organizations, and surveys and data like those collected by COCOPS allow researchers to understand how managers responded to crisis through austerity measures. Overall, the results indicate that the ways in which organizations react to difficult financial circumstances can have a substantial impact on the perceptions and well-being of organizational leadership.

Taken together, the mean figures from Table 1 and series of cross-tabulations offer a perspective of managers' cutback management preferences. Staff layoffs and pay cuts – two practices which do the most visible harm to employees and their livelihoods – were perhaps unsurprisingly the least used measures. There also seems to have been a preference for protecting the front-end of the organization compared to back office functions. This is consistent with research arguing that human resource management and development functions may be more susceptible to cuts in the beginning phases of austerity (Levine, 1984), while managers try to preserve and prioritize the core functions and services of their organization when possible (Meier & O'Toole Jr, 2009). Other practices were implemented typically in tandem to reduce expenses, as was the case with cutting current and prospective programs.

Interestingly, some practices were both frequently used and damaging to executive perceptions. The most apparent example in cancelling or postponing future programs, which was associated with much more negative outcomes than cutting current programs, despite being used with roughly the same frequency. This could be due to the fact that austerity often forces public organizations to "play defense" and streamline current operations while also tempering expectations for service expansion. As a result, forestalling prospective programs is likely an easy choice for executives to make, even if the motivational consequences for doing so are also substantial. Elsewhere, the least used practices – staff layoffs and pay cuts – did not produce markedly negative consequences for executives as might have been expected. While these are often difficult decisions to make, executives did not appear to suffer motivational consequences following their use – organizational commitment even increased slightly as the use of layoffs increased.

Cutbacks and Executive Perceptions

The results from Tables 7 and 8 provide strong evidence of the benefits of the targeted and savings-based approaches to cutting back, as opposed to the proportional strategy. This is unsurprising with respect to the efficiency savings strategy, as it typically causes the least disturbance to organizational operations, although the small share of respondents who reported using this strategy indicates its difficulty to implement, in practice. With this in mind, the targeted approach represents a promising way forward for managers in situations where substantial reductions in operations and resource consumption is necessary. It seems the up-front costs associated with the targeted strategy (e.g., negotiation, prioritization, planning) can be justified by the long-term benefits suggested by these findings – higher levels of executive satisfaction and commitment, as well as an improved work environment across the agency. This finding supports conclusions by Raudla, Savi, and Randma-Liiv (2015) that the targeted approach provides more benefits in times of long-lasting, severe financial problems.

With reference to specific cutback practices, the findings in this study suggest two practices – postponing/cancelling new programs and reducing front line presence – were associated with particularly poor outcomes. At the other end of the spectrum, downsizing back office functions actually improved manager's motivation, perceptions of employees, and perceptions of reform. Taken together, these results could provide indications of the types of practices which produce the least severe consequences for executive perceptions. While the consequences of postponing new programs may vary based on the purpose or scope of the program being cut, this practice can symbolize a halt in the progress of the organization, or even an inability to move forward with important organizational innovations. Likewise, reducing front line presence increases the likelihood that an organization's service delivery, effectiveness, or responsiveness will be hampered in some way. When compared to downsizing back office functions – which are less likely to seriously threaten organizational goals and objectives – these results may indicate that cutback management practices produce less harmful consequences when the operations and services at the core of the organization are least impacted by austerity measures. While this is difficult to achieve in many situations, especially under severe financial circumstances, organizational leaders will seek to prioritize cuts that minimize the damage imposed to organizational operations and effectiveness.

Evidence of "Executioner's Guilt"?

Brockner and his colleagues (Brockner, 1990; Brockner et al., 1985; Brockner et al., 1986; Brockner et al., 1987; Brockner et al., 1994) popularized the notion of "survivor's guilt" among employees who remain in an organization following cutbacks, especially those involving personnel reductions. This condition is characterized by employees feeling a sense of guilt that they were able to remain with the organization instead of other employees who were let go, and these guilty feelings in turn increase the quantity (though not necessarily the quality) of their work (Brockner et al., 1986).

Less attention has been paid to the perceptions of organizational leaders – the "executioners" – following the implementation of cutbacks (Kets de Vries & Balazs, 1997; Van der Voet & Van de Walle, 2018). One of the unanticipated findings in this study relates to managers' organizational commitment in response to the implementation of cutbacks. Unlike other forms of executive perceptions, organizational commitment was found to increase as the severity of specific cutback practices increased. While more research is needed to support this finding, this could provide evidence of a type of "executioner's guilt" in which managers tasked with making cuts to the organization feel an obligation to remain at the helm during hard times. The items used to create the measure of organizational commitment in this survey most closely align with normative commitment, defined as "a perceived obligation to remain in the organization" (Meyer et al., 2002, p. 21).

Several limitations should be acknowledged prior to making any solid conclusions about the existence of executioner's guilt among public executives. First, more research is needed to first conclude that increases in commitment following austerity occurs in other settings beyond the unique case of the fiscal crisis in Europe. As public organizations attempt to rebound following the Covid-19 pandemic of 2020-21, there will be opportunities to understand the effects another global economic crisis on public executives across multiple contexts. Second, alternative explanations for increases in commitment are still possible, even if somewhat less likely. For instance, while it is certainly possible that commitment may have increased due to the reduction of viable exit options (Hirschman, 1970), executives located within the top three hierarchical levels of a public organization should not be wholly shut off from other employment opportunities, even during periods of austerity. Therefore, more research should be conducted to understand how the implementation of cutbacks affects managers' perceived normative obligations to their organization. If substantiated, this could have implications for understanding the behavior of managers following austerity measures.

Study Limitations

Several factors provide important caveats for the generalizability of these findings. The most serious limitation involved with the COCOPS survey instrument involves the use of self-report data to identify cutback management practices. For instance, managers in organizations that used a mostly targeted strategy could have responded as using a proportional strategy – either through misunderstanding the process or focusing only on the cuts that were proportional – in a way that obscures the accuracy of that variable. Additionally, reporting specific cutback practice usage in a 1-7 scale creates the potential for some to managers to either over- or under-report some practices relative to others in the sample. These issues may be addressed by devising measures of cutback severity based on the respondent's country or their organization's policy area.[2] Controlling for these factors could alleviate the limitations of self-report data.

Other problems with causal order pose important limitations within this study, as well. First, while there were strong associations between the proportional strategy and poorer executive perceptions, it is difficult to establish that there is a causal path between these two things. The use of a proportional strategy could signify managers had less control over the process and were unable to use a more rational, targeted strategy. Thus, a lack of autonomy, rather than dissatisfaction with the

[2] The policy area variable used in COCOPS allowed respondents to select all areas that apply, which could complicate an analysis using that measure.

consequences of the cutback strategy, could plausibly be the driving force behind poorer perceptions. More research is needed to isolate the impact of a proportional versus a targeted approach in how it impacts managerial motivation.

CHAPTER II: FEWER PEOPLE OR LESS TRAINING? EXAMINING THE INDIRECT CONSEQUENCES OF PERSONNEL REDUCTIONS ON FEDERAL EMPLOYEE MOTIVATION

Introduction

As a response to various economic and budgetary constraints over several decades, US federal agencies devised numerous approaches to limit spending and resource consumption. Personnel reductions are often a hallmark of these strategies, as reducing the size of an agency's workforce reduces substantial amounts of overhead in a short period of time. The federal service has incurred several waves of cutbacks since the economic downturn of the late 1970s that have contributed to large reductions of personnel, including the Clinton Administration's National Performance Review which "included downsizing as a significant part of its plan to produce $108 billion in savings during fiscal years 1995 through 1999" (V. D. Jones, 1998, p. 4). In 2013, the federal service shed approximately 57,000 jobs, more losses than in any year since 1997, due to sequestration mandated by the 2011 Budget Control Act (Katz, 2017c). Additionally, the first several months of 2017 were marked by a broad hiring freeze for all federal agencies, and the Office of Personnel Management (OPM) released a newly updated Workforce Reshaping Operations Handbook in March 2017 amid forecasts of more workforce reductions (Katz, 2017d). These cutbacks may affect employee motivation, particularly for workers in the hardest-hit agencies in the federal service. This is especially likely when personnel reductions are accompanied by other forms of cuts which reduce the quality of human resource management (HRM) practices such as human resource development (HRD) and diversity management (DM). Cuts to these areas can hinder efforts to increase productivity and foster a cohesive, inclusive workplace following hard times. If cutbacks adversely affect worker motivation, this could increase turnover, reduce commitment, and hinder performance.

This study investigates the impact of personnel reductions on employee motivation by analyzing data from approximately 300 different federal agencies (below the department-level) over the span of six years. The primary question is whether agencies with personnel reductions over the course of a year have significantly poorer motivation levels among their employees than other agencies. I also seek to understand whether personnel reductions are symptomatic of other cuts which expand employees' scope of responsibilities, decrease their opportunities for development, or impact their perceptions of their agency as being inclusive and welcoming to all employees. While it's possible that personnel reductions could directly impact employee perceptions, these other consequences associated with cutbacks appear just as likely to negatively impact workers who survive a downsizing process (Greiner, 1986; M. D. Jones et al., 2016; Levine, 1984).

This study contributes to the broader public management research on cutback management and motivation in three ways. First, following prescriptions from Alteri (2020), I integrate data from multiple years of the Federal Employee Viewpoint Survey (FEVS) and FedScope to analyze personnel data alongside employee perceptions at a more granular level than past research on personnel reductions in the federal service (e.g., Shim et al., 2019). Second, I differentiate agencies based on specific types of personnel reductions implemented. This acknowledges that not all practices may produce the same effects on employee motivation. I explore the possibility that reductions-in-force (RIFs) – forced separations typically used as a last resort across federal agencies – may produce worse employee perceptions, since this tactic may be perceived as unfair among surviving employees. Early retirement incentives, on the other hand, may be viewed more positively as a voluntary measure to implement cuts. Third, I argue that HRM practices within an agency may play a substantial role in why employees are negatively affected by the implementation of cutbacks. While other authors note the strain that cutbacks can place on employees who are given more responsibilities and fewer resources following cuts (Arnold B Bakker & Demerouti, 2007; Arnold B. Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; Van der Voet

& Van de Walle, 2018; Van der Voet & Vermeeren, 2017), few studies investigate how cutbacks impact an organization's commitment to training and diversity management practices. These activities should be integral to the recovery effort following cuts. In many cases, however, cutbacks disproportionately impact HRM activities (Demmke, 2017; Metsma, 2014; Meyer-Sahling et al., 2016), leaving surviving employees with less opportunities to develop.

In what follows, I begin with a brief overview of major events that influenced changes to personnel numbers in the federal service during the period of analysis (2012-2017). Following this, I review the literature on cutback management with an emphasis on the consequences of personnel reductions in the public sector. The section concludes with several hypotheses which guide the analysis within this study.

Federal Agency Personnel Reductions, 2012-2017

Federal employment figures were relatively volatile from year-to-year in the mid-2010s due to several macroeconomic, political, and legislative factors. Stimulus packages and other economic legislation designed to help the United States out of the financial crisis of the late 2000s ballooned the federal deficit and caused lawmakers to find ways to lower spending once the crisis subsided (CRFB, 2019). The most significant event to impact the federal service during this time was the 2013 sequester necessitated by the Budget Control Act of 2011, a major piece of legislation designed to cut government spending and reduce the federal deficit (Driessen & Lynch, 2018). Sequestration involved deep, across-the-board cuts to the discretionary budgets of all non-exempt federal agencies, activities, and services (Kogan, 2011). While the majority of the sequester impacted spending on defense, domestic discretionary spending was also cut by $26.1 billion, a 5.1 percent reduction from previous levels (Matthews, 2013). Many federal agencies saw severe budget reductions under this domestic discretionary cut, including the CDC ($303 million), the FBI ($556 million), and NASA ($896 million) (Matthews, 2013). The sequestration did not actually eliminate any programs, agencies, or services, but the across-the-board nature of the cuts meant that every non-exempt agency was impacted. In practice, a significant share of the reductions in the federal service were realized through personnel reductions. From September 2012 to September 2014, OPM's head count of "on-board" employees in the federal service declined by approximately 65,000 (CRS, 2019). This reduction had a lasting effect on the number of employees in the federal service. Despite increases in OPM's on-board head count in three of the following four years, the on-board count in September 2018 was still almost 10,000 employees fewer than in September 2012 (CRS, 2019).

The federal service gradually increased the number of personnel in the years following the sequestration. From September 2014 to September 2016, the on-board count of personnel rose by 51,000 employees (CRS, 2019; Katz, 2017c). In January 2017, however, the new Trump administration instituted a broad hiring freeze for the majority of the federal service. Despite only formally lasting 79 days, the pause on hiring continued in some agencies such as the State Department and the Environmental Protection Agency (Katz, 2017a, 2017b). These measures eliminated 10,700 federal service jobs in the span of six months in the first-half of 2017, the largest reduction in federal personnel since mid-2014 (Katz, 2017c).

The Consequences of Personnel Reductions

The various financial problems during sequestration had a profound impact on the staffing levels and service delivery within many federal agencies. Though the organization-level consequences receive greater attention in much of the literature on cutback management (e.g., Behn, 1980; Glassberg, 1978; Levine, 1978), individual-level consequences of cutbacks are equally important aspects of the process (Bozeman, 2010; Pandey, 2010).

Two theoretical perspectives provide insight into how personnel reductions and other forms of cuts may impact the motivation and well-being of surviving employees. First, the job demands-resources model (JD-R; Arnold B Bakker & Demerouti, 2007; Demerouti et al., 2001) states that the demands and resources of the job interact to produce risk factors associated with job-related stress. Whereas job demands may increase job stress when they require inordinate amounts of effort, job resources – the "physical, psychological, social, or organizational aspects of jobs" that help workers achieve organizational goals (Arnold B Bakker & Demerouti, 2007, p. 312) – are said to increase worker motivation and alleviate the impact that heavy job demands have on job stress. As it relates to cutback management practices, public management scholars have used the theory to justify hypotheses that cutback management practices can worsen worker outcomes such as job satisfaction (Van der Voet & Van de Walle, 2018) and work engagement (Van der Voet & Vermeeren, 2017).

Second, social exchange theory emphasizes the importance of a series of interdependent interactions between organizational actors which generate obligations over time (Cropanzano & Mitchell, 2005; Emerson, 1976). These social interactions, as opposed to arms-length economic exchanges, typically involve exchanges of mutual trust and open, long-term commitments (P. Blau, 1964). Employees engage in social exchanges with coworkers, supervisors, or the organization as a whole (Lavelle et al., 2007; Wayne et al., 1997). These distinct exchanges allow employees to maintain different qualities of relationships with each of these foci. Employees who perceive positive exchanges with their organization and its policies and practices typically exhibit higher levels of organizational commitment, satisfaction, and trust (Aryee et al., 2002). During cutbacks, however, the quality of exchange between employee and organization can deteriorate. Cutbacks violate the "psychological contract" (Levinson et al., 1962) between employees and their organization when the outcomes of cuts are perceived by employees as unfair either towards themselves or other members of the organization (Brockner et al., 1986; Brockner et al., 1987; Brockner et al., 1994). This violation of the psychological contract could decrease perceptions of organizational fairness, trust, and commitment to the organization (Brockner, 1990; Lavelle et al., 2007).

JD-R and social exchange theory offer two solid theoretical bases to understand personnel reductions' potential impact on employee motivation. Beyond this, specific personnel reduction practices, such as RIFs and early retirements, may have unique impacts on employee perceptions, for better or worse. RIFs are involuntary separations of employees from the organization based on factors such as a shortage of funds, reorganization or a reclassification of an employee's position, among other justifications (OPM, 2017). RIFs are legally cumbersome processes used as a last resort for many agencies (Bonner, 2009; Dennis, 1983; V. D. Jones, 1998). Their involuntary nature may enhance the risk of breaching social contracts with employees, and the fact that they are last resort mechanisms increases the likelihood that organizations using them have already implemented serious cuts elsewhere, both to programming and personnel. Holzer and others (2003) suggest that RIFs can be done successfully alongside careful planning, communication, and vision from managers, though the risk with these practices is they are very rarely considered until time constraints and political pressures necessitate their use (Dennis, 1983). With these factors in mind, RIFs should be associated with poorer perceptions among federal employees.

In federal agencies, early retirement incentives are typically coupled with buyouts in order to reduce the workforce (Flanagan, 2017) without relying solely on natural attrition – which is desirable but potentially unreliable – or practices like RIFs – which are reliable but undesirable. While such programs are symptomatic of cutbacks within an agency, early retirement incentives can quickly benefit an organization's "bottom-line" (Davidson III, Worrell, & Fox, 1996) and improve employee perceptions of reductions as being voluntary (Tomasko, 1991). Therefore, even though early retirement incentives represent a blunt tool whose success hinges on factors such as age, compensation, marital status, and work group pressures (Appelbaum, Patton, & Shapiro, 2003; Tomasko, 1991), it offers potential advantages over furloughs or RIFs in its voluntary nature.

The Role of HRM Practices

Regardless of whether personnel reductions are realized through hiring freezes, RIFs, or early retirements, I expect other cutback management procedures to play a role in the overall relationship between personnel reductions and motivation. Downsizing agencies often give surviving employees expanded work roles to maintain service levels with fewer staff. Without effective training and development programs, employees may experience more problems adapting to new roles and responsibilities, leading to stress, feelings of incompetence, or burnout (Noblet & Rodwell, 2009; Van den Broeck, De Cuyper, De Witte, & Vansteenkiste, 2010). For these reasons, agencies should provide opportunities to help remaining employees acclimate to new responsibilities. Unfortunately, HRM and training budgets can be quite vulnerable when organizations face austerity measures, particularly when cuts are ordered across-the-board for all departments (Levine, 1984; Meyer-Sahling et al., 2016). This proportional "equal-misery" cutback approach was a feature of the 2013 sequester, so I expect that agencies that endured severe cuts will also show evidence of poorer HRD programs and opportunities during that time period.

An inescapable truth of cutbacks, especially those associated with personnel reductions, is that the demands placed on surviving employees increase (Carter et al., 2013; M. D. Jones et al., 2016; V. D. Jones, 1998). Van den Broeck and others (2010) distinguish between two types of job demands: hindrances and challenges. Hindrances are job demands such as role ambiguity, constraints, and job insecurity that cause negative emotional states and ultimately interfere with effective job performance. Challenges, on the other hand, are demands such as workload and time-sensitive deadlines that produce both negative *and* positive emotional consequences. Whereas job hindrances primarily produce stress, burnout, and withdrawal, job challenges at least provide a certain degree of need satisfaction and development opportunities (Cavanaugh, Boswell, Roehling, & Boudreau, 2000). Hindrances can produce negative consequences both for individual employees and organizations. Breaugh (2020) found that job demands that produce stress while also not satisfying basic needs diminish employee engagement on work tasks. Cavanaugh and others (2000) also found that hindrances increased the likelihood of turnover and job-searching behaviors, whereas job challenges produced the opposite effect.

Cutbacks produce many of the job hindrances discussed by Van den Broeck and others (2010). For instance, Noblet and Rodwell (2009) found that cutback-related reform efforts in state government organizations produced job strain that worsened employees' intrinsic motivation, extrinsic motivation, and psychological well-being. Carter and others (2013) discovered that reforms geared towards "lean working" in UK public organizations contributed to increases in several forms of ill-health complaints, including mental fatigue, physical tiredness, and general stress. Meyer-Sahling and others (2016) even found that specific austerity-driven actions in Latvia and Poland (e.g., changes in recruitment, dismissals, and training) negatively impacted civil servants' motivation.

The general strategy to mitigate the impact of job hindrances is to provide various types of job resources, such as performance feedback, role clarity, and supervisor support. Job resources provide opportunities for growth and help employees acclimate to emergent or important work tasks (Arnold B. Bakker et al., 2007; Fried & Ferris, 1987; Van den Broeck et al., 2010). Job resources can be particularly helpful to employee attitudes during times of role conflict and stressful work conditions, as workers are more likely to seek out and acquire resources to cope with change and uncertainty (Arnold B. Bakker et al., 2007; Hobfoll, 2002; Seers, McGee, Serey, & Graen, 1983).

However, the reorganization that accompanies downsizing or other cutbacks increases strain while also sometimes cutting formalized job resources such as training and development programs. Removing training and development opportunities simply compounds the negative impacts of increased job demands, which can cause significant problems for organizations seeking to maintain the quality of services while shedding jobs and resources available to perform them (M. D. Jones et al., 2016).

Another facet of HRM policies and practices possibly neglected during the cutback management process is diversity management (DM). While the evidence for how organizations uphold DM in the face of downsizing is mixed, several factors increase the likelihood that hard times may inhibit effective DM implementation. First, reducing or freezing accessions can stall efforts to strengthen representation of minority groups. Second, organizations that already had inadequate DM policies and practices going into a restructuring process experience difficulty committing further to inclusivity under periods of austerity (Cunningham, 2000; Greene & Kirton, 2011). Third, downsizing activities tend to disproportionately removing women and minorities from their jobs (Kalev, 2014; Piatak, 2019), as was the case during the series of RIFs in the federal service in 1981 (Holzer, 1986). Finally, DM practices may be vulnerable to cutback management efforts simply because they fall under the category of activities organizations emphasize when times are good and resources are slack, but then neglect when resources shrink. Organizations must commit time, energy, and resources in order to effectively implement a climate of inclusion (Gasorek, 2000; Shore et al., 2011). Cutbacks make it more likely that inclusionary organizational policies are either neglected or not fully implemented and enforced due to more immediate concerns (Stein, 1994).

Hypotheses

The literature review provides rationale for several hypotheses to guide the analysis. These hypotheses are labelled to correspond to the six propositions in the simplified conceptual model in Figure 1. The first of these can be stated simply as the total impact of personnel reductions on employee motivation:

H1A: More separations and fewer accessions reduce employee job satisfaction, organizational commitment, and job involvement.

This hypothesis is the crux of the study, but further propositions are required to provide a more complete explanation of why personnel cuts impact motivation. Employees' reactions following personnel reductions may relate to the method used by an organization to carry out the cuts. RIFs, for instance, are often viewed as a last resort in federal agencies, and their use in conjunction with other forms of personnel reductions may signify that an agency has already exhausted many other alternatives in its attempts to meet budgetary constraints. As a result, one should expect even a modest number of RIFs to provide evidence of relatively severe cuts within an agency, which should negatively impact motivation, in return:

> H1B: RIFs lower job satisfaction, organizational commitment, and job involvement when controlling for the number of accessions and separations.

Not all personnel reduction measures are necessarily theorized to produce poorer motivational outcomes. Early retirement incentives can produce negative side-effects if it leads to a mass exodus of experienced workers without an effective transition plan, but it has distinct advantages over RIFs and furloughs in that employees perceive it as voluntary. Additionally, early retirement programs that sufficiently reduce personnel expenses in the early stages of cuts may forestall tougher cutback management practices later. In general, I expect evidence of early retirement incentives to reflect that an agency planned personnel reductions more carefully and improved employee perceptions compared to agencies with the same quantity reductions that did not utilize these incentives:

> H1C: Early retirements increase job satisfaction, organizational commitment, and job involvement when controlling for the number of accessions and separations.

In addition, perceptions of training and development – or HRD quality – can have a tremendous impact on making employees feel comfortable and competent when performing work responsibilities, resulting in fulfilling, satisfying work experiences. Sahinidis and Bouris (2008) found that employees' increased feelings of effectiveness following a training program were associated with higher levels of commitment and satisfaction. Additionally, Schmidt (2007) found that satisfaction with high-quality, intensive training and development was a significant predictor of overall job satisfaction:

> H2A: Employees with better perceptions of HRD quality report higher levels of motivation, particularly job satisfaction and job involvement.

Many employees, particularly with respect to the public sector, place importance on working in an inclusive, equitable environment. Individuals are more likely to feel committed and comfortable in workplaces where they feel valued and respected. Kundu, Mehra, and Mor (2017) discovered that employee motivation was not only positively impacted by their perceptions about diversity management in the workplace, but motivation also plays an important role in the relationship between diversity management perceptions and lower turnover intentions:

> H2B: Employees with better perceptions of DM quality report higher levels of motivation, especially organizational commitment.

While individual-level perceptions of HRD and DM quality are likely to increase motivation, the quality of these perceptions across an entire work setting is likely to have a fairly strong influence on motivation, as well. Agencies with exceptional aggregate perceptions of HRD quality among its employees (which I refer to as Group-HRD throughout) should have many well-trained and confident employees working together to achieve organizational goals. This can provide benefits even for employees who feel personally under-trained (Papay, Taylor, Tyler, & Laski, 2020), as there are more opportunities for consultation and assistance when facing nonroutine challenges at work (P. M. Blau, 1955):

> H3A: When controlling for individual-level HRD perceptions, employees in agencies with better group-level HRD perceptions report higher levels of motivation, especially job satisfaction and job involvement.

Similarly, agencies with higher aggregate perceptions of DM quality among employees are likely to have more inclusive and equitable work environments. While a person's own perceptions of agency commitment to diversity are important, a harmonious workplace where individuals feel welcome can also have a strong, positive effect on individual-level motivation:

H3B: When controlling for individual-level DM perceptions, employees in agencies with better group-level DM perceptions report higher levels of motivation, especially organizational commitment.

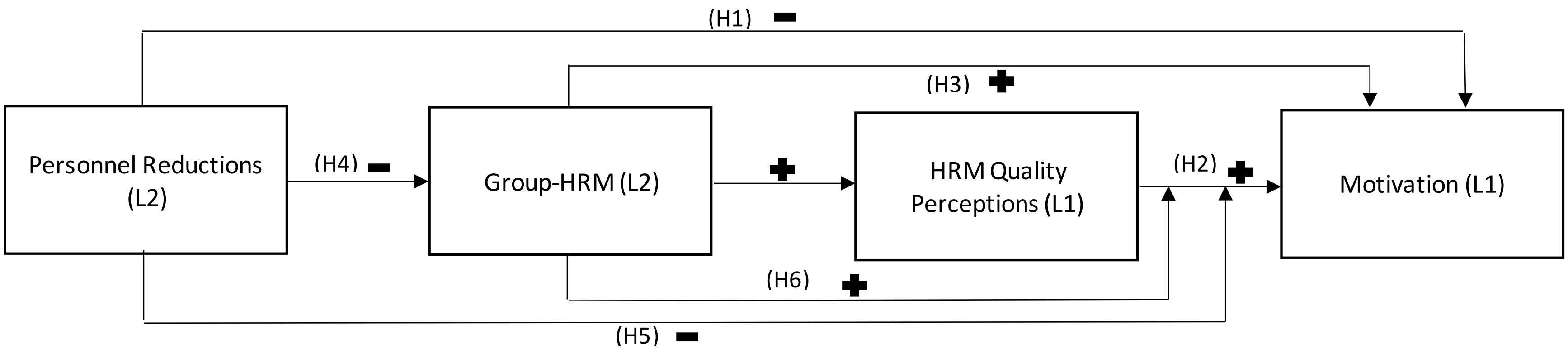
Strong group-level HRD and DM perceptions can produce motivational benefits for an agency's employees, but personnel reductions and other forms of cutback management practices are expected to hamper efforts to achieve these strong climates. Cutbacks, particularly those implemented across-the-board, can disproportionately affect the resources available for HRM practices (Meyer-Sahling et al., 2016) and shift managers' attention away from these practices in favor of actions that will produce quick, short-term benefits. Thus, cutbacks are likely to erode rather than fortify these two types of climates:

H4A: Agencies undergoing personnel reductions have poorer group-level HRD perceptions.

H4B: Agencies undergoing personnel reductions have poorer group-level DM perceptions.

Another potential pathway for cutbacks to negatively impact motivation is by moderating its relationships with individual-level HRD and DM perceptions. In the case of HRD, personnel reductions and other cuts can place additional strain and workloads on remaining employees while also providing fewer resources to accomplish organizational objectives. Xanthopoulou and others (2007) found that increased feelings of self-efficacy, organizational self-esteem, and optimism – all potential by-products of high-quality training and development – still may not be enough to strengthen the relationship between onerous job demands and stress following cuts. In a similar way, I anticipate that the increasing demands and uncertainty resulting from cutbacks serve to mitigate the benefits that HRM perceptions have on employee motivation. Even well-trained, confident employees are vulnerable if the stress of new responsibilities becomes too great, and there will be diminishing returns on the benefits of training and development on employee well-being:

Figure 1. Simplified Theoretical Model



H5A: The relationship between individual-level HRD perceptions and motivation is weaker in agencies with personnel reductions.

The same can essentially be said about positive DM perceptions. Cutbacks, when severe enough, have the potential to overshadow feelings about an inclusive and equitable workplace. While an agency's commitment to diversity is expected to have an important impact on employee motivation, the presence of cutbacks can deteriorate the advantages that come with a welcoming work environment:

H5B: The relationship between individual-level DM perceptions and motivation is weaker in agencies with personnel reductions.

Cutbacks are not the only factor expected to moderate the relationships between HRD and DM perceptions and motivation. First, organizations with strong group-level HRD perceptions should signify that there are many well-trained individuals in the workplace. The idea that a more competent, skilled workforce can have an impact even on the well-being of less skilled employees is supported by the work of Blau (1955). In his study of a public auditing agency, Blau observed that less experienced employees will informally consult with experts in their organization when given a particularly difficult task or procedure. Even when this form of consultation is technically prohibited by the organization, the prospective benefit of receiving this advice is valuable enough to incentivize less skilled employees to seek it out when management is not watching. Consultations like these help less-skilled employees perform their duties effectively and can even help them hone their skills more quickly than if they were not surrounded by expert colleagues. These experts, therefore, can offer distinct advantages for organizational functioning and employee effectiveness, even among more novice coworkers.

When this occurs, employees are better equipped to use their skills and collaborate with other employees. In situations where this helps to achieve organizational goals, this can produce better perceptions of self-efficacy and skill utilization:

H6A: The relationship between individual-level HRD perceptions and motivation is stronger in agencies with better group-level HRD perceptions.

Finally, group-level DM perceptions could have a moderating impact on the relationship between individual-level DM perceptions and motivation. Previous evidence supported this less than the potential moderating influence of group-level HRD in H6A, but an increasingly harmonious and cooperative work environment could increase the commitment of individuals who feel that their agency is a welcoming and diverse place:

H6B: The relationship between individual-level DM perceptions and motivation is stronger in agencies with better group-level DM perceptions.

Research Design and Methodology

This study uses several years of data from the Federal Employee Viewpoints Survey (FEVS, 2012-2017) and FedScope (fiscal years 2011-2017), both collected and maintained by the Office of Personnel Management (OPM). Each year, FEVS provides information on employee perceptions about their work experiences across the federal service. Across the six survey years included in this study, over 2.4 million employees responded with an average response rate of 47.0 percent. The survey asks over 70 questions related to employees' experiences about their work unit, supervisors, and agency leadership. Combining years of the FEVS survey yields a series of cross-sectional observations rather than a panel design, as there are no identifiers to match a particular employee's responses over time. Therefore, while some individuals inevitably took the survey more than once across these six years, it is not possible to identify or track how their views change from year-to-year.

FEVS provides important individual-level information about federal employee attitudes, but in order to study the effect that agency personnel reductions have on these perceptions, I also incorporate data from FedScope Federal Workforce Data. This database from OPM keeps records on employment levels, accessions, and separations over time for each agency. Accessions and separations are tabulated on a monthly basis for each agency. To match the personnel changes from FedScope with the data from FEVS, accessions and separations are combined into "survey years" which begin in June and end in May of the next year, when FEVS survey collection typically ends (e.g., "survey year 2013" in FedScope data ranges from June 2012 to May 2013). Thus, the time period of FedScope data used in this study ranges from June 2011 to May 2017.

Agency Identification

The process of matching FEVS observations and FedScope data at the subagency level is far from straightforward (for an extensive review, see Alteri, 2020). In both datasets, agencies are coded using a four-digit identifier, with the first two digits identifying the parent agency (e.g., "AFxx" for any Air Force agency) and the last two digits specifying the agency within that agency (e.g., "AF1M" to represent the Air Force Materiel Command). However, even though OPM collected both sets of data, the four-code identifiers differ both between datasets and even between survey years of the same dataset. Some agencies used by FedScope were combined in FEVS survey data (e.g., the Farm Service Agency and Foreign Agricultural Service were combined into the "Farm and Foreign Agricultural Services" in FEVS), and vice versa (e.g., FedScope does not distinguish any agencies within the Department of Energy except the Federal Energy Regulatory Commission). Furthermore, different codes were sometimes used to represent the same agency (e.g., the Census Bureau is identified as "CM03" in FEVS and "CM63" in FedScope), and identifiers for the same agency sometimes differed across survey years in FEVS (e.g., the Federal Bureau of Investigation was identified as either "DJ02" or "DJFB" depending on the survey year).

These discrepancies complicated the matching process, but ultimately each agency and survey year were successfully matched from 2012 to 2017. In all, 963 agencies are used in the analysis. The average number of respondents per agency is 2,495, with a minimum of 151 and a maximum of 44,609. Respondents in agencies with too few respondents were identified as "all other" within a particular agency (e.g., AFZZ in FEVS represents "Air Force, all other"). For these respondents, agency-level personnel variables in this study are represented by the average number of accessions or separations for the entire agency. Additionally, a small, but still notable, portion of respondents from each year worked in entire agencies with too few respondents. These groups were assigned agency-level values represented by the overall trends within the federal service during a particular year.

Cutback Management Indicators

I use several measures as proxies for personnel reductions within agencies. Each of these variables is measured at the level of agency and year. For instance, FEVS respondents from the Federal Aviation Administration (FAA) in 2012 are treated as a separate group from FAA respondents in the 2015 survey. While this presents some challenges and limitations – as the same person answering the survey over multiple years would be divided into different groups – it accords with ideas by Nesselroade (1991) on intraindividual change over time and that volatile personnel changes within an agency should have an impact on employee motivation and perceptions.

Accessions

The first proxy for personnel changes in is the percentage difference of new hires made by an agency in a survey year relative to the agency's average number of new hires from 2012-2017. FedScope tabulates the number of monthly accessions by each agency and divides them into five categories – individual transfers in, mass transfers in, competitive service appointments, excepted service appointments, and senior executive service appointments. The three final categories each represent new hires by an organization, while the first two imply some form of transfer from another agency within the federal service. With this in mind, I exclude transfers from the variable on hiring differences by year, as these types of accessions may not necessarily indicate fluctuations in the number of new hires made by an agency.

The formula for the percentage difference in annual new hires is expressed as: $[(\text{Hire}_i - \text{Hire}_{Avg}) / \text{Hire}_{Avg}] \times 100$. Negative numbers indicate that the number of hires were fewer than the average number per year for that agency during the survey period. Thus, if an agency added 2,000 new hires in 2016, but averaged 2,500 new hires per year from 2012 to 2017, then the percentage difference for 2016 is -20 percent. Across all valid respondents in this study, the mean percentage difference in agency hires was .82 percent, with a standard deviation of 32.27 percentage points.

Separations

The next major proxy for personnel reductions looks at the percentage difference in annual agency separations relative to the average yearly separations in that agency. This formula essentially mirrors the formula measuring yearly hiring differences, but the fact that positive numbers signify *more* separations than average suggests that separations coefficients in the analysis should affect outcome variables in the opposite direction from hiring change coefficients.

FedScope divides separations into eleven different categories that include individual and mass transfers out, quits, terminated/expired appointments, death, and four types of retirement (voluntary, early, disability, and other). I exclude deaths and individual and mass transfers out from the measure of yearly separations. The inclusion of separations designated as "quits" was a difficult consideration, as individuals may exit the organization in this way absent of any personnel reduction efforts. However, Jones (1998) explains that federal governments first seek to reduce personnel through natural attrition and buyouts, both of which are likely to be designated at "quits" in FedScope data. The mean percentage difference in separations within an agency was 1.25 percent, with a standard deviation of 18.71 percentage points.

Reductions-in-force

OPM, as well as human resource departments throughout the federal service, suggest that agencies should use RIFs as a last resort to meet budgetary or personnel-related requirements. RIFs are defined by OPM as separations from the organization for one of the following reasons: lack of work; shortage of funds; insufficient personnel ceiling; reorganization; or reclassification of an employee's position which leads to an erosion of duties (OPM, 2017). RIFs may also take the form of demotion, furlough, or reassignment, but FedScope's data only tabulates RIFs which result in separations from the organization.

RIFs may signify that the organization has already undertaken other personnel reduction efforts without successfully meeting desired staffing levels. As a result, I expect employees in agencies that implemented RIFs during a survey year to report poorer motivational perceptions than others. As RIFs are relatively infrequent compared to other separations, I operationalize a measure of RIFs using an ordinal-level variable, coded 0 for no RIFs used, 1 for less than ten RIFs in a year, or 2 for ten-or-more RIFs in a year. This ordinal distinction is used to distinguish agencies which may have been forced to issue a handful of RIFs to meet budgetary demands from agencies which incorporated RIFs as a larger component of the total downsizing strategy. Of the 963 agency-year groups included in the analysis, 49 (5.1 percent) implemented more than ten RIFs, while 107 (11.1 percent) implemented between one and nine RIFs.

Early Retirements

Early retirements are measured in a similar ordinal-level strategy as RIFs in this study, with 0 representing no early retirements, 1 representing less than ten, and 2 signifying ten-or-more. This is again intended to distinguish early retirements as a minor or relatively significant component of an agency's overall personnel reduction strategy. Early retirement incentives were used much more widely than RIFs from 2012 to 2017 across the federal service. Of the 963 agency-year groups in the analysis, 200 (20.8 percent) had more than 10 early retirements, while 214 (22.2 percent) had between one and nine.

Motivational Perceptions

Three constructs, consistent with previous research by Moynihan and Pandey (2007a), will be used to measure work motivation. Job satisfaction is measured using a single item ("Considering everything, how satisfied are you with your job?"). The single item measure has been used in previous studies using FEVS (Choi & Rainey, 2014). Organizational commitment is measured using four items related to attachment to the organization and its members and most closely aligns with affective commitment (see Table 10 for item descriptions and factor loadings for each factor variable). These items produced a Cronbach's alpha of .91. Job involvement is measured using five survey items related to an employee's interest in, and identification with, work tasks. These items were identified by OPM as relating to "intrinsic work experience", which is one component of the Employee Engagement Index (OPM, 2019). Factor analysis produced a single factor with a Cronbach's alpha of .86. Every factor variable represents the mean score across all items for each respondent.

These variables are utilized as a set of outcome variables in the analysis. Within multilevel models, individual-level outcome variables are typically either grand mean centered or left in a raw-score format (Hofmann & Gavin, 1998). I conducted analyses using both techniques and confirmed that the results did not significantly differ based on the operationalization. I report my results using the raw-score technique, primarily to interpret the constant coefficients in their original Likert scale format.

Human Resource Management Perceptions

I also assess the impact of cutback management practices on employee perceptions of training and diversity management efforts within an organization. Perceptions of HRD quality uses five items asking about the extent to which training needs are assessed and satisfaction with the amount of training received; it produced a Cronbach's alpha of .88. Perceptions of agency commitment to DM are measured using three items previously used by Choi and Rainey (2014). These three items produced a Cronbach's alpha of .79.

The role of human resource management variables as mediators influencing the relationship between cutbacks and motivation necessitates careful consideration when incorporating them into a multilevel model. I follow the prescriptions from Hofmann and Gavin (1998) and include HRD and DM variables in two ways: as a group mean centered individual-level variable, and also as a level-2 variable representing the mean value of these perceptions within each group. The latter of these approaches creates proxies for the HRM practices within an entire agency, as the value assigned to each individual represents the average perceptions of HRD and DM quality across all of the respondents in their agency during a particular survey year. This measure also allows to test the hypothesis that agencies undergoing personnel reductions also have poorer quality HRM practices. The former approach – operationalizing group mean centered perceptions – views individual-level perceptions of HRD and DM in terms of the deviation from the average perceptions of respondents in their agency during that year.

Research Design

The analysis is divided into several steps. First, I use a correlation matrix (Table 11) to view the strength and direction of association among indicators of personnel reductions, motivation, and HRM across the data. Next, I temporarily aggregate the data to the agency-level (Tables 12-13) to test whether agencies with personnel reductions significantly differ from other agencies with respect to group-HRD and group-DM perceptions. I expect personnel reductions to be accompanied by poorer HRD and DM practices, and this finding is a necessary condition for establishing the mediating role of HRD and DM in the relationship between personnel cuts and motivation.

The remainder of the analysis includes three series of multilevel mixed effect models using Stata's "mixed" command, with each series focused on one of the three outcome variables representing individual-level motivation (Tables 14-16). Each table is comprised of four models. The first model is a baseline multilevel linear regression with no predictor variables included. The baseline provides information on the grand mean of the outcome variable across the groups[3] in the model, the plausible range of group mean values of the outcome variable across all groups, and the intraclass correlation (ICC) that determines the amount of variation in the outcome variable which can be explained by agency-level factors. The second model incorporates the four group-level indicators of personnel reductions within an agency: percent difference in accessions, percent difference in separations, RIFs, and early retirements. This shows how each personnel reduction indicator impacts the individual-level outcome variable, as well as fit statistics to determine how well these indicators account for group-level variation in each dependent variable.

The third model in each table is a "random coefficient" model as described by Raudenbush and Bryk (2002). Five individual-level variables are added to the model in this step: HRD quality, DM quality, gender, minority status, and supervisory status[4]. The final model in each series uses an "intercepts-and slopes-as-outcomes" approach (Raudenbush & Bryk, 2002), which adds two agency-level variables (group-HRD and group-DM perceptions) and ten cross-level interaction terms. Combined with the results from the agency-level tests of cutbacks on group-HRD and group-DM (Tables 12-13), the final models in Tables 14-16 are designed to test for the influence of agency-level HRM practices within the overall relationship between personnel reductions and motivation.

[3] The grouping variable in the analysis is an agency during one survey year (e.g., the Federal Aviation Administration during survey year 2013).

[4] For brevity, demographic variables are not reported.

Results

Descriptive Statistics

Table 11 shows a correlation matrix including personnel reductions, motivation indicators, and HRM variables.[5] The variables describing personnel reductions and group-HRM perceptions are agency-level constructs, but the statistics in this table represent the mean value at the individual-level and their correlation with individual-level perceptions. While this information helps to understand the associations, the mean values for (and correlation coefficients among) the level-2 variables in this table overrepresent agencies with larger numbers of respondents.

Relationships among cutback indicators are relatively modest in some areas. Despite fairly strong associations between separations and RIFs (r=0.22), separations and early retirements (r=0.25), and between RIFs and early retirements (r=0.23), associations between accessions and each indicator are weak. In particular, relationship between accessions and separations produces a positive coefficient (r=0.06), whereas we would anticipate a negative coefficient if high separations and low accessions were used in conjunction to carry out personnel reductions. Managers may instead have relied on either low accessions or high separations to implement staff reductions.

Strong, positive associations exist among each of the individual-level motivation and HRM perceptions, ranging from 0.58 (between job satisfaction and DM quality) to 0.77 (between job involvement and HRD quality). In contrast, the associations among personnel variables and individual-level perceptions are each quite weak, with only the percent difference in accessions and RIFs correlated in the hypothesized direction with every motivation and HRM indicator. The findings suggest that an agency's personnel strategies and employees' perceptions are only weakly related at the individual-level.

[5] To provide clearer information about mean values and correlations across the sample, HRD quality and diversity management quality are reported as raw scores in Table 10 and are not group mean centered until later in the analysis.

Table 10. Perception Variable Item Descriptions and Factor Loadings

Factor Variable	Items Used	Factor Loading (Pattern-Matrix)[1]
Job Satisfaction (1 item)	Considering everything, how satisfied are you with your job?	N/A
Organizational Commitment (4 items, alpha=0.91)	In my organization, senior leaders generate high levels of motivation and commitment in the workforce	0.89
	My organization's senior leaders maintain high standards of honesty and integrity	0.88
	Managers communicate the goals and the priorities of the organization	0.74
	I have a high level of respect for my organization's senior leaders	0.84
Job Involvement (5 items, alpha=0.86)	I feel encouraged to come up with new and better ways of doing things	0.76
	My work gives me a feeling of personal accomplishment	0.76
	I know what is expected of me on the job	0.71
	My talents are used well in the workplace	0.78
	I know how my work relates to the agency's goals and priorities	0.67
Human Resource Development (HRD) Quality (5 items, alpha=0.88)	I am given a real opportunity to develop my skills in my organization	0.78
	My training needs are assessed	0.76
	My supervisor provides me with opportunities to demonstrate my leadership skills	0.77
	Supervisors in my work unit support employee development	0.81
	How satisfied are you with the training you receive at your current job?	0.75
Diversity Management (DM) Quality (3 items, alpha=0.79)	Policies and programs promote diversity in the workplace	0.67
	My supervisor is committed to a workforce representative of all segments of society	0.72
	Supervisors work well with employees of different backgrounds	0.75

[1] Factor loadings represent analysis including only the items used to create that specific factor variable

Looking at the bottom two rows of Table 11, there is a somewhat stronger association between group-HRM indicators and personnel reductions. In particular, both types of group-HRM variables are positively associated with increases in hiring (0.14 for HRD; 0.11 for DM) and negatively associated with the use of RIFs (-0.11; -0.24). These results indicate a potential relationship between reduced HRM practices and personnel reductions consistent with H4A and H4B (i.e, agencies undergoing personnel reductions have poorer group-level HRM perceptions), but further tests in Table 12 and Table 13 examine this more systematically.

Agency-level Tests of Cutbacks and Group-HRM

Beginning in Table 12, I aggregate the data to the agency-year, such that each observation represents a single agency during a single survey year. Aggregation helps to determine whether agencies that implemented personnel reductions differ from those that did not with respect to HRD and DM perceptions across the agency. The top-half of Table 12 separates agencies into three categories based on how many RIFs were implemented during the survey year (none, less than ten, and ten or more), and compares the mean percentage of separations and accessions, mean group-HRD perceptions, and mean group-DM perceptions across these three categories. The bottom-half repeats the process but categorizes groupings according to the number of early retirements used (none, less than ten, and more than ten).

Agencies with ten or more RIFs endured fewer hires and more separations than agencies with none or only a few RIFs in a year. These agencies also had poorer HRD and DM perceptions across their agency, on average. The mean group-HRD perceptions in agencies with ten or more RIFs was 0.10 lower than agencies with no RIFs, and the difference between these two groups was 0.14 with respect to mean group-DM perceptions. Similarly, agencies with at least 10 early retirements in a year were lower than agencies with no early retirements with respect to mean group-HRD (0.04) and mean group-DM (0.05). While the differences between mean perceptions are still noticeable between agencies with less than ten

RIFs and those with none, group-level perceptions are virtually identical between agencies with only a few early retirements and those with none. A few early retirements periodically in an agency may not signal much related to intense cuts, though the separations and accessions figures for agencies with more than 10 early retirements indicates that heavy usage of this tactic is accompanied by lower accessions and higher separations using other techniques.

Table 13 represents two sets of OLS regression models with group-HRD and group-DM as dependent variables. The data are still aggregated to the agency-year level in this analysis. The four personnel reduction indicators are included as predictors of these two agency-level variables, with overarching department (e.g., Air Force; Agriculture; Commerce; etc.) and survey year fixed effects also used as controls in the model. The two controls help to determine that any effects found with respect to personnel reductions cannot be explained away by broader trends within specific departments or the impact of particularly turbulent years in the federal service. The first model for each outcome variable tests the effects of accessions and separations only, while the second models incorporate RIFs and early retirements. Of the four indicators, RIFs within an agency were the strongest predictor of poor group-HRD and group-DM perceptions. When controlling for year, parent department, and the other personnel reduction indicators, the presence of at least ten RIFs during a particular year was associated with a 0.06 decrease in group-HRD and a 0.10 decrease in group-DM compared to agencies without RIFs, on average (both differences significant at 0.01 level). Lower than usual accessions and higher than usual separations were moderately associated with poorer group-HRD, though these differences were only significant at the 0.1 level. Neither the effect size nor the significance of the two percentage change variables is greatly impacted by incorporating RIFs or early retirements into the model for either outcome variable. Early retirements were not significantly related to group-HRD, but were associated with poorer group-DM. Taken together, the results suggest that certain personnel reduction measures, and especially RIFs, are associated with lower group-level perceptions of HRM practices within an agency. Thus, cuts to HRM

Table 11. Correlation Matrix (Individual-Level Statistics)

Variable	Mean	Std. Dev.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) % Difference in Accessions	0.86	32.29	1.00										
(2) % Difference in Separations	1.28	18.73	0.06	1.00									
(3) Reductions-in-Force (0-2)	0.27	0.58	0.00	0.22	1.00								
(4) Early Retirements (0-2)	0.76	0.87	-0.15	0.25	0.23	1.00							
(5) Job Satisfaction	3.73	1.07	0.02	0.00	-0.01	-0.00	1.00						
(6) Organizational Commitment	3.39	1.06	0.02	0.01	-0.03	0.00	0.64	1.00					
(7) Job Involvement	3.79	0.87	0.02	0.00	-0.00	0.00	0.74	0.69	1.00				
(8) HRD Quality	3.59	0.95	0.03	-0.01	-0.02	-0.01	0.69	0.69	0.77	1.00			
(9) DM Quality	3.70	0.89	0.02	-0.01	-0.04	-0.02	0.58	0.70	0.64	0.74	1.00		
(10) Group-HRD	3.56	0.18	0.14	-0.05	-0.11	-0.02	0.14	0.18	0.15	0.19	0.17	1.00	
(11) Group-DM	3.70	0.16	0.11	-0.08	-0.24	-0.10	0.13	0.18	0.14	0.18	0.18	0.91	1.00

2,259,535 Observations

Table 12. Agency-Year-Level Means and Standard Deviations by Personnel Reduction Practice Usage[1]

Reductions-in-Force	No RIFs (n=807)	1-9 RIFs (n=107)	10 or More RIFs (n=49)	Total (n=963)
Percentage Change in Agency Accessions	2.19% (38.47%)	-2.44% (31.55%)	-3.42% (30.00%)	1.39% (37.39%)
Percentage Change in Agency Separations	0.35% (20.84%)	0.35% (21.02%)	8.06% (33.24%)	0.74% (21.70%)
Group-HRD Perceptions (1-5)	3.61 (0.21)	3.54 (0.14)	3.51 (0.19)	3.60 (0.21)
Group-DM Perceptions (1-5)	3.75 (0.18)	3.69 (0.12)	3.61 (0.22)	3.74 (0.18)
Early Retirements	**No Early Retirements (n=549)**	**1-9 Early Retirements (n=214)**	**10 or More Early Retirements (n=200)**	**Total (n=963)**
Percentage Change in Agency Accessions	4.36% (37.04%)	2.19% (38.80%)	-7.62% (35.53%)	1.39% (37.39%)
Percentage Change in Agency Separations	-2.44% (18.96%)	0.90% (23.22%)	9.28% (24.64%)	0.74% (21.70%)
Group-HRD Perceptions	3.61 (0.21)	3.61 (0.21)	3.57 (0.19)	3.60 (0.21)
Group-DM Perceptions	3.75 (0.18)	3.75 (0.18)	3.70 (0.16)	3.74 (0.18)

[1] An example of one observation in this analysis is "the Federal Aviation Administration during the 2013 Survey Year".

practices likely accompany personnel reductions.

Hierarchical Linear Models

Tables 14-16 comprise the bulk of the analysis related to employee motivational outcomes. First, I summarize the baseline perceptions in each table's Model 1 to assess the appropriateness of a multilevel approach. Next, I assess the impact of personnel reductions seen in Model 2 of each table, testing hypotheses 1A through 1C. Model 3 of each table incorporates individual-level variables such as HRD and DM perceptions and tests hypotheses 2A and 2B. Finally, I describe each table's full model (Model 4) to test H3A-B, H5A-B, and H6A-B. The full model adds group-level HRM perceptions and incorporates cross-level interactions involving individual-level HRD and DM perceptions and each level-2 variable.

Baseline Models

Baseline models in HLM begin with no explanatory variables. These outputs do not describe relationships between variables, though they are still essential for determining if a multilevel model is preferred over standard linear regression techniques with respect to a certain outcome variable (Hofmann, 1997). If the amount of variation between agencies is significantly above zero, then a multilevel approach is appropriate.

The baseline model for job satisfaction (Table 14) shows that the grand mean across all agencies is 3.76, with a plausible set of mean values of job satisfaction across agencies between 3.41 and 4.10 across 95 percent of agencies. The intraclass correlation coefficient (ICC), which determines whether or not the variation between groups is significant enough to warrant a multilevel approach, is .0268, signifying that 2.68 percent of the variation in job satisfaction can be explained by agency-level factors. This ICC is significantly greater than zero, indicating multilevel approach to analyzing job satisfaction is appropriate.

Table 13. OLS Regression on Group-HRM Indicators at the Agency-Level

	Group-HRD		Group-DM	
VARIABLES	Model 1	Model 2	Model 1	Model 2
% Difference in Accessions	0.0003*	0.0002*	0.0002	0.0001
	(1.84)	(1.65)	(1.28)	(0.80)
% Difference in Separations	-0.0005**	-0.0004*	-0.0003	-0.0002
	(-2.08)	(-1.85)	(-1.53)	(-0.93)
Reductions-in-Force		-0.0301***		-0.0485***
		(-3.06)		(-5.97)
Early Retirements		-0.0035		-0.0122**
		(-0.48)		(-2.03)
Constant	3.5820***	3.6092***	3.7110***	3.7620***
Observations	963	963	963	963

Year and Agency Fixed Effects included
t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The baseline model for organizational commitment (Table 15, Model 1) indicates the grand mean for organizational commitment is the lowest of the three motivational outcomes in the sample. Across agencies, the mean value for organizational commitment is 3.45, with a plausible range of mean values between 3.03 and 3.94 across agencies. The 95 percent confidence interval for the ICC indicates that between 4.30 and 5.34 percent of the variation in perceptions of organizational commitment can be attributed to agency-level factors, again supporting the use of a multilevel model.

The first model in Table 16 shows the grand mean of job involvement to be 3.83, the highest average of the three outcome variables. The plausible range of mean values between agencies is between 3.54 and 4.12, which is a relatively narrow range (.58) when compared with job satisfaction (.69) and organizational commitment (.91). The ICC's confidence interval indicates that between 2.57 and 3.35 percent of the variation can be explained at the agency-level. The results from all three baseline models indicate that each may be tested using a multilevel model.

Model 2 – Introducing Personnel Reduction Variables

Model 2 in Tables 14-16 introduces four personnel reduction indicators to the HLM models for each outcome variable. If hypotheses 1A through 1C are correct, coefficients representing the percent difference in accessions as well as early retirements should be positive, while percent difference in separations as well as RIFs should have negative coefficients. Model 2 within each table is a "random intercept" model, implying that the personnel reduction indicators alter the intercept of each outcome variable, but the slopes in each model are the same across agencies.

Model 2 in Table 14 shows that, on average, lower than usual accessions and higher than usual separations were both significantly related to poorer job satisfaction at the .01 level, though neither RIFs nor early retirements were significantly associated. Though separations and accessions were significantly related, the overall magnitude of these effects was relatively weak, as rather large deviations from the normal number of accessions and separations are required to produce a substantial impact on average job satisfaction perceptions. The fit statistics also suggest only marginal improvements on the baseline model results. Model 2's ICC displays an improvement of only .06 percentage points compared to the baseline model, meaning the four variables do little to account for the between-agency variation in job satisfaction. Akaike's information criterion (AIC) has also only reduced by 14, whereas one would expect a far more substantial reduction in the case of significantly improved fit.

Model 2 in Table 15 shows that disproportionate quantities of low accessions and high separations within an agency negatively impact employee organizational commitment. Additionally, when controlling for the other personnel reduction measures, the implementation of at least ten RIFs in an agency was associated with a .05 interval decrease in organizational commitment (significant at the 0.1 level). Again, the ICC and AIC coefficients indicate very little improvement on the baseline with respect to model fit.

The second model of Table 16 shows that disproportionately high separations and low accessions significantly reduce individual-level job involvement, while neither RIFs nor early retirements were significantly related. As with the other tables, Model 2 does little to account for the agency-level variance in job involvement. The results across each Model 2 show that these four personnel reductions alone likely do not ther potential explanatory variables.

Model 3 – Introducing Level-1 Predictors

Model 3 in Tables 14-16 introduces five individual-level variables to the analysis: individual-level HRD and DM perceptions[6], gender, minority status, and supervisory status. The latter three variables act as controls, while the former two are constitute explanatory variables in accounting for the variation in motivational perceptions. I use a "random coefficients model" design (Raudenbush & Bryk, 2002) in

[6] HRD and DM perceptions are "group mean centered" in the analysis, meaning the raw scores of respondents are centered around the mean of all of the respondents within their agency during the same survey year.

which the slopes of HRD quality and DM quality vary across agencies throughout the model. In addition to the fixed effect coefficient for HRD and DM quality measuring their average effect across each agency, there are variance coefficients for either variable that determine how much the slopes of these effects vary across agencies. This determines whether the relationship between individual-level HRM perceptions and motivation display a similar degree of association between agencies, or if the association is stronger in certain contexts. The slopes could vary for numerous reasons consistent with our hypotheses. For instance, if agencies with low group-level HRD perceptions make it difficult for even well-trained individuals to accomplish work tasks effectively, then the slope describing the association between individual-level HRD perceptions and a particular outcome variable could flatten in agencies with poor group-level HRD. This and other possibilities will be explored in Model 4 of each table.

In Table 14, individual-level HRM perceptions substantially improve the model fit compared to the model with only personnel reduction indicators. The AIC, which dropped by 16 between the baseline model and Model 2, has now been reduced by 1.5 million, indicating a much more suitable approach compared to the previous models. The level-1 residual variance coefficient shows that the five new individual-level variables accounted for 48.50 percent of the within-agency variation in job satisfaction that existed in the previous model.

The four personnel reduction coefficients have not changed drastically from the previous model. Deviations in the average number of accessions and separations are still significantly related to job satisfaction in the expected directions, while RIFs and early retirements are still not significantly related. The effect sizes of these indicators are relatively small when compared to those of HRD and DM quality, however. A one-interval increase in a respondent's perceptions of HRD quality is associated with a 0.64 interval increase expected job satisfaction. DM quality also has a strong impact on job satisfaction. The variance component for HRD quality is 0.0016 and significantly greater than zero, meaning that while the average effect of HRD on job satisfaction is 0.64 across the entire sample, the plausible range of this effect is between 0.56 and 0.72, depending on a respondent's agency characteristics.[7] The plausible range of DM quality is between 0.15 and 0.28 in each agency, indicating a narrower but still notable variation between agencies.

Model 3 in Table 15 shows that DM quality perceptions impacts organizational commitment quite strongly. A one-interval increase in DM quality perceptions produces a 0.53 interval increase in organizational commitment, on average. The variance component for DM quality (0.0033) suggests the plausible range of DM quality's impact on commitment is between 0.42 and 0.64 based on a respondent's agency. HRD quality was still fairly strongly related to organizational commitment, with a plausible range of 0.29 to 0.49 across all agencies. The percentage differences in accessions and separations are still significantly related to organizational commitment, as are the use of RIFs. Model 3 provides an improved model fit, as the level-1 residual variance decreased from the previous model by 55.66 percent (from 1.07 to 0.47) and the AIC has lowered substantially.

Model 3 in Table 16 shows that deviations in annual accessions and separations were significantly related to job involvement at similar magnitudes to Model 2, while RIFs and early retirements remained unrelated. HRD quality exhibited a much stronger relationship than DM quality with respect to job involvement. The plausible range of values for HRD quality's impact on job involvement is between 0.51 and 0.65 across all agencies, while the DM quality's impact ranges between 0.11 and 0.24. The level-1 residual variance drops by 60.10 percent (from .73 to .29), suggesting that the majority of individual-level variation in job involvement from the previous model is accounted for by the new variables.

Model 4 (Full Model) – Introducing Group-HRM and Cross-Level Interactions

Model 3 of each table reduced much of the individual-level variation in each motivation variable, though a significant portion of *between-agency* variation remains unexplained in each

[7] An exploration of why the slopes of HRD and DM quality vary in each table will be conducted in the final models.

motivation construct. The final models within Tables 14-16 incorporate two additional agency-level variables and ten cross-level interactions to explain as much of this between-agency variation in motivation perceptions as possible. Group-HRD and group-DM represent the agency means in HRD quality and DM quality perceptions, respectively.[8] These measures serve as reasonable proxies for training quality or commitment to diversity and inclusion within an agency, and previous analyses showed that they were lower in agencies that had implemented personnel reduction measures (especially RIFs).

The cross-level interaction terms in each model explore potential reasons why the effects of individual-level HRD and DM quality vary across agencies, as was shown in each Model 3. Individual-level HRD and DM perceptions are multiplied by each personnel reduction measure, as well as the corresponding group-HRM variable. Interactions with personnel reductions determine whether these cuts weaken the relationship between either HRD or DM perceptions and an outcome variable. For instance, if the interaction term representing RIFs and HRD quality is negative and significant, this would mean RIFs weaken the relationship between HRD perceptions and the dependent variable. The interactions with group-level HRM variables indicate whether more positive group-HRD or group-DM perceptions strengthen the relationship between individual-level HRM perceptions and the outcome. This addresses the question of whether well-trained employees receive additional motivational benefits from working alongside other well-trained colleagues. I discuss the results of all three tables simultaneously according to the categories of coefficients in each table.

Fit statistics and variation across agencies. Model 4 in each table improves on the previous models in terms of fit. The AIC coefficients do not shrink to the same magnitude as between Model 2 and Model 3 in each table, but they lower by approximately 2,000 in each case. A large portion of the

[8] To ease interpretation of the constant and the plausible range of values between agencies, these variables are centered to have a mean value of 0.

between-agency variation in each outcome is explained by group-HRD and group-DM. The ICC for job satisfaction shows 1.26 percent of the remaining variation in job satisfaction can be attributed to agency-level factors, which is a 52.99 percent improvement on the baseline model. Organizational commitment's ICC also improves on the baseline model by 45.30 percent, and job involvement's ICC improves by 39.93 percent. While each ICC is still significantly greater than zero – suggesting there is still some degree of unexplained variation in each indicator across agencies – group-HRD and group-DM clearly account for much of the original variation.

Personnel reduction indicators. The most noteworthy change from previous models is the reduced impact of personnel reduction measures on each motivation indicator. Whereas low accessions and high separations had been consistently linked to significantly poorer satisfaction, commitment, and involvement, the incorporation of group-HRD and group-DM reduced the effect size of both of these indicators to essentially zero across each model.[9] Early retirements remain not significantly related to any motivation indicator, but RIFs are curiously now positively related to each outcome variable. While there are other possible explanations for this result, the most likely explanation is that agencies incurring RIFs have significantly poorer group-HRD and group-DM perceptions, on average. Thus, holding these group-level factors constant neutralized the negative consequences of personnel reductions. Having said that, personnel reductions – especially RIFs – still play an important role worth addressing while discussing cross-level interactions.

Group-HRM variables. Group-HRD and group-DM are strongly associated with individual-level motivation, although their effects are not uniform across each indicator.[10] Group-HRD predicts job

[9] An additional model (not shown) included the group-HRM variables without the interaction terms to determine it was the inclusion of these variables – and not the statistical effects of interaction terms – which reduced the effect-size of each personnel reduction variable.
[10] One should exercise caution when comparing agency- and individual-level HRM coefficients. Group-HRD and group-DM's standard deviations are nearly four-times smaller than individual-level perceptions of HRD and DM. Therefore, the group-level coefficients are more likely to simultaneously have larger regression coefficients but relatively weaker associations with the outcome variable.

satisfaction and job involvement much better than organizational commitment, whereas the opposite is true of group-DM. In each case, however, higher levels of these climate variables produce positive motivational outcomes. This supports the idea that competent and inclusive working environments are essential for cultivating worker motivation. Interestingly, the inclusion of these variables neutralizes (or reverses) the direct effect of each personnel reduction measure in the model. Thus, the negative impacts of personnel reductions seen in Models 2 and 3 of each table can reasonably be attributed to the poorer group-HRD and group-DM perceptions that are likely to result from cutbacks.

Individual-level predictors. The individual-level HRD and DM coefficients do not change meaningfully from Model 3 to Model 4. HRD quality still strongly predicts job satisfaction and job involvement, while DM quality predicts organizational commitment much better. Some (though not all) of the between-agency variation in how HRD and DM quality perceptions influence each motivation indicator was accounted for by the new variables. The between-agency variation in HRD quality and each motivation variable reduced by 18.75 percent for job satisfaction, 7.41 percent for organizational commitment, and 15.38 percent for job involvement. The between-agency variation in DM quality and each motivation variable reduced by 8.33 percent reduction for satisfaction 9.09 percent for organizational commitment, and 10.00 percent for job involvement.

Cross-level interaction terms. Cross-level interaction terms investigate which level-2 indicators, if any, are responsible for varying the effect of HRD or DM perceptions on each outcome variable *across agencies*. Between three and five of the ten interaction terms were significant at the .1 level or better in each table, though two significant trends were found in all three models. First, group-HRD positively interacted with individual-level HRD perceptions across each outcome, indicating that the relationship between HRD perceptions and motivation is stronger in agencies with high levels of group-HRD (as was predicted in H6A). This result was not replicated by any of the group-DM and DM quality interactions (refuting H6B), suggesting that there is an additional motivational benefit to being well-trained in an overall well-trained agency that is not matched by both personal and agency-wide perceptions of diversity management. This may be because well-trained employees are more likely to feel effective and that their skills are well-utilized in higher performing environments alongside more competent coworkers.

The second trend across each model, which complicates the previous finding, is the negative interaction between RIFs and HRD quality. Using RIFs as a personnel reduction strategy weakens the relationship between HRD perceptions and motivation, such that increased perceptions of training and development quality do not increase motivation to the same degree when an agency implements any number of RIFs. RIFs represent a last resort for managers tasked with cutting down the size of their agency, and the sudden loss of personnel may produce negative consequences even in previously high-performing agencies. The weaker relationship between HRD perceptions and motivation caused by RIFs partially supports H5A, though not every cutback measure had a similar impact on the HRD-motivation relationship.

Discussion

This study examined the impacts of personnel reductions and HRM perceptions on employee motivation in the federal service from 2012 to 2017. The primary research question originally involved whether personnel reductions produced poorer motivation among employees. Instead, the findings from this essay point to agency-wide HRM perceptions as the primary organizational variable responsible for motivational impacts. Low accessions and high separations in an agency during a particular year produced a fairly negative impact on individual-level job satisfaction, organizational commitment, and job involvement prior to incorporating group-HRM perceptions, though their effects vanished in the full model.

RIFs and early retirements – two commonly used and easily identifiable signals of downsizing, in general – displayed even less consistent motivational impacts. The primary instrumentality of these specific cutback practices related to their association with poorer group-HRM perceptions. Tables 12 and 13 showed group-HRD perceptions were significantly poorer in agencies with higher than usual separations, lower than usual accessions, and the presence of RIFs, while agencies that used RIFs or early retirement incentives tended to have poorer group-DM perceptions. This likely indicates that agencies applied cuts to many of the policies, programs, and practices that contribute to these agency-wide HRM perceptions either before or in conjunction with personnel reductions. Cuts to personnel, particularly in the public sector, are rarely viewed as the first recourse in the cutback management process (V. D. Jones, 1998; OPM, 2017). However, if saving personnel comes at the expense of reducing employees' development opportunities or inhibiting agency commitment to diversity, there may be unanticipated motivational consequences for employees as a result.

Group-HRD and group-DM's relationships with motivation – as well as their contraction under times of cutbacks – informs not only how we can conceive of the consequences of cuts, but also strategies for how to cut smartly in the future. Both the JD-R (Arnold B Bakker & Demerouti, 2007) and social exchange theory (Brockner & Wiesenfeld, 1996; Lavelle et al., 2007) are compatible with the notion that HRD and DM practices within an agency can play a huge role in employee motivation following cutbacks. As it relates to JD-R, the reduction in opportunities for training and development that very likely accompanied personnel cuts increased strain while decreasing the resources available for workers to cope with increasing demands. With respect to social exchange theory, reductions in both HRD and DM practices can exacerbate the perceived contract violations associated with personnel reductions. Eliminating training opportunities may be internalized by workers as another sign that agency leadership does not value or invest in employees following cuts. Even in the case of DM, if employees see that progress stalls in creating a more inclusive, diverse workplace, this could be viewed

Table 14. Job Satisfaction Hierarchical Linear Model

	Model 1	Model 2	Model 3[a]	Model 4[b]
Intercept	3.7550***	3.7605***	3.7329***	3.6911***
Level-2 Variables				
% Difference in Accessions		0.0006***	0.0006***	-0.0001
% Difference in Separations		-0.0007***	-0.0007***	-0.0001
RIFs		-0.0101	-0.0147	0.0357***
Early Retirements		-0.0055	-0.0043	-0.0018
Group-HRD				0.4647***
Group-DM				0.3751***
Level-1 Variables				
HRD Quality[c]			0.6367***	0.6363***
DM Quality[c]			0.2170***	0.2220***
Cross-level Interactions				
HRD Qual. * % Diff. in Accessions				-0.0000
HRD Qual. * % Diff. in Separations				-0.0000
HRD Qual. * RIFs				-0.0200***
HRD Qual. * Early Retirement				0.0055***
HRD Qual. * Group-HRD				0.0571***
DM Qual. * % Diff. in Accessions				0.0001*
DM Qual. * % Diff. in Separations				0.0001
DM Qual. * RIFs				0.0021

DM Qual. * Early Retirement				-0.0083***
DM Qual. * Group-DM				0.0005
Random Effects				
Level-1 Residual Variance	1.1222	1.1222	0.5784	0.5784
Intercept Variance	0.0309	0.0302	0.0315	0.0074
HRD Quality Variance			0.0016	0.0013
DM Quality Variance			0.0012	0.0011
Supplementary Statistics				
ICC	0.0268	0.0262	0.0518	0.0126
Wald Chi^2 ($Prob>Chi^2$)	--	19.48 (<0.001)	317,576.41 (<0.001)	418,091.52 (<0.001)
Akaike's Information Criterion (AIC)	6,760,816	6,760,802	5,246,852	5,244,891
Observations	2,288,159			

Controls (Models 3-4): Gender, Minority Status, Supervisor Status

Standard errors clustered at the agency-level

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

[a] Random Coefficients Model

[b] Slopes- and Intercepts-as-Outcomes Model

[c] Variables are group mean centered

Table 15. Organizational Commitment Hierarchical Linear Model

	Model 1	Model 2	Model 3[a]	Model 4[b]
Intercept	3.4486***	3.4470***	3.4252***	3.3576***
Level-2 Variables				
% Difference in Accessions		0.0005**	0.0005**	0.0000
% Difference in Separations		-0.0007**	-0.0009***	0.0003
RIFs		-0.0255*	-0.0340**	0.0456***
Early Retirements		0.0108	0.0157	0.0206***
Group-HRD				0.1175**
Group-DM				1.0881***
Level-1 Variables				
HRD Quality[c]			0.3886***	0.3907***
DM Quality[c]			0.5323***	0.5264***
Cross-level Interactions				
HRD Qual. * % Diff. in Accessions				-0.0001
HRD Qual. * % Diff. in Separations				0.0001
HRD Qual. * RIFs				-0.0243***
HRD Qual. * Early Retirement				0.0040
HRD Qual. * Group-HRD				0.0201*
DM Qual. * % Diff. in Accessions				0.0001
DM Qual. * % Diff. in Separations				0.0001
DM Qual. * RIFs				0.0274***

DM Qual. * Early Retirement				-0.0002
DM Qual. * Group-DM				-0.0160
Random Effects				
Level-1 Residual Variance	1.0659	1.0659	0.4726	0.4726
Intercept Variance	0.0537	0.0529	0.0556	0.0127
HRD Quality Variance			0.0027	0.0025
DM Quality Variance			0.0033	0.0030
Supplementary Statistics				
ICC	0.0479	0.0473	0.1052	0.0262
Wald Chi^2 ($Prob>Chi^2$)	--	11.61 (0.021)	389,856.17 (<0.001)	434,002.67 (<0.001)
Akaike's Information Criterion (AIC)	6,600,394	6,600,389	4,755,266	4,753,746
Observations	2,273,309			

Controls (Models 3-4): Gender, Minority Status, Supervisor Status

Standard errors clustered at the agency-level

*** p<0.01, ** p<0.05, * p<0.1

[a] Random Coefficients Model

[b] Slopes- and Intercepts-as-Outcomes Model

[c] Variables are group mean centered

Table 16. Job Involvement Hierarchical Linear Model

	Model 1	Model 2	Model 3[a]	Model 4[b]
Intercept	3.8294***	3.8263***	3.8101***	3.7744***
Level-2 Variables				
% Difference in Accessions		0.0005***	0.0005***	0.0001
% Difference in Separations		-0.0006***	-0.0006***	0.0000
RIFs		0.0004	0.0017	0.0382***
Early Retirements		0.0043	0.0099	0.0101***
Group-HRD				0.3889***
Group-DM				0.3314***
Level-1 Variables				
HRD Quality[c]			0.5792***	0.5782***
DM Quality[c]			0.1756***	0.1799***
Cross-level Interactions				
HRD Qual. * % Diff. in Accessions				0.0000
HRD Qual. * % Diff. in Separations				-0.0000
HRD Qual. * RIFs				-0.0101***
HRD Qual. * Early Retirement				0.0005
HRD Qual. * Group-HRD				0.0662***
DM Qual. * % Diff. in Accessions				-0.0000
DM Qual. * % Diff. in Separations				0.0001
DM Qual. * RIFs				0.0039

DM Qual. * Early Retirement				-0.0055***
DM Qual. * Group-DM				0.0124
Random Effects				
Level-1 Residual Variance	0.7261	0.7261	0.2897	0.2897
Intercept Variance	0.0219	0.0215	0.0230	0.0052
HRD Quality Variance			0.0013	0.0011
DM Quality Variance			0.0010	0.0009
Supplementary Statistics				
ICC	0.0293	0.0288	0.0737	0.0176
Wald Chi^2 ($Prob>Chi^2$)	--	15.17 (0.004)	314,423.35 (<0.001)	458,927.06 (<0.001)
Akaike's Information Criterion (AIC)	5,795,445	5,795,435	3,685,471	3,683,514
Observations	2,300,409			

Controls (Models 3-4): Gender, Minority Status, Supervisor Status
Standard errors clustered at the agency-level
*** $p<0.01$, ** $p<0.05$, * $p<0.1$
[a] Random Coefficients Model
[b] Slopes- and Intercepts-as-Outcomes Model
[c] Variables are group mean centered

as a broken promise on the part of agency leadership to create a more welcoming environment.

Two other findings from Model 4 of Tables 14-16 partially confirm hypotheses 5A and 6A. First, the relationships between individual-HRD perceptions and each motivation indicator were stronger in organizations with high group-HRD perceptions. Essentially, employees received a bigger motivational boost from training in agencies where the average training perceptions among all respondents were higher. The payoff of training and development looks to be higher in environments that surround workers with other competent and high-performing colleagues. Skilled coworkers may provide support and advice on difficult questions and circumstances (P. M. Blau, 1955), or they may allow for more cohesive cooperation and higher achievement when task interdependence and complexity is high (Van De Ven, Delbecq, & Koenig, 1976). This moderating role was not replicated when testing group-DM's potential moderating impact on the various DM-outcome relationships, however. This does not deny the potential personal or organizational benefits of effective DM, such as increased organizational commitment (Chrobot-Mason & Aramovich, 2013) and enhanced organizational performance (Jayne & Dipboye, 2004; Kulik & Roberson, 2008). Rather, these results imply that individual-level DM's impact on motivation is not meaningfully affected by other colleagues' perceptions of their agency's commitment to diversity.

The second significant finding from each table's Model 4 displayed that as an agency implements RIFs within a particular year, HRD perceptions' instrumentality in increasing motivation decreased. RIFs represent the worst-case scenario for managers in the public sector (V. D. Jones, 1998), and they are implemented only following several other attempts to reduce expenses through other methods (Dennis, 1983; Raudla, Savi, et al., 2015; Shaughnessy, 1986). If RIFs are accompanied by other losses of resources, this may lessen the benefits of employees' perceptions of competence on their overall well-being. For instance, losing colleagues or necessary tools to accomplish tasks may create obstacles to complete tasks and frustrate employees, causing them to disengage from the agency and their activities (Holzer, 1986; Levine, 1984). High-skilled employees may also perceive themselves to be overly qualified for certain work tasks that are assigned to them following RIFs, reducing their fulfillment in work tasks despite a high level of training and preparedness (Greiner, 1986). Regardless of the potential explanation, RIFs were the most reliable agency-level cutback indicator with respect to straining agency resources and reducing the motivational benefits of training and development.

Limitations and Directions for Future Research

Several limitations to the research and data sources constrain the findings. In some cases, these limitations warrant further investigation into the specific policies and practices within federal agencies following (or during) personnel reductions. First, OPM's FedScope data provides detailed information on the type and number of personnel changes in each agency, but this is an imperfect way to measure cutback management practices used within an agency. High separations, low accessions, RIFs, and early retirements within an agency are symptomatic of broad cutback management efforts, but one cannot definitively conclude that an agency was downsizing based off of these figures, alone. Furthermore, neither FedScope nor FEVS provide any objective data on HR budgets. In order to ascertain the quality of training within an agency during a given time, FEVS respondents' answers to training and diversity questions were averaged at the agency level. This, too, is an imperfect measure of the HRM policies and practices within an agency, though the evidence in this study – comparing results against two separate data sources – indicates that average perceptions of HRD and DM (found in FEVS) were poorer in agencies with more personnel reductions during that year (found in FedScope). Thus, concerns of common source bias are not as serious in this regard.

Another important limitation is that HRD quality could have slipped in organizations with personnel reductions for two equally-plausible reasons. First, the reductions could have been accompanied by spending cuts that truly reduced the amount of training and development opportunities available to employees following cuts. Alternatively, there may be instances where agency leaders maintained funding and opportunities for worker development, but failed to implement training that helped employees adapt to new roles or increased workloads. Previous research from several sources suggests that either alternative is possible (Greiner, 1986; V. D. Jones, 1998; Levine, 1984), and there was probably a mix of both of these problems during the survey period. Unfortunately, there is little available data that would allow us to identify either of these cases. Future research in this area should work to study the consequences of either phenomenon on work motivation.

Implications for Practice

The implications of this study are simple enough, in theory: if personnel reductions are necessary to reduce expenses, then agency leadership should ensure that there are ample opportunities for training and development. When faced with increasing job demands – whether that be expanded workloads, ambiguous responsibilities, or unfamiliar work tasks – employees will seek out resources to help them cope with these emerging demands (Arnold B. Bakker et al., 2007; Greiner, 1986; Park, 2019; Van den Broeck et al., 2010). As mentioned above, it is unclear whether leadership in federal agencies more often cut training spending compared to previous levels or simply failed to create new training for new demands. Regardless, employees in agencies across the federal service reported significantly poorer training perceptions in cases where there were more separations, fewer accessions, and more RIFs. With this in mind, managers should commit to meeting the training needs that come with fewer personnel and redesigned work tasks.

Unfortunately, cutback management research suggests that managers often do just the opposite in difficult circumstances. When the alternative is making difficult, coordinated, and politically unpopular decisions about making targeted cuts according to priorities, managers will instead approach retrenchment through across-the-board, equal-misery strategies of decrementalism (Behn, 1985; Levine, 1984; Pandey, 2010; Raudla, Savi, et al., 2015). This strategy realizes savings in the short-term, but it leads to longer-term problems if employees' basic needs are no longer being met to sufficiently perform their duties and develop as professionals. Dissatisfaction on the part of workers may eventually translate to organizations losing their best-skilled workers at a time when they are needed most (Holzer, 1986).

This disconnect between managerial actions and evidence-based recommendations concerning training budgets is a bad problem getting worse. Financial hardships brought about by the Covid-19 pandemic substantially decreased training opportunities in many organizations, including the public sector. *Training Magazine's* annual "Training Industry Report" found that 28 percent of respondents reported a decrease in the amount of training opportunities provided by their organization, compared to 14 percent in 2019 (Training Magazine, 2019, 2020). The gap was similar among government/military responses, with 32 percent reporting decreases in training budgets in 2020 compared to 17 percent in 2019. This trend spells trouble for the future effectiveness of agencies implementing training cuts in 2020, as ample research in cutback management concludes this short-term approach to realizing savings leads to long-term consequences of decreased productivity (Levine, 1979), increased employee strain (M. D. Jones et al., 2016), and ultimately less motivated employees (Meyer-Sahling et al., 2016).

CHAPTER III: STATE PUBLIC HEALTH TRAINING AND DEVELOPMENT PERCEPTIONS AND PUBLIC HEALTH WORKER MOTIVATION

Introduction

Budget cuts are the norm, rather than the exception, for state public health agencies (SHAs) in the United States, particularly in the years following the 2008 financial crisis. An analysis by the Kaiser Family Foundation and the Associated Press (Weber, Ungar, Smith, Recht, & Barry-Jester, 2020) found that per capita spending for SHAs declined by 16 percent from 2010 to 2019. During that same span, the number of SHA employees also dropped by approximately 12 percent. These cuts to public health budgets have left staff short on training, equipment, and supplies (O'Donnell, 2020), and makes the US more vulnerable to public health emergencies when they emerge (Guyton & Buccina, 2011).

Despite having the most expensive healthcare system in the world (Byrnes, 2019), the US is distinctly middle-of-the-pack among OECD countries in health workers per capita and infant mortality rates, for example (Chen et al., 2004). *Public health*, in particular, is chronically underfunded compared to other areas of health expenditures in the United States, and there are many reasons for this. Hemenway (2010) argues that public health is neglected compared to medicine and health care because a) the services it provides are mundane, in comparison to medicine's flashy breakthroughs; b) it is a public good that relies heavily on government funding as opposed to private investment; and c) when public health runs effectively, there is little visibility of the purposes it serves, its beneficiaries, or the counterfactuals of if it were ineffective. Indeed, the Covid-19 pandemic of 2020 has exposed major flaws in the public health infrastructures in the United States and provided a clear example of the damage that can be inflicted when public health workers are ill-equipped to handle a public health emergency (Maani & Galea, 2020). This problem will likely get worse before getting better, as the financial issues associated with the pandemic may shrink federal, state, and local health budgets over the next several years (Devi, 2020; Weber et al., 2020).

Insufficient resources or unwieldy demands may also cause motivation problems among public health workers (Franco, Bennett, Kanfer, & Stubblebine, 2004; Mathauer & Imhoff, 2006; Rowe, De Savigny, Lanata, & Victora, 2005). Still, Sellers and others (2015) point to a lack of research on public health workforce development, satisfaction, and motivation in the US context, particularly at the state and local levels. This is surprising, given the importance of public health worker motivation to accomplish work tasks in a difficult, often labor-intensive environment (Franco, Bennett, & Kanfer, 2002). In this study, I examine whether statewide perceptions of training and development quality impact the job involvement, satisfaction, and organizational commitment of workers.

Research Questions

This chapter builds on the results of the previous study of federal workers to examine how organization-level HRD perceptions are related to individual-level motivation. Using a survey of 16,000 SHA employees in 2017, I ask whether the quality of human resource development (HRD) perceptions at the state-level are associated with higher levels of motivation at the individual-level. I anticipate that states with poorer aggregate perceptions of HRD quality among employees will be accompanied by lower motivation levels on average. As in the previous chapter, state-level HRD perceptions are used as a proxy for the overall quality of – and commitment to – training and development within a particular SHA. These perceptions cannot act as accurate representations of the financial resources available to SHAs, nor should they reasonably represent the presence of cutbacks implemented within SHAs. However, evidence from the previous chapter indicated that organization-level training perceptions were generally lower in agencies with other signs of cutback management activity, such as reductions-in-force and hiring freezes. Therefore, this offers a test of whether an organization's commitment to training and development increases employee motivation.

Hypotheses

Several hypotheses are similar to those in the previous study. Prior to understanding the organization-level effects of HRD perceptions, the first hypothesis simply states that there should be a relationship between individual-level perceptions of training and development and motivation:

> H1: Employees with better perceptions of HRD quality report higher levels of job satisfaction, organizational commitment, and job involvement.

Even when controlling for individual-level HRD perceptions, the wider perceptions of HRD in an organization may impact individual-level motivation. High-quality working environments may provide benefits for employees regardless of perceptions of their own training and abilities, as colleagues should be more likely to offer support or advice:

> H2: Employees of SHAs with better mean employee perceptions of HRD quality (i.e., group-HRD) report higher levels of job satisfaction, organizational commitment, and job involvement.

Finally, as was found in the previous chapter, there should also be a positive interaction between individual- and organization-level HRD perceptions:

> H3: The relationship between HRD quality and motivation is stronger in states with stronger group-HRD.

I theorize here that well-trained employees will be more satisfied, committed, and involved when surrounded by other highly-trained, competent employees. In job roles and activities with high levels of complexity and interdependence, even well-trained employees will still likely rely upon other skilled colleagues to accomplish their goals. Better Group-HRD facilitate these working environments and allow employees to achieve towards the upper-end of their potential more easily.

Research Design and Methodology

The PH WINS survey was conducted from September 2017 to January 2018 and includes over 47,000 respondents across 47 state agencies, 25 large-city agencies, and 71 local health departments in the US. The sample is nationally representative of the overall governmental public health workforce and had a response rate of approximately 48 percent. The demographic information of the sample displays a wide range of individuals surveyed in terms of age (20 to over 76), tenure in public health (0 to over 21 years), educational attainment (no college degree to doctoral degree), position type, and salary (less than $25,000 to over $145,000). In addition to answering attitudinal items directly related to this study such as job involvement, satisfaction, and the availability of training and development opportunities, the survey also asks about turnover intention, emerging trends in public health, and questions about the scope of healthcare delivery services within an employee's jurisdiction. The survey was conducted in partnership with the de Beaumont Foundation, the Association of State and Territorial Health Officials (ASTHO), the National Association of County and City Health Officials (NACCHO), and the Big Cities Health Coalition (BCHC).

I include only the respondents working in a state public health department. Local public health spending data provided by the Census Bureau is aggregated at the state-level, making it impossible to determine funding changes within specific local health departments. This reduces the sample size from approximately 47,000 to 16,180 respondents. The reduction in observations, while substantial, increases the likelihood of accurately representing HRM practices and policies within a respondent's agency as measured by the independent variables, while also retaining enough observations to attain meaningful results within each statistical test. Three state health departments are completely decentralized (i.e., divided entirely into local health agencies with no overarching state health agency), resulting in 47 states used in the analysis. To protect the privacy and anonymity of respondents, ASTHO and the de Beaumont Foundation provided only randomized state dummy variables, rather than state identifiers.

Therefore, while it is possible to measure aggregate HRD perceptions in each SHA, I was not able to identify specific states in the analysis.

Motivation Indicators

Measures of individual-level motivation are similar to the previous study in this dissertation and consistent with previous research using multi-faceted approaches to the overall construct of motivation (Moynihan & Pandey, 2007a). Full item descriptions for each factor variable are shown in Table 17. Job satisfaction is measured using a single item: "Overall, how satisfied are you with your job?" Organizational commitment is comprised of three items with a Cronbach's alpha of 0.85 (e.g., "Overall, how satisfied are you with your organization?"). Of the three types of organizational commitment identified in the organizational behavior literature, these items align most closely with affective commitment. Job involvement is measured using four items with a Cronbach's alpha of 0.79 (e.g., "I feel completely involved in my work"). Job satisfaction and job involvement both have high mean values (4.0 and 4.3, respectively), and job involvement has a particularly small standard deviation (0.6, versus 1.1 for job satisfaction). Respondents reported lower levels of organizational commitment on average (3.5), with a standard deviation of 1.0.

Human Resource Development Indicators

Human resource development quality is measured both at the individual- and state-level. The individual-level variable measures workers' perceptions of HRD quality through a series of five items. These items include respondents' general perceptions about training, development, and leadership opportunities within the organization, producing a Cronbach's alpha of 0.88 (e.g., "My training needs are assessed"). The mean value for across all state health agency respondents is 3.6 with a standard deviation of 0.9. Using these same items, I also create a state-level measure of group-HRD which represents average perceptions of HRD quality among all of the respondents in a particular state health agency. At the individual-level, group-HRD has a mean value of 3.7 with a standard deviation of 0.1.

These summary statistics are largely similar at the state-level, as well (mean of 3.7; standard deviation of 0.1).

For the sake of analysis in Tables 19-21 (hierarchical linear models), individual HRD quality is group mean centered to display worker perceptions as deviations from the mean HRD perceptions within their state. The assumption that HRD perceptions are at least partly a function of the training and development policies in an employee's SHA necessitates the use of group mean centering. The individual-level mean for group centered HRD quality is approximately zero with a standard deviation that is virtually the same as the raw HRD quality measure (0.9). The group-HRD variable is also transformed to have a mean of zero, allowing for an interpretable constant coefficient in the last model of each table.

Controls

Control variables used in the preliminary regression models include gender, race, age, hierarchical level (non-supervisor to executive), age group, education (highest degree attained), and employment type (full- or part-time). The coefficients for these variables are excluded in the tables for clarity of presentation.

Research Design

The bulk of the analysis involves three separate series of multilevel mixed effects models, shown in Tables 19-21. Each table uses one of the three measures of motivation as an outcome variable and includes four models: (1) a baseline model to determine the extent of between-state variation in an outcome variable; (2) a random coefficient model with individual-level HRD quality perceptions and other controls introduced into the model; and (3) a slopes- and intercepts-as-outcomes model which adds state-level group-HRD, as well as a cross-level interaction between individual- and state-level HRD

Table 17. Perception Variable Item Descriptions

Factor Variable	Items Used
Job Satisfaction (1 item)	Considering everything, how satisfied are you with your job?
Organizational Commitment (3 items, alpha=0.85)	I recommend my organization as a good place to work Communication between senior leadership and employees is good in my organization Considering everything, how satisfied are you with your organization?
Job Involvement (4 items, alpha=0.79)	I know how my work relates to the agency's goals and priorities The work I do is important I feel completely involved in my work I am determined to give my best effort at work every day
Human Resource Development (HRD) Quality (6 items, alpha=0.88)	Supervisors in my work unit support employee development My training needs are assessed Employees have sufficient training to fully utilize technology needed for their work My supervisor provides me with opportunities to demonstrate my leadership skills I have had opportunities to learn and grow in my position over the past year I am satisfied that I have the opportunities to apply my talents and expertise

quality. The latter two models within each table are structured to allow the HRD quality-outcome slope to vary for each state.

Results

Descriptive Statistics

Of the 16,181 valid respondents from state health agencies, the vast majority are women (71.9 percent). 67.0 percent of respondents are white, while Black and Hispanic/Latino respondents account for a combined 20.8 percent of the sample. The age range is fairly wide, with 16 respondents under age 20 and 24 respondents over 75, but 43.5 percent are between the ages of 46 and 60. Almost 70 percent of the respondents are categorized as non-supervisors, even though 73.7 percent of the sample hold a bachelor's degree or higher. Finally, a very large majority of workers in the sample work full-time at their agency (93.4 percent).

An individual-level correlation matrix, shown in Table 18, displays strong correlations among each of the motivation indicators, ranging from 0.6 between commitment and involvement to 0.7 between satisfaction and commitment. Additionally, each motivation indicator is strongly associated with HRD quality perceptions (0.6 to 0.7).

Hierarchical Linear Models

This section focuses on the results from Tables 19-21 to assess the impact of state-level HRD perceptions on public health employee motivation.

Baseline Models

Model 1 in Tables 19-21 details the within-state and between-state variation in each motivation outcome in the absence of explanatory variables. The results in each baseline model provide enough evidence of between-state variation to justify the use of HLM, though the degree of this variation was more robust for organizational commitment than for either job satisfaction or job involvement. The ICC

Table 18. Correlation Matrix (Individual-Level Statistics)

Variable	Mean	Std. Dev.	(1)	(2)	(3)	(4)
(1) Job Satisfaction (1-5)	4.04	1.09	1.00			
(2) Organizational Commitment (1-5)	3.54	1.02	0.66	1.00		
(3) Job Involvement (1-5)	4.29	0.62	0.56	0.55	1.00	
(4) HRD Quality (1-5)	3.64	0.86	0.63	0.74	0.62	1.00

16,157 observations

for organizational commitment shows that an estimated 4.5 percent of its variation can be attributed to state-level effects, compared to approximately 1 percent of the variation in job satisfaction and job involvement (in general, the random effects portion of the model indicate very little variation in job involvement at any level, individual or state). Consistent with the ICC coefficients, the range of plausible mean values across all states was widest for organizational commitment (3.1 to 4.0), followed by job satisfaction (3.8 to 4.3) and job involvement (4.2 to 4.4).

Random Coefficient Model – Introducing Individual-Level Factors

Model 2 in Tables 19-21, which adds several individual-level variables to each regression equation, suggests that perceptions of training and development quality are positively (and strongly) linked with higher levels of satisfaction, commitment, and involvement. HRD quality had the strongest impact on organizational commitment, though the t-statistic for each HRD quality variable in each of these models was greater than 75, indicating strong relationships across-the-board. A one-interval increase in HRD perceptions was associated with a 0.9 increase in commitment. However, HRD quality's impact on commitment does not vary much at all between states, as shown by the HRD quality variance coefficient (0.0003). The plausible range of values for the HRD quality coefficient is between 0.8 and 0.9 for any particular state. Of the three motivation indicators, only job satisfaction's relationship with HRD quality varied meaningfully at the state-level. This the plausible range of values for this relationship was between 0.7 and 0.9, indicating that there could be some state-level factors responsible for the variation in job satisfaction.

Model 2 in each table represented vast improvements in model fit. The AIC is reduced by approximately 8,000 for job satisfaction, 13,000 for organizational commitment, and 8,000 for job involvement. The proportion of within-state variation in each outcome variable has also dropped considerably, as shown by the change in the level-1 residual variance coefficient. HRD quality and demographic control variables explain roughly 40 percent of the individual-level variation in job satisfaction and job involvement, and roughly 55 percent of the individual-level variation in organizational commitment.

Full Model – Introducing Group-HRD and Cross-Level Interactions

The final models within Tables 19-21 add state-level group-HRD and a cross-level interaction between individual and group-HRD to the model.[11] On average, a one-interval increase in a state's group-HRD was associated with a one-interval increase in job satisfaction (t^*=12.1), a 1.4 increase in organizational commitment (t^*=10.7), and a 0.5 increase in job involvement (t^*=10.5). This suggests that even when controlling for a worker's own perceptions of their training and development, the aggregate quality of HRD perceptions in a state public health organization is associated with significantly improved motivation among its workers. The inclusion of group-HRD also vastly decreases the between-state variation in each variable, shrinking the range of plausible mean values across all states (compared to the baseline model) by 61 percent for job satisfaction (0.5 to 0.2), 41 percent for organizational commitment (0.9 to 0.5), and 63 percent for job involvement (0.2 to 0.1). The ICC values for each outcome has also reduced within each table. Just 3.5 percent of the remaining variation in organizational commitment can be attributed to state-level factors, and there is virtually no remaining between-state variation in job satisfaction (0.3 percent) or job involvement (0.2 percent). Overall, group-HRD explains 85.5 percent of the state-level variation in job satisfaction, 64.3 percent of the state-level variation in organizational commitment, and 86.9 percent of the state-level variation in job involvement.

While a state's group-HRD does predict individual-level motivation, it does not appear to have a profound impact on the individual-level HRD quality-motivation relationships that were found in the previous study – thus negating H3. The cross-level interactions, which in this case were only useful for

[11] Since job satisfaction was the only outcome in which the HRD quality slope varied substantially between states, the cross-level interactions are less informative for making conclusions regarding organizational commitment or job involvement.

potentially explaining how individual-level HRD perceptions would vary across states for job satisfaction, show a slightly negative interaction between group-HRD and HRD quality. This would indicate that the relationship between individual-HRD perceptions and satisfaction is actually *weaker* in states where there is a better group-HRD, though the effect was only significant at the 0.1 level. The random effect of HRD quality in Model 3 of Table 19 indicates that there is still a fair amount of variation in the HRD-satisfaction relationship between states that remains unaccounted for.

Discussion

The previous study explored whether personnel reductions in a public organization decreases employee motivation through, among other factors, diminishing the quality of training and development opportunities. The findings from that essay largely supported the hypothesis that personnel-related cutbacks decreased employee motivation, though the effect was mostly indirect through a deterioration of the HRD and diversity management (DM) climates in federal agencies that made cuts.

This chapter replicated some, though not all, of the findings related to organizational HRD perceptions and motivation. When controlling for individual-level perceptions of training and development quality, states with better group-HRD tended to have more motivated employees (H2). States that commit more time and resources to training their workforce may therefore experience benefits of having not only a more competent and qualified workforce, but also one that is more committed to the agency and its goals. Unlike the previous study, there was no evidence that a positive group-HRD strengthens the relationship between individual-level training perceptions and motivation (H3). Thus, the proximity of other well-trained employees may not have the same moderating impact between training and satisfaction that was observed among federal workers (this could relate to the diverse activities and responsibilities of state health employees). Despite this, there are clear implications from this and the previous study that a strong group-HRD tends to produce higher levels of motivation for its employees. If an organization needs to implement cutbacks to meet emerging budgetary constraints, public managers should exercise caution in making decisions that might negatively affect training and development opportunities available to employees. Committed and competent employees are necessary for organizations faced with weathering hard times, which makes it all the more important for managers to commit to the programs that strengthen these feelings across the workforce.

As noted earlier in this chapter, statewide HRD perceptions do not necessarily represent the presence of cutback measures within an SHA, nor do they represent the financial health of an agency. Data limitations related to randomized state dummy variables (rather than state identifiers) prevented the opportunity to research state-level funding or resources available to SHAs. Even when it is possible to identify specific states, creating variables to accurately measure the financial health of SHAs is a very difficult task (for an extensive review, see McCullough & Leider, 2019). Further research and experimentation should be done using both primary and secondary data sources to identify both when cuts are applied to SHAs and their effects on cutback management practices.

Disclaimer

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Table 19. Job Satisfaction Hierarchical Linear Model

	Model 1	Model 2[a]	Model 3[b]
Intercept	4.0639***	3.8286***	3.8784***
Level-2 Variable			
Group-HRD			0.9968***
Level-1 Variable			
HRD Quality[c]		0.7944***	0.8046***
Cross-Level Interaction			
HRD Qual. * Group-HRD			-0.1845*
Random Effects			
Level-1 Residual Variance	1.1842***	0.7068***	0.7065***
Intercept Variance	0.0141***	0.0152***	0.0022***
HRD Quality Variance		0.0019***	0.0015***
Supplementary Statistics			
ICC	0.0118	0.0210	0.0031
Wald Chi^2 ($Prob>Chi^2$)	--	9,151.70 (<0.001)	15,864.97 (<0.001)
Akaike's Information Criterion (AIC)	48,667.57	40,395.56	40,338.46
Observations	16,160	16,160	16,160

Controls (Models 3-4): Gender, Race, Age, Hierarchical Status, Full/Part-time Status, Education
Standard errors clustered at the agency-level
*** p<0.01, ** p<0.05, * p<0.1
[a] Random Coefficients Model
[b] Slopes- and Intercepts-as-Outcomes Model
[c] Variables are group mean centered

Table 20. Organizational Commitment Hierarchical Linear Model

	Model 1	Model 2[a]	Model 3[b]
Intercept	3.5338***	3.5220***	3.6913***
Level-2 Variable			
Group-HRD			1.4463***
Level-1 Variable			
HRD Quality[c]		0.8617***	0.8461***
Cross-Level Interaction			
HRD Qual. * Group-HRD			-0.0760
Random Effects			
Level-1 Residual Variance	0.9963	0.4465	0.4466
Intercept Variance	0.0471	0.0451	0.0161
HRD Quality Variance		0.0003	0.0001
Supplementary Statistics			
ICC	0.0451	0.0917	0.0347
Wald Chi^2 ($Prob>Chi^2$)	--	31,530.61 (<0.001)	59,108.97 (<0.001)
Akaike's Information Criterion (AIC)	45,987.17	33,077.89	33,038.40
Observations	16,180	16,180	16,180

Controls (Models 2-3): Gender, Race, Age, Hierarchical Status, Full/Part-time Status, Education

Standard errors clustered at the agency-level

*** p<0.01, ** p<0.05, * p<0.1

[a] Random Coefficients Model

[b] Slopes- and Intercepts-as-Outcomes Model

[c] Variables are group mean centered

Table 21. Job Involvement Hierarchical Linear Model

	Model 1	Model 2[a]	Model 3[b]
Intercept	4.2998***	4.0874***	4.1130***
Level-2 Variable			
Group-HRD			0.4921***
Level-1 Variable			
HRD Quality[c]		0.4436***	0.4300***
Cross-Level Interaction			
HRD Qual. * Group-HRD			0.1069***
Random Effects			
Level-1 Residual Variance	0.3842	0.2304	0.2304
Intercept Variance	0.0038	0.0038	0.0005
HRD Quality Variance		0.0004	0.0002
Supplementary Statistics			
ICC	0.0098	0.0161	0.0022
Wald Chi^2 ($Prob>Chi^2$)	--	12,713.71 (<0.001)	21,559.19 (<0.001)
Akaike's Information Criterion (AIC)	30,503.92	22,302.98	22,246.13
Observations	16,178	16,178	16,178

Controls (Models 2-3): Gender, Race, Age, Hierarchical Status, Full/Part-time Status, Education
Standard errors clustered at the agency-level
*** p<0.01, ** p<0.05, * p<0.1
[a] Random Coefficients Model
[b] Slopes- and Intercepts-as-Outcomes Model
[c] Variables are group mean centered

CONCLUDING CHAPTER

Integrated Findings

Previous literature has made one point very clear: cutback management practices which reduce the number of employees – or the amount of resources available to them – produce added pressures, feelings of job insecurity, and lower motivation (Petrou et al., 2017; Russell & McGinnity, 2014). The three essays in this work started with this basic assumption and sought to increase our understanding of the underlying reasons that cutbacks negatively influence employee and managerial motivation, alike. Exploring factors that may play a role in the cutback management-motivation relationship – such as the loss of managerial autonomy (Van der Voet & Van de Walle, 2018) or how organizational changes are communicated to employees (Van der Voet & Vermeeren, 2017) – is in line with recent cutback management research, though few recent studies have looked at how cuts impact HRM practices as an explanation for deteriorating motivation (Greiner, 1986; Levine, 1984). The findings of the three essays in this work account for the role of HRD, DM, and other "back office" functions in public organizations faced with the need to reduce operating capacity. However, the findings also present inherent conflicts between managers and employees regarding precisely which areas to implement cuts. In order to satisfy crucial demands of both maintaining efficacy *and* providing sufficient resources to employees, managers are tasked with making informed, careful decisions during the cutback management process. The concluding section of this work discusses this balancing act in greater detail.

Chapter I illustrated the preferences and perceptions of EU public executives following the 2008 financial crisis. Managers of organizations that utilized a proportional-across-the-board cutback approach reported lower levels of job satisfaction and organizational commitment, compared to managers using targeted or savings-based strategies. These managers were also more likely to believe that organizational reforms were poorly planned and implemented. In terms of specific cutback tactics, executives reported using hiring freezes, program cuts, and back office downsizing most frequently, while minimizing the use of pay cuts and staff layoffs. There was also a clear preference for back office downsizing over reducing front line presence, and back office reductions were the only practice to be associated with positive perceptions among managers as their use increased.

Chapter I also revealed that the severity of cutbacks in an organization produced opposite directional impacts on executives' job satisfaction and organizational commitment. Whereas more severe cuts were associated with decreases in executive job satisfaction, organizational commitment increased as cuts grew in severity.

Chapter II underscored the importance of agency-wide HRD and DM policies and practices on employee motivation. Group-HRD imparted a larger impact on satisfaction and job involvement, while group-DM raised organizational commitment substantially. While reductions to personnel – measured through low accessions, high separations, RIFs, and early retirements within an agency during a particular year – were initially found to produce negative impacts on employee motivation, though this impact was neutralized once agency-wide HRM perceptions were added to each model. The conclusion resembles a pattern found in Chapter I: organizations undergoing cutbacks will seek to apply cuts to training, development, diversity and inclusion, and other "back office" functions prior to, or at least in coordination with, personnel reductions. The second chapter's results suggest that these back office functions are still valued by employees, however, and their motivation is strongly tied to the quality of HRM functions within their agency.

Chapter III built off of the previous chapter's findings by seeking to understand the role of organization-wide HRD perceptions on individual-level motivation in state public health agencies. While the interaction effect between individual- and state-level HRD did not produce the expected results, there was a clear, strong association between group-HRD and each motivation indicator, even when controlling for individual-level HRD perceptions.

Revisiting Propositions from the Introduction

The introductory chapter outlined five general propositions that were investigated at various points throughout the dissertation. A summary of these five propositions is listed below:

P1: Cutback management practices reduce employee job satisfaction and job involvement at all organizational levels.

P2: Cutback management practices reduce organizational commitment among low-level employees and increase commitment among executives.

P3: Managers will apply cuts to HRM policies and practices in organizations faced with cutbacks, even when few other practices are used.

P4: Employee motivation is positively associated with high-quality HRM practices.

P5: Employees in organizations faced with cutbacks will report fewer opportunities for training and development.

The discussion below covers some of the findings related to these propositions and implications for cutback management theory and practice.

Primary Implications

Disparities in Executive and Subordinate Cutback Preferences

The first proposition stated that two components of work motivation – job satisfaction and job commitment – would be negatively impacted by cuts for all types of employees, regardless of hierarchical level. This was largely supported by the first two chapters, though different types of cuts affected job satisfaction in either study. Among EU public executives, cuts that postponed or cancelled future programs and reduced frontline presence were associated with poorer job satisfaction, while cuts to back office functions produced the opposite effect. Executives in this survey expressed satisfaction with cuts that protected the technical core (Cameron, Kim, et al., 1987) at the expense of more peripheral agency functions and services. The study of federal workers, however, showed that perceptions of training quality and agency commitment to diversity – two peripheral, back office functions – strongly related to work motivation. While personnel reductions such as low accessions and high separations initially appeared to negatively impact federal employee satisfaction, commitment, and involvement, these negative effects were nullified after incorporating agency-wide perceptions of HRD and DM into each hierarchical model. Reductions in HRM practices – which appeared more likely in agencies with RIFs and early retirements (Chapter II, Tables 12-13) – may leave employees with fewer resources to cope with increasing job demands, while also violating the psychological contract of working in an inclusive, supportive organization.

Taken together, these results signify a disconnect between managerial preferences of how to implement cuts and how to maintain employee motivation during tough times. The types of cuts preferred by managers in Chapter I, which preserve mission-oriented priorities at the expense of "soft" budget areas such as development (Brewster, Wood, Brookes, & Ommeren, 2006), may conflict with the priorities and attitudes of subordinates tasked with maintaining service delivery with fewer resources and opportunities for development. This is where Propositions 3 and 5 may combine to create a negative working environment for employees once an organization begins to cut back. Executives from Chapter I were more likely to apply heavy reductions to back office functions than to reduce front line presence. Table 6 displayed a clear preference for back office cuts, as only five percent of executives in the sample implemented substantial reductions to the front line in the absence of similar levels of back office downsizing. This can cause significant strains on employee resources if the back office functions include HRM-related practices.

Suggestions for Better Cutback Management Tactics

All of this is not meant to suggest that cuts to training and development should shift to personnel-related cuts. Even among research that finds motivational consequences associated with fewer training and development opportunities, cuts related to lower recruitment and higher dismissals were shown to produce similarly negative consequences for remaining employees (Meyer-Sahling et al., 2016). Additionally, staff reductions should theoretically produce roughly the same degrees of increased demands and hindrances that occur when training opportunities are reduced (Breaugh, 2020). Where can managers implement budget reduction strategies that will leave all parties in a better place?

Van Eerde, Tang, and Talbot (2008) emphasize that the effectiveness of training programs in organizations is related to the utility, rather than quantity, of training opportunities. They argue that organizations should perform "training needs assessments" to determine the types of HRD programs that suit an organization and its employees' needs. Brown (2002, p. 569) defines a training needs assessment as a "process of gathering data to determine what training needs exist so that training can be developed to help the organization accomplish its objectives." In addition to identifying areas that may not be adequately addressed by current practices, it can also identify which existing training activities are producing enough benefits to justify their cost (Schneier, Guthrie, & Olian, 1988; Van Eerde et al., 2008). Needs analysis is especially appropriate as organizations face change processes like cutbacks, as many employees will need at least some form of development practices to cope with new or increasing work demands (Reed & Vakola, 2006).

While the up-front costs of a needs assessment may be difficult to justify during times of strain and crisis (Levine, 1979, 1984), its links to increased productivity (Denby, 2010) and greater acceptance of change efforts (Reed & Vakola, 2006) make it an invaluable tool for strengthening HRM practices, while also removing any redundancies in the current training regimen (Schneier et al., 1988). If done correctly, a needs analysis can provide executives with information about which development activities should be kept, which should be eliminated, and whether new development opportunities should be implemented to help employees cope with new demands.

Conceptualizing Executioner's Guilt

Proposition 2 hypothesized that cutback management practices would impact executive organizational commitment differently from subordinate organizational commitment. The findings from Chapter I revealed that executives' organizational commitment increased as the severity of cutbacks increased, while Chapter II suggests that federal servant commitment decreased following cuts.[12] These differences likely point to differences how these two groups experience the cutback management process, and the psychological processes that accompany it.

Brockner's theory of survivor's guilt (1985; 1986; 1987) posits that cutbacks negatively impact the affective states of employees due to, among other things, perceived job insecurity and anxiety. Cutbacks also breach the psychological contract between an employee and their organization, in which an employee's implicit trust in the organization to treat them fairly and provide a basic level of security is damaged (Aryee et al., 2002; Brockner et al., 1994; Conway et al., 2014). Psychological contract breaches often lead to withdrawal behaviors, greater turnover intentions, and decreased loyalty to the organization (Lo & Aryee, 2003; Turnley & Feldman, 1999). Employees lower in the organizational hierarchy are very likely to perceive a psychological contract breach – and an ensuing sense of survivor's guilt – though executives within an organization are not necessarily likely to experience these same feelings during downsizing.

As stated before, executives often perceive themselves to be executioners, as opposed to survivors, following cuts (Kets de Vries & Balazs, 1997). This difference in roles implies unique, though not necessarily more positive, emotional experiences. Executives are likely to experience a challenging combination of guilt, role overload, and social isolation after implementing layoffs (B. Wright & Barling, 1998). However, the psychological contract between individual and organization is less likely to be

[12] The Federal Employee Viewpoints Survey data included a binary measure of supervisory status (Non-supervisor vs. Supervisor/Team Leader), though this variable did not provide details of individuals in the Senior Executive Service or similarly high hierarchical positions within their agency.

breached when the person is responsible for administering the cuts. Executives are much more likely to understand the organization's financial circumstances and often feel as though layoffs, while draining and painful, are also delivered justly (B. Wright & Barling, 1998). Perceptions of job insecurity are also lower as one's hierarchical position increases (Armstrong-Stassen, 1993), and their resources for coping may also increase with hierarchical level (Armstrong-Stassen, 2006).

Thus, cutback management practices, while unpleasant and emotionally draining for all employees, may impact the psychological states of employees differently depending on hierarchical level. Subordinates experiencing survivor's guilt are more likely to feel a broken trust with their organization and its leadership, which should decrease feelings of loyalty and commitment (Conway et al., 2014). Executives, however, are more likely to perceive the justification of cutbacks as fair (Armstrong-Stassen, 1993), which lessens the potential of experiencing the same contact breach. As the "executioners" of cuts, they may actually *increase* commitment and loyalty to the organization as a result of trying to "right the ship" after implementing cuts (E. Schmidt & Groeneveld, 2019; E. Schmidt & Van de Walle, 2020). While this could be true of affective commitment, normative and continuance commitment are more likely to be impacted following cuts, as the perceived responsibility of implementing cuts is likely to engender feelings of guilt towards subordinates or determination to improve organizational performance and service delivery.

More research should be conducted to determine the nature and scope of what I refer to as "executioner's guilt." The idea that executives in public organizations may fortify their commitment to an organization after delivering cuts is an understudied, but potentially important, area of cutback management research, particularly in public organizations with mission-oriented executives (Singla, Stritch, & Feeney, 2018).

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