SERVING ALONGSIDE THE SHADOW: CIVIL SERVANTS AND
CONTRACTED PUBLIC WORK

David M. Bredenkamp

Submitted to the faculty of the University Graduate School
in partial fulfillment of the requirements
for the degree
Doctor of Philosophy
in the School of Public and Environmental Affairs
Indiana University
June 2018
Accepted by the Graduate Faculty, Indiana University, in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

Doctoral Committee

Matthew Baggetta, Ph.D. (co-chair)

Michael McGuire, Ph.D. (co-chair)

Sergio Fernandez, Ph.D.

Beth Gazley, Ph.D.

May 25, 2018
Acknowledgements

I would like to offer abundant thanks to my dissertation committee—Drs. Matthew Baggetta, Michael McGuire, Sergio Fernandez, and Beth Gazley—for all of your support and guidance throughout my graduate study. You all have offered your valuable time and energy for my benefit, and I am so grateful for your insights. You made me better at every point along the way.

A thank you also goes to Dr. Baggetta in particular for initially asking me to work on a research project together five years ago. Answering “yes” to that one question changed the course of my journey for the better, and I do not have the words to thank you enough for your candor, kindness, constructive criticism, patience, and partnership in my education.

I also would like to offer thanks to the Indiana University team at Public Administration Review, where I worked as a graduate assistant. Dr. Jim Perry, Dr. Michael McGuire, Elise Boruvka, Dr. Rachel Fyall, Dr. Gordon Abner, and many others: it was my honor to collaborate with such a capable and committed team. Working with you contributed immensely to my education and career.

My active and capable teaching assistants deserve all the accolades I can offer: Reny Keener and Ryan Edwards, your help was essential. I would not have made it without you, and our students are better off because of your valiant efforts. Thank you for your hard work, consistency, and diligence.

To all the students who enrolled in my classes during my six semesters of teaching thus far: you have educated me. You have taught me how to be a better teacher and how to view learning as a partnership. I hope I contributed something positive to your education and professional development, because you certainly impacted mine for the better.
I would also like to thank my family and all of my friends: in particular, Mom, Dad, Matt, Krista, Lauren, and Jamie. You have offered patience and frequent support during a long journey wherein I began a whole new career. Your contributions to who I am and what I do are immeasurable.

Finally, a special thank you goes to Rich McKay for your encouragement to set my goals high and your efforts to help sustain me while I worked toward them.
Much government work is performed through cooperation, both within public organizations and increasingly across organizational boundaries, as cooperation is essential for achieving collective public goals. Research has demonstrated that employees who work in an uncooperative environment are less likely to share knowledge, be transparent, and resolve conflict easily—and subsequently are less satisfied in their jobs. Some observers suggest that working in a heavily contracted environment may affect cooperation among employees managing interorganizational relationships. Is contracting out of government work negatively related perceptions of cooperation and job satisfaction among government workers? To answer this question, I combine data from the U.S. Federal Employee Viewpoint Survey and contracting data from the Federal Procurement Data System. I use a composite measure—cooperation at work—to investigate attitudinal relationships in contracting environments over time. Results suggest contracting is positively related to perceptions of cooperation but negatively related to job satisfaction. These findings imply that, while public managers face challenges with employees who remain in government and work with contractors, new approaches to facilitating and managing relationships in increasingly cooperative work environments are necessary to leverage institutional cooperation toward more desirable outcomes. While cooperation is positively related to job satisfaction in the public sector, job satisfaction may be reduced by the additional management required in contracting relationships.
Table of Contents

Chapter 1: “Where Should I Work?” .......................................................... 1

Chapter 2: Background & Theory—“The Shadow” ..................................... 5

Chapter 3: Job Satisfaction and Cooperation at Work ................................. 25

Chapter 4: Is Contracting Related to Discord?
Contracting and Cooperation at Work ....................................................... 45

Chapter 5: Is Contracting Related to Satisfaction?
Contracting & Civil Servant Job Satisfaction ........................................... 61

Chapter 6: Conclusion .............................................................................. 73

References ............................................................................................... 83

Appendix ................................................................................................. 95

Curriculum Vitae
CHAPTER 1: “Where Should I Work?”

After too many years of graduate study, I sat with a friend of mine as we mused about our past work experience. He described his recent experiences working in and outside the public sector and, as he told his story, I could not help but empathize with his manager. No, it was not his work ethic or behavior that made me feel sorry for his former boss; quite the contrary: I knew my friend to be a conscientious and hard-working person. It was because of a decision he was forced to make after venturing out to become a public servant.

He was offered a chance during his Ph.D. studies to work as an intern for the Department of Homeland Security. He completed his internship successfully and was subsequently offered a permanent position. More than that, he had also been offered a job with a private government contractor in the Washington DC area. He was presented with a choice: “where should I work?”

Now, we did not discuss all the pros and cons of each job, but ultimately, he decided to take the position with the government contractor. If I had to guess, salary was one of the deciding factors. So, he left his completed internship, and made his way to work on his first day with the contractor. Upon discovering where he was assigned, he got the answer to his question: he headed back to the same office where he had interned and was assigned to do similar kinds of work he had done during his internship. He had been assigned by the government contractor to virtually the same post, doing similar work, but he was no longer on the government payroll. He was not a “public servant” in the conventional sense anymore—and yet, he was still doing work in service to the public.

I sympathized with his boss because I could not imagine attempting to manage people in an environment where employees are so differentially incentivized to do the work assigned to them and held accountable to that work in different ways. While some people in my friend’s
office held traditional government jobs, others worked alongside them—often for different incentive packages, salaries, and benefits. My friend’s manager had different “levers” to pull with respect to the government employees as compared to the contracted employees, and the contracted employees do not technically work for the government—they work for Grant Thornton, Booz Allen Hamilton, and the like.

I consider these arrangements not to imply any nefarious intent by contracted workers, nor to assume public managers are incapable or incompetent in their management of complex work environments. I consider these arrangements because of how they might change how we think about public service and what we expect of civil servants on the job. I consider whether this might change how people working in government view their own work.

President Kennedy said that the public service should be a “proud and noble profession” (Denhardt, Denhardt, & Aristigueta 2015, 425). If public service is qualitatively different enough to warrant its own category of profession, how does it change things if the work is not done by civil service professionals? How might civil servants be inclined (or not) to work in cooperation with contracted employees as their jobs necessitate? Do they remain as satisfied on the job as public servants in environments where use of contractors is common? I explore these questions and more in the chapters ahead.

This dissertation is composed of six chapters. As the summary diagram in Figure 1.1 shows, the models from each empirical chapter test the relationships among the phenomena explored in this dissertation:
In Chapter 1, I have presented a brief introduction. Chapter 2 will provide the main research questions: How is agency contracting related to civil servant attitudes? More specifically, what are civil servants’ impressions of cooperation and overall job satisfaction in a work environment where contracting is used? Chapter 2 also offers theoretical background describing the environment civil servants must navigate in the modern public service. As shown in Figure 1.1, Chapter 3 contains analysis of the two dependent variables—cooperation at work and job satisfaction—and their relationship to one another. Findings indicate that civil servants who report more positive perceptions of cooperation at work also report higher job satisfaction. Chapter 4 contains agency-level empirical analysis of government contracting’s relationship with cooperation at work, including hypothesis testing and results. Findings indicate that agencies with more contracting have improved perceptions of cooperation on average. Chapter 5 contains agency-level empirical analysis of contracting’s relationship with job satisfaction, further hypotheses testing, and results. Findings indicate that agencies with more contracting report
lower job satisfaction on average. Chapter 6 offers a conclusion, including implications of this research for theory, research, and practice.
CHAPTER 2: Background & Theory—“The Shadow”

“Ultimately, the message from the trend lines is simple. The federal government may be turning back the clock on the number of civil servants, but it continues to need a sizable shadow [workforce] to accomplish its mission.”

—Paul C. Light, The True Size of Government (1999b, 3)

On the precipice of the 2008 financial crisis, John Donahue (2008) wrote about the “warp[ing]” of government work—asserting that the public and private sectors offer starkly different work environments (15). Meanwhile, veins of research in public administration point to a decades-long blending of the sectors, a “new paradigm” where public and private are two ends of a spectrum, and often organizations work across relatively weak sectoral boundaries to achieve goals in partnership somewhere in the middle of that spectrum (Salamon 2002, 6; Moulton 2009). Rather than draw distinctions between the sectors, these partnerships seem to blur the differences between public- and private-sector work.

This chapter describes how these two seemingly opposite perspectives can be simultaneously true. Here, I describe the shadow workforce; the research questions for this study; the public-sector jobs landscape, including how current and prospective public servants may perceive opportunities in government work; and the larger movement towards government’s reliance on private sector work to deliver services. This chapter descriptively builds the case that there can exist both a physical blending of the sectors through contracted work arrangements, but also a cognitive or attitudinal schism in which workers may view a government job as something qualitatively different than working for a private company.
The Shadow Workforce and Civil Servants

The traditional argument for achieving more government efficiency by using private firms to do some government work has been debated and studied in the public administration literature. Whole movements in public administration have been devoted to managing anew by maximizing the activity removed from government and reinvention through reduction of redundancy—all while public expectations of results in solving real and complex problems continue to grow. However, the effects of this apparent transfer of work on public worker attitudes concerning their own jobs, and the larger effects on attitudes toward public service, are lesser studied.

Going back at least as far as the late 1970s, scholars and practitioners of public administration have noted the increasing prevalence of government partnership with private organizations (Gleason 2006). However, Paul Light’s work has brought into focus the idea that a “shadow” workforce exists alongside government employees—a private sector, quasi-governmental workforce that implements the work of government in private firms contracted out to do this work (Light 1999b, 1). Management of this combined workforce has increased the complexity of public administration by incorporating a more network-based set of relationships for organizations across the different sectors and among levels of government (Agranoff & McGuire 1998; 2004).

Given the ways that views on work are changing, and the simultaneous prevalence of federal contracting, what is known about this shadow workforce’s effects on public workers? Evidence could lie in worker perceptions of their own jobs. Slow and steady declines in the relative numbers of public servants might logically be followed by changes in the attitudes of
workers who stayed, specifically pertaining to their job satisfaction and impressions of cooperation among colleagues or the contractors with whom they may work.

Even public-sector jobs numbers themselves are a source of debate, where the count itself is subject to some interpretation. While reflection on the public-sector jobs numbers is important to uncover what is most relevant and interesting about them, one fact remains clear: irrespective of the (perhaps concerning) trends of public employee numbers, the reality remains that the federal government sees fit to enforce a certain balance among civil servants and private contractors to do this work—rightfully so, as the government cannot possibly afford to house all the expertise needed to complete every expected function. Work should indeed be performed by those equipped to do it most efficiently and effectively, be they in government or not.

From the long-term perspective, however, society continually assesses what it wants and expects from government, and whether the workers who perform the work of the people—government-employed civil servants or privately contracted workers—actually meet those expectations. Not having the ability to change societal perceptions with one action or policy, public managers deal with the immediate-to-short term wherein they must manage under the realities of whatever balance is achieved within the context of what is possible right now. They do so while continually working toward improving the quality of service delivery expected by the people. However, the numbers are not nearly so important as how managers manage in the context of the numbers (Light 1999a). This assertion runs parallel to the idea that we just need more federal civil servants on the payroll—which indeed we may (DiIulio 2014)—and reprioritizes toward how the civil workforce is managed while keeping the effects of a shadow workforce in mind (Light 1999b).
If the goal is to change the work context to one with more people on the government payroll, indeed that responsibility lies with the policymakers and personnel departments to increase the numbers of civil servants. To that end, managers may advocate for that end in their own work contexts when they see a need for more personnel. But what do they do right now, or until that new employee arrives? In the midst of previously government-based jobs being presently outsourced from under them, how do public managers deal with the workforce that stays behind? In the aftermath of a reduction in force (RIF) action, how do they manage the “survivors?”

Scholars and practitioners can work toward answers to these questions by posing and testing hypotheses about how civil servants react to changes in their workplaces (and perhaps their eventual work alongside the contractors or consultants who may have functionally replaced their former colleagues). Aside from the typically assumed shock, disappointment, and fear that could come from changes in their workplaces, how do worker attitudes on the job—about the job—change in the context of an agency-based prevalence of federal contractors and consulting relationships as part of their work? Do they remain satisfied on the job? Do they cooperate less on the job because of the possible risks involved in partnership leading to their own job being outsourced?

Knowing and understanding the answers to these questions will provide managers with an improved understanding of how to manage civil servants under the real-world pressures experienced in the “do-more-with-less” civil service environment (Esteve, et al. 2017). Understanding how current employees feel in the context of prevalent contracting in their agencies and departments (and the increased cooperation across sectors that is inevitably required in such arrangements) provides managers with knowledge to work against possible
negative consequences—in particular, decreases in cooperation and worker satisfaction. But is there evidence that these possible consequences actually happen as a result of contracting out?

**Research Questions and Contribution**

This dissertation answers the following question: How is agency contracting related to civil servant attitudes? More specifically, what are civil servants’ impressions of cooperation and overall job satisfaction in a work environment where contracting is used? The answers to these questions, and this research in particular, will contribute to public administration theory by: 1) clarifying the definition of cooperation at work using its appearance in different literatures; 2) expanding on research of public worker attitudes beyond the popular construct of public service motivation (PSM) (Perry & Wise 1990; Perry, Hondeghem, & Wise 2010); and 3) expanding the theoretical boundaries of contracting theory and decision-making by considering potential employee attitudes as part of the calculus in the management of such contracts.

This research will also contribute in the field of public administration by: 1) adding to the body of contracting research by testing relationships between employee attitudes and the volume of contracting taking place in the federal government; 2) combining data in unique ways to test relationships using different data sources, which adds to the growing body of literature working to combat the assumption of common source bias in public administration and other behavioral research (Podsakoff, et al. 2003); and 3) leveraging the Federal Employee Viewpoint Survey (FEVS) despite its shortcomings (Fernandez, et al. 2015) to show its usefulness in answering questions about the federal bureaucracy.

---

1 Public service motivation (PSM) is a motivation theory asserting that some workers are drawn to public-serving organizations through either an innate desire to serve or an acquired motivation to give back to their community because of interest in particular policy- or issue-related causes (Perry & Wise 1990).
Furthermore, this research will contribute to public management practice by: 1) exploring worker attitudes that matter for managers in the workplace for issues like employee turnover (Mobley 1977; Kim & Min Park 2014; Lu, et al. 2016), absenteeism (Diestel, Wegge, & Schmidt 2014), commitment (Yousef 2017), innovation (Fernandez & Moldogaziev 2012; Niu 2014), empowerment (Fernandez & Moldogaziev 2015), and performance (Fu & Deshpande 2014); and 2) adding to what practitioners know about employee attitudes on cooperation and job satisfaction with government employees, enabling them to leverage that knowledge in management on the job to potentially improve outcomes and workplace culture. Knowledge about how employees perceive their own work in contexts shaped by organization-level management decisions (like contracting out) can help managers be more informed about how workers may behave under future similar contexts.

**Literature Review, Context, and Theoretical Background**

Employment in the public sector took a dramatic hit in 2008 and has been gradually declining (at least as a percentage of population) at the federal level for some 50 years (Zumbrun 2014). Between the market crash of 2008 and 2012, nearly 600,000 jobs were lost in the public sector as a whole (Greenstone & Looney 2012). At the state and local levels—where the hit was felt hardest—a 30-year trend of growth showed its first signs of weakness (Zumbrun 2014).

Depending on the observer’s ideological leanings, trends like these may cause either deep concern or affirmative praise. Some feel relief at a pared-down public sector that leans toward smaller local and state governments rather than the federal government. Others have a sense that government (and its institutions that bear out democratic governance) is becoming a “hollow state,” stripped of its former ability to effect responsive change for those it serves (Milward & Provan 1993, 222).
Others (e.g., Denhardt & Denhardt 2015) might see the trends as ramifications of two movements in public administration that encouraged decision-makers to outsource work that traditionally fell under the purview of government—"New Public Management" (Borins 1995, 122; Hood 1995, 93)—and make government more efficient by eliminating redundancy, fraud, and waste in the system—"Reinventing Government" (Frederickson 1996, 263). These two movements offered ways to help streamline government but may have also had unintended consequences. One of the New Public Management movement’s principle precepts was to outsource as much of government as possible to the private sector (including to nonprofits) when it made economic sense to do so. Then private organizations could bear the large burden of service provision, while policymakers also encouraged lower levels of government and management to be given more autonomy to make decisions more locally (Schick 1999). The Reinventing Government movement was similar in that it sought to achieve greater efficiency in government by stripping out redundancy and empowering individuals in the public sector to innovate creative solutions to complex problems (Frederickson 1996). Both movements neglected two important realities: 1) when the people’s money is involved, government and the taxpayers who employ them do not take kindly to giving abundant autonomy because legislators and taxpayers feel that money needs oversight (Moynihan 2006), and 2) often government is set up intentionally to have redundancy so that power does not accumulate unjustly with one entity or another (Miranda & Lerner 1995).

Regardless of ideological leanings, however, many recognize the importance of having an effective government, and even a bureaucracy (Dilulio 2014), that functions for the dissemination of democratic governance on behalf of the people. Thus, a state that becomes too skeletal or anemic could become unable to deliver on that purpose. The following review offers
some insight into why the public-sector job trends, climate, and context might be impacting worker attitudes.

*Wage Compression and the Implicit Employment Contract*

From a labor economic perspective, there are differences in the public and private sectors. Wage compression and the implicit employment contract are two examples wherein the public and private sectors in the United States have been affected differently by specific circumstances (Borjas 2002; Hallock 2009). Since 1970, there has been an increasing differential between salaries of public and private sector workers, with private sector workers enjoying growth in wages faster than their public-sector counterparts (Borjas 2002). While changes have occurred over time in the disparities that exist across field areas, skill level of the worker, and the demographic differences (e.g., gender) within skill groups, the distinction between public and private wages is particularly pronounced and has become more so in the last four decades. Consider the following:

Suppose (as is actually the case) that wage dispersion has been rising at a faster rate in private sector jobs than in public sector jobs. The relative change in the wage structure would then suggest that [highly skilled and high-income] private sector workers…will have reduced incentives to enter the public sector. Conversely, [highly skilled and high-income] public sector workers…will have increased incentives to leave the public sector and enter private sector jobs. In short, the relative changes in the wage structure should influence labor supply decisions, and alter the sorting of workers between the two sectors (emphasis added) (Borjas 2002, 3).

These dramatic changes for the worker are caused by “wage compression” (the idea that organizations offer higher pay to compete for new workers while leaving current employee pay stagnant) in the public sector (Borjas 2002, 4). Thus, as private sector jobs have offered higher and higher salaries for highly skilled workers, the public sector has become less able to compete,
and is now left with a wage structure that has gradually been compressed over time as it tried to adapt.

Another aspect to consider over virtually the same time period is the evolution of the “implicit” employment contract, which deals with “expectations about the extent to which the employment relationship is not just a payment for labor on the spot market but instead is likely to continue over time” (Hallock 2009, 69). Implications of this contract can be viewed across sectors and demographic boundaries: between 1973 and 2008, for example, employee tenure in public and private organizations has varied differently across gender lines (Farber 2010; Hallock 2009).

These divergent trends indicate that there are indeed differences across sector in how long workers will stay in a given organization. Thus, a drastic loss of federal employment following the 2008 recession—even in the public sector where workers tend to hold on to jobs longer and consider employment to be more stable—may have negatively affected the impression that the public sector is more effective at keeping an implicit work contract.

Not only do these conclusions ring true for the overall ability of public organizations to “attract and retain high-skill workers,” (Borjas 2002, 11) the effects on a potential recovery after an economic event like the Great Recession may be dramatic (Leonhardt 2014; Maciag 2015). Wage compression in the public sector could differentially prevent the recovery of hundreds of thousands of jobs lost to recession because 1) the inability to compete becomes compounded as private sector jobs are recovered more quickly while public sector wages become increasingly compressed, and 2) the implicit job contract becomes broken for laid-off public sector workers, which reinforces an impression that the public sector may not be as reliable and stable an employer as once thought.
These possible challenges would be especially true if a “skill compression” (Freeman & Schettkat 2001, 582) accompanied the wage compression. As public-sector wages are compressed, the potential pool of job applicants could conform to a more specific or narrow set of skills or expertise. Consequently, the hired workers may become more homogenous, making it more difficult to discern who should be the first workers laid-off during hard times. If shorter tenure is the only measure of who is first to go, and minute differences in skill level are difficult for management to parse out, it could appear to workers that the public sector is even less reliable than the private sector when it comes to job security, violating an assumed and implicit employment contract that has persisted in the popular consciousness for decades: government work is more secure.

Furthermore, there is a third possible factor preventing the recovery of public sector jobs that may lie in a public–private difference: firing costs. The general idea is: “As firing costs increase, firms increasingly prefer hiring [already] employed workers, who are less likely to be lemons” (Kugler & Saint–Paul 2004, 553).² Perhaps, in times of fiscal crisis recovery, public managers are hesitant to hire new unemployed applicants. The risk of later costs and barriers to termination may be too great should the inexperienced or “lemon” employee need to be let go. Managers may simply deduce that it is easier to stay lean rather than take the chance on hiring and training new employees, only to find out their hiring was a mistake and not be able to terminate them.

² Although Kugler and Saint–Paul (2004) eliminate public sector workers from their data so as to keep it consistent, the theory may help to explain why the public sector is slower to recover jobs after recessionary job losses: greater barriers to terminating employment of workers and the associated costs to the organization.
Is it possible that the nature of public service has changed because people have changed? New generations focus on different things, or so the story goes. Loaded, stereotypical language depicts “these kids today” (Perman 2013) as wanting more “work-life balance” (Schulte 2015). In fact, some studies have shown that there is very little difference generationally among employees, at least between the Baby Boomers and Generation X (Jurkiewicz 2000). This is not to say things have not changed. However, perhaps the world that has changed rather than the people (Light 1999a). Perhaps the landscape for Millennials just looks different: graduating with high student debt, entering the job market right as a financial crisis began in 2008, and subsequently running up against a fearful, retirement-age workforce that decided to hang onto jobs for a few more years. Perhaps these conditions force people to reprioritize, but do they really want anything different out of their work than previous generations?

The Volker Commission pointed to a “quiet crisis” that foretold an impending problem with turnover in the federal civil service wherein workers would be compelled to leave government service for jobs in the private sector (Lewis 1991, 145). Most troubling was the trend of experienced and college-educated workers leaving, a “brain drain” of sorts. While what actually occurred might be more complex, concerning wage gaps and private sector capital investments in human resources, the resultant situation for a college-age prospective worker is the same: choose the private sector to maximize income; choose the public or nonprofit sector to serve the public and (only maybe) achieve a bit more job security. What choice (if they indeed have one) can we expect college-debt-laden people to make? Even while the evidence may indicate a more complex pay environment with respect to public service-oriented work—nonprofit healthcare jobs often pay equivalent to (or more than) the commercial and
governmental sectors (Leete 2001)—the impressions potential public servants may get from talk of a “quiet crisis” is to pursue work in the commercial private sector to maximize income (Lewis 1991, 145).

In contrast to the less-demand angle, some university institutions have found that the desire and demand for service-oriented careers are so great that entire schools of public policy, public management, and nonprofit management have been erected in the name of service. Some fields such as law find hope in the reconceptualization of careers, reorienting them toward a career of service by teaching students to be “guardians of the legal system” (Chaifetz 1993, 1696) so that society benefits from an equitable distribution of justice.

However, a reorientation toward service may be insufficient for workers to obtain a job in a service capacity. Law students generally carry a high level of debt upon graduation, which may be luring graduating students into non-service-oriented careers in prestigious law firms. However, the real issue may not be student debt, but the shortage in supply of service-oriented (i.e., government) jobs (McGill 2006). High-paying prestigious law firms cannot hire every graduating law student, leaving the “non-elite” students with a shortage of options; even if they wanted to go into public service, jobs may be in shorter supply there as well (McGill 2006, 677).

Individual Preference or Perception Changes

If people generally want the same things out of work across generations, could the appearance of generational change in job preferences—pointed out by the countless articles, blogs, internet memes, and current popular consciousness concerning how Millennials are different than their Generation X counterparts (e.g., Asghar 2014)—simply be a new generation reacting to being boxed into a corner with fewer logical, financially sufficient job options in this new economic context? When the private sector seemingly offers more opportunity for higher
salaries, quicker advancement, and in some cases, even more job security than public sector
government work can offer (which used to be one of its greatest perceived advantages), current
graduates may be left with no real choice about which sector to look to for work. Perhaps they
gravitate toward jobs of any sector that offer more tools to manage life in the economic world
they inhabit.

Preferences in what people want out of job do not seem to change greatly from one
generation to another (Jurkiewicz 2000). However, it seems that changes in preferences of job
characteristics (Hackman & Oldham 1975, 1976, 1980) might have evolved with the roadblocks
that have gradually built up against workers over the last thirty years. It stands to reason that
there would be some form of pushback once critical mass of individual worker productivity is
maximized. This would explain the gap between what public and private organizations can offer
in the way of compensation, and observers may be mistaken to attribute this evolving playing
field to changing worker preferences when it could be due to alternative compensation
mechanisms that are more readily offered to private sector workers than public sector ones, or
possibly the changing nature of work itself across sectors.

Furthermore, despite the classic arguments about the supposed separation between
politics and public administration (Wilson 1887), the popular consciousness around public
service can get entangled with attitudes about politics (Elleithee 2015). As civility and the ideals
of service in the political sector are eroded, desire to run for political office fall (Lawless & Fox
2015). Under the same circumstances, this erosion may have an effect on the desires of young
people to enter public service, merely because of its close association with the political
environment.
The New Public Service

The New Public Service movement, which framed how a changing landscape no longer provides lifelong careers in government agencies (Light 1999a), is also indicative of swings or changes in how society views public service. This movement also emphasized the “democratic values” and “citizenship” exhibited and promoted by those who work in public service, possibly in contrast or reaction to the efficiency-driven New Public Management and Reinventing Government movements that preceded them (Denhardt & Denhardt 2000, 557). More recent reflection on the New Public Service confirms that the principles of democratic governance and the normative value of active citizenship have held up since the turn of the century (Denhardt & Denhardt 2015). While some view The New Public Service as a return to what should be a continuing set of normative values that informs people in their work, others emphasize the changing jobs landscape in which those values find their way into the workplace.

The New Public Service, therefore, seems to be composed of two enduring ideas that involve workers regardless of the sector in which they work: 1) how workers feel about service, and 2) what workers do with their service inclination in the work environment. Light (1999a) focuses on the latter, asking questions of public management and policy school graduates about the paths they chose and why. A core tenet of his assessment is that government should create more attractive opportunities for graduates in order to compete for talent.

Since the Great Recession (and prior), much about the landscape Light observed has changed. As a result of fiscal constraint, most public agencies seemed busier simply trying (and often failing) to hold on to the talent they had. Light’s (1999a) assertion that the days of “thirty-year careers” are “gone,” had never rung truer (1).
Furthermore, government work has been gradually changing and evolving over the last four decades, moving slowly away from traditional hierarchical models of authority, operation, and implementation toward a flatter network of partnerships across sectors (Kettl 2002; Salamon 2002). Amid this public sector “transformation” (Kettl 2002, 158), government still retains elements of a more institutional hierarchical structure than the private sector, as the hierarchical structure is part of its “intellectual foundation” (Kettl 2000, 495). The movement toward more “horizontal” management structures (Kettl 2000, 494), regardless of how comparable to the speed with which the private sector has changed and evolved, makes holding government and its representatives accountable more challenging (Kettl 2002). The New Public Service movement, by reiterating the need for democratic values in public service, may have (perhaps very appropriately in some ways) slowed momentum toward a workplace similar to what private companies can offer in work.

**The Hollow State**

Scholars have pointed to the “hollow state” as a progressively increasing tendency for government to rely on private and nonprofit organizations to deliver services and results for its citizens, thereby detrimentally affecting government’s legitimacy and responsibility to solve problems (Milward & Provan 1993, 222; Milward & Provan 2000; 2003). However, research has focused only generally and tangentially (i.e., turnover, retention, recruitment) on how hollowing out the state might affect workers and their ability or desire to stay in government work. Is the desire to serve strong enough to overpower the draw of opportunities in other sectors—especially when government itself is *creating* these opportunities by contracting out traditionally government-funded work to third parties?
The hollow state is described in three “hallmarks”: 1) distance exists between government and where it spends money; 2) provision occurs in partnership between government and third parties; and 3) a cooperative, network-based approach is used to solve problems rather than a traditional hierarchical structure (Milward & Provan 2003, 3). As the state is opened up in this way, and as the people’s work is undertaken by non-governmental organizations, it stands to reason that individuals interested in serving the people in work historically housed within government might then seek work opportunities in the newly dispersed work that now resides off the government payroll.

The hollowing theory proposes not just a hollowing out of talented people, knowledge, and skills, but also dispersing of accountability for outcomes: when government provides services through private companies and nonprofit organizations for service delivery, it takes a step away from being accountable for the results achieved by those actually doing the work (Alexander, Brudney, & Yang 2010). Indeed, the nonprofit sector has tried to adapt to the expectations of this accountability shift, all while dealing with “overly complex and cumbersome” performance management standards rising as a result of this shift (Alexander, Brudney, & Yang 2010, 566). Thus, hollowing in one sector appears to place new expectations, responsibilities, and accountability on another.

Network-based or “process management” (Klijn 2002, 149) and interorganizational/intergovernmental collaboration (Agranoff & McGuire 1998) are also important factors when considering the effects of a hollowed state. While one aspect of the hollowing out literature warns of implications at both the individual level (i.e., lost talent, skills, worker recruiting) and the societal level (i.e., who will do the people’s work?), another aspect of the theory addresses organization-level implications: while government agencies are expected to
achieve results, the methods by which they achieve them change. In organization-level partnerships or intergovernmental collaborations, network-based processes develop to manage the implementation of not just the work, but also the relationships across organizational boundaries.

The hollowing out theory also implies concern that, in the extreme, the tendency for streamlining the state—for the purposes of making government either more efficient or more collaborative—may have unforeseen negative side effects that serve to make administrative institutions inherently weak (Terry 2005). In other words, if we strip out our public institutions, they will lack the power to effectively pursue democratic values in governance for the people.

To follow that logic at the agency and worker level, any movement of public sector workers into the private sector due to contracting or other partnerships, might indirectly contribute to such weakening by “thinning” not only the legitimacy and authority of state institutions, but the very ranks of those who place the people’s democratic interests high on their priority list (Terry 2005, 427). This weakening could extend even further by limiting the talent pool or skill base from which government can realistically compete for workers, even if raw numbers of public servants were to remain constant.

How might this thinning appear in the workplace? Policymakers may propose business models of governance driven toward cutting the red tape of bureaucracy and streamlining (i.e., cutting) government services (DiIulio 2014)—thereby reducing the “publicness” of public institutions (Haque 2001, 65; Moulton 2009, 889). Advocates for privatization might extol the virtues of privatization while dismissing the possible “trade-offs between cost containment and other values” (Gormley 1989, 355; Savas 1987). Movements in public administration could
herald less bureaucracy and less regulation (Frederickson 1996) that may lead to fewer

government employees needed to enforce and implement them.

Recently the New York Times (Cohen & Gebeloff 2018) reported on this phenomenon
with respect to the middle class in particular. Even if the “hollowing out” concept is not directly
illustrated at the federal level by the raw numbers of public servants, this reporting confirms that,
at the state and local levels at least, the American middle class has seen a hollowing out of their
opportunities to work in public service and a simultaneous growth of opportunity in the private
sector—although that opportunity growth has appeared predominantly in the service sector and
the jobs often lack stability and benefits (Cohen & Gebeloff 2018).

With all this concern, one might ask why these circumstances matter. What if contracting
is simply a tool, and the hollow state is simply adapting by necessity to constrained resources
and a societal drive toward efficiency and accountability with taxpayer resources? Indeed,
regardless of concerns about hollowing out, some have asserted that public-private partnerships
and government contracting are “here to stay” (e.g., Borins 1995, 122), and it appears that
practitioners and policymakers agree. Given the realities of the opportunity structure for public
employment and work becoming more collaborative and network-based, what happens to the
people who stick around? The people who decide to stay on the government payroll—lifers,
devoted public servants, or conversely those with fewer options, fewer skill sets, or those barely
holding on until retirement—are looked to as stewards of the citizenry and are themselves
citizen-participants in self-government. How they perceive their own work, responsibilities,
loyalties, and duty are important factors in the distribution of democratic governance, of which
an open, conscientious, and responsible civil service is arguably an essential component
(Denhardt, Denhardt, & Aristigueta 2015).
In this chapter, I have described the shadow workforce, the research questions I will investigate empirically in the next three chapters, and the larger foundations and contexts wherein these questions—and their answers—become relevant and important for how work is accomplished by those working inside and outside of government. The description of this context shows that the ideas of public-private differences in work environments and the blending of the sectors through contracted work are indeed manifest together and simultaneously in today’s job landscape.

The following chapters test how the public-sector environment’s transformation into a network of interorganizational relationships via contracting is related to the attitudes of civil servants on the government payroll. The more managers know about how civil servants view their own work in the current context, the better they can manage to recruit, retain, train, support, encourage, and develop a civil workforce that effectively executes the people’s work with honesty, integrity, and shared democratic values.
CHAPTER 3: Cooperation and Job Satisfaction

Prior to entering graduate school, I worked for a private sales firm, wherein I served as one member of a five-person management team. We all had very different backgrounds and demographics, which was by design: the lead manager had recruited all of us as part of a strategy to increase diversity among the staff, seeing it as an essential part of gaining different ideas and perspectives. Thus, the five of us differed in the categories of age, gender, race, national origin, religiosity, sexual orientation, and socio-economic background. Managing in a team of five people with such different perspectives was both exciting and, at times, challenging. There were phases of distrust, conflict, secretiveness, clique formation; and eventually, learning, communication, mutual agreement and understanding, and some cooperation.

We were selling products that for many are considered luxury items. The stakes were not life-or-death: we were not curing disease, nor were we providing food, water, or shelter to those who desperately needed it. However, at times, the conflict was palpable. It amazed me that with such low stakes how my relationships at work had such an intense effect on my feelings about my job. In the times where distrust and secretiveness reigned, I was extremely dissatisfied in my job; in times of mutual understanding and cooperation, life felt easier and I felt more accomplished and good at my job.

What if the stakes were far higher? What if we were delivering an essential service that potentially meant saving lives? What if we were working across organizational boundaries on issues essential to national security or diplomacy? Could the same phenomena be at work in delivering outcomes for the citizens of a democracy as when I was managing and selling luxury items in a shopping mall?
These questions inspire the research question in this chapter: are cooperation at work and civil servant job satisfaction related? Given scholars’ assertions that employee attitudes differ between the public and private sectors (Perry & Rainey 1988; Perry 1996; Boyne 2002), perhaps my experience in the private sector does not translate to public sector attitudes. However, bodies of work in public service motivation (Perry & Wise 1990; Perry, Hondeghem, & Wise 2010; Christensen, Paarlberg, & Perry 2017), as well as job satisfaction and motivation (e.g., Organ 1977, Fernandez & Moldogaziev 2015), have enlightened the field of public administration on how public managers might use knowledge about work attitudes to affect worker behavior and even outcomes. Drawing on insights from these literatures, I test whether cooperation at work is related to job satisfaction in the public sector. I find a positive and significant relationship between cooperation at work and job satisfaction. This finding implies that public managers should understand how to leverage these positively related elements in the public-sector work context.

**Theory**

**Job Satisfaction**

Job satisfaction is a thoroughly studied construct in the general management and psychology literatures. Job satisfaction has been defined as “a pleasurable or positive emotional state resulting from the appraisal of one’s job experiences” (Locke 1976, 1304), and many scholars have investigated major job satisfaction models and theories that have impacted the study of motivation and management. Judge & Church (2000) offer a comprehensive overview of these major job satisfaction theories, and among those mentioned are Herzberg’s (1967) two-factor theory, Locke’s (1976) value-percept theory, and Hackman and Oldham’s (1974, 1975, 1976, 1980) job characteristics model.
Managing toward (or attempting to manipulate) job satisfaction itself has consequences. Perhaps the most theorized consequence of job satisfaction has been performance, wherein there lies scholarly and practical disagreement about whether increased or decreased levels of job satisfaction actually affect job performance at all. The “Human Relations” movement’s dismissal of the link between job satisfaction and performance is a prominent example of this conflict (Organ 1977, 46). However, regardless of whether job satisfaction affects performance (or vice versa), there are other, less-disputed consequences of job satisfaction (or dissatisfaction) that make it worthy of study, such as employee absenteeism (e.g., Ybema, Smulders, & Bongers 2010), and employee turnover (e.g., Mobley 1977; Tett and Meyer 1993).

More recently, scholars have undertaken work to synthesize and compile what the field of public administration has learned about job satisfaction, and many reference the correlates described by Hal Rainey:

Rainey (2009) recaps some of the most investigated correlates of job satisfaction, which are as follows: individual characteristics (e.g., the level of aspiration, education, tenure, hierarchical status, and gender), job design (e.g., skill variety, task identity, task significance, autonomy, and feedback), job characteristics (e.g., leadership, goal ambiguity, performance-based rewards, and participation), external factors (e.g., pay, promotion, and job security), and employees’ behaviors (e.g., absenteeism, turnover intentions, and the turnover rate) (Cantarelli, Belardinelli, & Belle 2016, 118-119).

However, while much job satisfaction investigation has occurred in the field of public administration, the literature appears to lack focus and definitive conclusions when it comes to correlates of job satisfaction (Cantarelli, Belardinelli, & Belle 2016).

Cooperation at Work

Work groups and teams. Some study of cooperation at work is framed within the work groups and teams literature. Efforts in the public sector to use work groups and self-management
in teams have been depicted as “face[ing] long odds...because they so often exist within an organizational context where most of the structures and processes remain concretely bureaucratic” (deLeon & deLeon 2002, 243). However, in an environment where contracting out of public work is common, perceptions around what constitutes a “work group” or “team” may warrant reexamination. For example, teams may be perceived as either 1) a classically insular group of people who work together daily toward a narrow common objective or 2) a linked group of individuals facilitating relationships across organizational boundaries. Classic assumptions about the nature of work teams in the public sector may also endure in part because of the New Public Management movement’s focus on performance and accountability (Hood 1995).

This dissertation connects the traditional organizational behavior research on work groups to the public sector, testing its relevance and applicability in a context that has important differences in motivation, behavior, attitudes, loyalties, and outcomes. While public sector research investigating the specific relationship between cooperation at work and overall group member satisfaction has not been pursued, there are studies that investigate the relationships among work group members and the antecedents or consequences of those relationships (e.g., Love & Forret 2008). Scholarly work in team effectiveness also adds to what we know about how teams can improve performance (Hackman 2004). Other research finds that solutions for problems within “autonomous work groups” lie in addressing issues concerning “motivation, participation, and power equalization” (Bucklow 1966, 59). Additionally, supervision is shown to be important to work-group structure: “The structure of task units and work groups may depend on the personal dimension of control or how the supervisor relates to subordinates and the administrative system” (Hrebinak 1974, 396).
Some scholars define groups (in the context of work) as gatherings of people who collectively display certain behaviors or indications: “interpersonal relationships, shared norms, common objectives, interdependency, and cohesiveness” (McKenna 2006, 310). Specific types of groups have also been studied and classified as: “formal/informal, primary/secondary, co-acting/counteracting, and reference groups” (McKenna 2006, 310-11). Within this framework, cooperation is viewed as an assumed element of an effective group or team, and evidence for cooperation is often obtained from observing teams and team member behavior.

**Cooperation as a behavior or action.** In light of the different conceptualizations of cooperation in the literature, the construct is viewed as difficult to measure:

Cooperation is an ordinal measure; regions are either more or less cooperative, but it is difficult to conceive of “0” cooperation, a benchmark necessary for a ratio measure. Similarly, it is hard to assess the difference between any two or three different forms of cooperation, or between the outcomes of cooperative efforts. If more cooperation reduces or eliminates minority perspectives, how is that assessed? (Nunn and Rosentraub 1997, 208)

Some research into cooperation seemingly assumes that the definition of cooperation is self-evident or normative and positively connoted. Cooperation is viewed as an outcome of “trust,” and the terms “cooperation” and “cooperative behavior” are often used interchangeably (Jones & George 1998, 539). However, the simplest general definition asserts that cooperation is merely “joint action” (Tuomela 1993, 87), and, while there is some mention of the *a priori* “agreement-making” that can implicitly take place, the definitional focus is on the action itself (Tuomela 1993, 88). In the field of organizational behavior, cooperation is considered to be one of many organizational citizenship behaviors and is examined at the organizational level (Van Dyne, Graham, & Dienesch 1994). While the positive, pro-social connotation of the word cooperation is tempting to apply within the realm of organizational citizenship behaviors, a pro-
social conceptual definition of cooperation makes certain assumptions. Indeed, cooperation to undermine the organization, or “collusion” (Spagnolo 1999, 1), is an excellent example of how cooperation might serve a negative purpose overall but might still be considered cooperation. This definitional conundrum presents a dilemma from both theoretical and operational perspectives, which are discussed further in the measurement section of this chapter: should we assume normative connotation in the definition of cooperation?

**Cooperation as a perception or psychological process.** The idea that cooperation can be viewed as a psychological process is proposed by Deutsch (1949) in combination with his theory where cooperation and competition are viewed as two ends of a spectrum: cooperation and competitiveness coexist in counterbalance. Cooperation and competition are “psychological processes which are rarely found in their ‘pure’ form in nature, but, instead, are found more typically mixed together” (Deutsch 2003, 10). This supports the notion that cooperation must have two or more parties that come together willingly, without the sole intention to work against one another.

Other research asserts that cooperation is “the willful contribution of personal effort to the completion of interdependent jobs, [and] is essential whenever people must coordinate activities among differentiated tasks” (Wagner 1995, 152; Barnard 1938). The “individualism-collectivism” dichotomy (i.e., the “relative importance people accord to personal interests and to shared pursuits”) (Wagner 1995, 153) actually operationalizes cooperation as the extent of agreement among group members as to the cooperative nature of the other members. This operationalization is especially relevant in that it implies that there must be an agreement of perception that cooperation exists in order for it to actually be present. Framing cooperation as perception-based means that if one party believes themselves to be cooperating, but they are not
perceived that way, then they are not actually cooperating. Thus, even though subjective perception is being measured, cooperation exists if there is a high rate of agreement among group members about their perceptions of the levels to which their compatriots cooperate. Additionally, other research, even in its effort to describe the effects of cooperation in the workplace—or the conditions under which cooperation occurs (e.g., Chatman & Barsade 1995)—still looks to individual perception for a definition: someone’s willingness to cooperate and the perception that someone else is willing to cooperate, which are perceptions not captured through simple observation of behavior.

Additionally, while observable behavior may be an important factor in assessment of cooperation—and while a priori “agreement-making” is not a necessary condition for cooperation (Tuomela 1993, 88)—the assumption is that there must be some agreement of perception that some form of cooperation has occurred for it to be considered cooperation at all. That said, contextual differences exist between positive cooperation versus collusive or conspiratorial intent. Perception measurements are helpful in this regard because they focus on the impressions people have of their own cooperation or the cooperative disposition of others around them.

Conversely and pursuant to the previous section, behavioral measures attempt to capture the actions of individuals that serve as evidence of cooperation. Indeed, at its most basic reading (i.e., “co-operation”), cooperation is the behavior—that is, to “operate” behaviorally with someone else. However, measuring these actual behaviors generally requires an observer’s assumption of intention surrounding specific behaviors and may ignore or misinterpret the reasons behind them. Therefore, the present study assumes that cooperation is best captured
through the measurement of reported perceptions, and the indicators used to measure it will conform to those that capture perceptions of coworkers or work units.

Cooperation at work and job satisfaction. Harris, James, & Boonthanom (2005) pointed out that “co-worker support,” of which they argue cooperation is a form, has been “directly connected to job satisfaction,” among other indications of work stress and strain (31). Barnard (1938) proposes that there is a relationship between satisfaction and cooperation, although his depiction suggests that satisfaction positively affects individuals to be more willing to cooperate. Chatman & Flynn (2001) found clear evidence that group member perceptions of the existence of “cooperative norms” were positively and significantly related to group member satisfaction (966).

Self-determination theory also offers some insight. One component of self-determination theory is the employee’s sense of association or “relatedness” to the organization, which describes a worker’s need for belonging or “association” with the place of employment and the people with whom the worker performs the job (Ryan and Deci 2000, 68). Beyond an employee’s sense of belonging to an organization or team, behaviors that “promote self-determination” and empower employees (behaviors that often by necessity incorporate cooperation, like knowledge sharing) have “positive and sizable effects on job satisfaction” (Fernandez & Moldogaziev 2015, 375).

Furthermore, another component of self-determination theory also links cooperation to job satisfaction: autonomy. Workers who have some “discretion to change work processes” also report greater job satisfaction (Fernandez & Moldogaziev 2015, 375). Generally, changing processes at work in any lasting manner involves more people than just the individual with
discretion to change them, so cooperation to gain compliance with change is implicit in the autonomy described in self-determination theory.

**Theoretical support for operationalization.** Four elements closely associated with the concept of cooperation across several fields of study are: 1) common objectives (i.e. joint action), 2) honesty and transparency, 3) knowledge sharing, and 4) constructive conflict resolution or prevention. Each of these has support in the literature, albeit scattered across disciplines.

Knowledge sharing is “the process through which one unit…is affected by the experience of another” (Argote, et al. 2000, 3). Knowledge sharing is an important part of cooperation because when knowledge is shared, trust is engendered, and when people are trusting, they tend to share more knowledge (Bandyopadhyay & Pathak 2007; Willem & Buelens 2007). Common values of honesty and openness also engender trust (Jones & George 1998, 532), which consequently has a direct (and partially mediated indirect) relationship with “interpersonal cooperation” and “teamwork” (Jones & George 1998, 540).

As stated in the previous section, Deutsch proposes a theory that cooperation and competition coexist in balance with one another. The particular balance of these two concepts in a situation determines the degree of interpersonal conflict. Conflict occurs “whenever incompatible activities occur…An action that is incompatible with another action prevents, obstructs, interferes, injures, or in some way makes the latter less likely or less effective” (Deutsch 1973, 10). In this context, cooperation lies within a larger theory of conflict in the workplace. This is not to say that conflict will be absent when there is either more or less cooperation, but that “conflict can occur in a cooperative or a competitive context, and the
processes of conflict resolution that are likely to be displayed will be strongly influenced by the context within which the conflict occurs” (Deutsch 2003, 10).

Furthermore, “a cooperative process (as compared to a competitive one) leads to greater productivity, more favorable interpersonal and intergroup relations, better psychological health and higher self-esteem as well as more constructive resolution of conflict” (Deutsch 2003, 15).

Similarly, a cooperative approach when handling conflict leads to greater confidence in group members in their abilities to resolve conflict, as well as the leader’s impressions about how effective the team was (Alper, Tjosvold, & Law 2000). Also supporting conflict management as a component of cooperation is the concept of cooperation as a “tactic” (Hill 1990, 504). Cooperation is investigated through the lens of “opportunism” and its use to leverage situations to one’s advantage (Hill 1990, 500). While this characterization may not always be negative, opportunistic behavior may arise frequently in competitive work situations, necessitating the management or prevention of potential conflict.

In light of the literature discussed in this section, the conceptual definition used in this study is as follows:

**Cooperation at Work:** the perception that two or more individuals are acting toward a common objective through honesty, shared knowledge, and constructive conflict resolution.

In this chapter, I test whether there is a relationship between cooperation at work and overall job satisfaction:

**Hypothesis 1:** Perceived cooperation at work and reported levels of individual overall job satisfaction are positively related.
Data

Data come from the Federal Employee Viewpoint Survey (FEVS) from 2004, 2006, 2008, and 2009-15, containing over 2 million individual survey respondents answering approximately 100 questions about a variety of job-related and status-oriented topics, including overall job satisfaction and perceptions of cooperation in work units. The FEVS surveys only civilian workers. While spanning multiple years, the FEVS is not a true individual-level panel; thus, individual respondents are not trackable across years.

Measures

Job Satisfaction

The measure for job satisfaction is straightforward. “Considering everything, how satisfied are you with your job?” Responses to this question are on a five-point scale, “very satisfied” to “very dissatisfied” (more detail on responses to FEVS survey questions can be found in appendix Table A.1). Responses to more job-element-specific satisfaction questions are also included in the FEVS. However, satisfaction with the phenomena these items capture does not generally add up to overall job satisfaction; overall job satisfaction has not been convincingly shown to equal the sum of its parts (Scarpello & Campbell 1983). These other satisfaction-based items are discussed in a later section dealing with controls.

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Min.</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Job Satisfaction</td>
<td>2,876,528</td>
<td>3.712</td>
<td>1.067</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td><strong>Key Independent (Cooperation Components)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooperation/Common Objectives</td>
<td>2,965,790</td>
<td>3.916</td>
<td>0.980</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Knowledge Sharing</td>
<td>2,965,201</td>
<td>3.807</td>
<td>1.023</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Honesty &amp; Transparency</td>
<td>2,785,443</td>
<td>3.412</td>
<td>1.196</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Managing Conflict</td>
<td>2,761,858</td>
<td>3.362</td>
<td>1.234</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td><strong>Controls</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfied with Training</td>
<td>2,878,084</td>
<td>3.367</td>
<td>1.119</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Important Work</td>
<td>2,951,779</td>
<td>4.347</td>
<td>0.783</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Satisfied with Pay</td>
<td>2,879,622</td>
<td>3.517</td>
<td>1.151</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Minority Status</td>
<td>2,729,168</td>
<td>0.330</td>
<td>0.470</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Tenure 15 Years or &gt;</td>
<td>2,252,085</td>
<td>0.460</td>
<td>0.498</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Male Respondent</td>
<td>2,519,643</td>
<td>0.534</td>
<td>0.499</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Supervisor Status</td>
<td>2,816,932</td>
<td>0.240</td>
<td>0.427</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Federal Employee Viewpoint Survey, Trends Data

Table 3.1 contains descriptive statistics for the subsequent model’s dependent variable (job satisfaction); the constituent components for its key independent variable (cooperation at work); and controls for relevant attitudes and demographics. The cooperation at work variable takes the mean of four survey items into one factor-based score. Other included variables control for other factors theoretically perceived and shown to have an impact on overall job satisfaction as outlined in the next subsection. Specific survey questions and answer choices corresponding to each variable in Table 3.1 can be found in appendix Table A.1.

**Cooperation**

A confirmatory factor analysis was performed to ensure that survey questions serve as an adequate combined measure for cooperation at work, which is based on the four dimensions outlined in the previous section: common objectives (Cooperation to Get the Job Done), shared knowledge and transparency (Knowledge Sharing), honesty and integrity (Honesty and Transparency), and constructive conflict resolution, management, or prevention (Managing

---

3 Full descriptions of the FEVS survey questions from which the variable names in this table (and all subsequent tables) are derived can be found in Appendix Table A.1.
Conflict). Tables 3.2 and 3.3 show the factor analysis results and factor loadings of the cooperation at work variable. All items are loading onto one factor with an Eigenvalue of 1.833 and no other factors exceed an Eigenvalue of one. A Cronbach’s alpha, shown in Table 5, was also computed to test for convergent validity and the lowest alpha for any item was 0.71, with the overall alpha at 0.78. This result shows acceptable internal consistency among the items, justifying their combination into the cooperation at work composite measure (DeVellis 2012). 4

Table 3.2 Factor Analysis of Cooperation at Work Items

<table>
<thead>
<tr>
<th>Factor</th>
<th>Eigenvalue</th>
<th>Difference</th>
<th>Proportion</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>1.833</td>
<td>1.657</td>
<td>1.133</td>
<td>1.133</td>
</tr>
<tr>
<td>Factor 2</td>
<td>0.175</td>
<td>0.361</td>
<td>0.108</td>
<td>1.241</td>
</tr>
<tr>
<td>Factor 3</td>
<td>-0.186</td>
<td>0.018</td>
<td>-0.115</td>
<td>1.126</td>
</tr>
<tr>
<td>Factor 4</td>
<td>-0.204</td>
<td>.</td>
<td>-0.126</td>
<td>1.000</td>
</tr>
</tbody>
</table>

N=2,607,850
Retained Factors=2
Number of Parameters=6
Prob>chi2 = 0.0001
Source: Federal Employee Viewpoint Survey, Trends Data

Table 3.3 Factor Loadings for Cooperation at Work

<table>
<thead>
<tr>
<th>Variable</th>
<th>Factor 1 (used in model)</th>
<th>Factor 2</th>
<th>Uniqueness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation to Get the Job Done</td>
<td>0.646</td>
<td>0.219</td>
<td>0.534</td>
</tr>
<tr>
<td>Knowledge Sharing</td>
<td>0.649</td>
<td>0.217</td>
<td>0.532</td>
</tr>
<tr>
<td>Honesty &amp; Transparency</td>
<td>0.704</td>
<td>-0.201</td>
<td>0.464</td>
</tr>
<tr>
<td>Managing Conflict</td>
<td>0.706</td>
<td>-0.199</td>
<td>0.461</td>
</tr>
</tbody>
</table>

Source: Federal Employee Viewpoint Survey, Trends Data

Table 3.4 Cronbach’s Alpha

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation to Get the Job Done</td>
<td>2965790</td>
<td>+ 0.745</td>
<td>0.553</td>
<td>0.648</td>
<td>0.741</td>
</tr>
<tr>
<td>Knowledge Sharing</td>
<td>2695201</td>
<td>+ 0.751</td>
<td>0.551</td>
<td>0.633</td>
<td>0.741</td>
</tr>
<tr>
<td>Honesty &amp; Transparency</td>
<td>2785443</td>
<td>+ 0.807</td>
<td>0.607</td>
<td>0.526</td>
<td>0.711</td>
</tr>
<tr>
<td>Managing Conflict</td>
<td>2761858</td>
<td>+ 0.813</td>
<td>0.610</td>
<td>0.512</td>
<td>0.710</td>
</tr>
<tr>
<td>Test Scale</td>
<td></td>
<td></td>
<td></td>
<td>0.579</td>
<td>0.780</td>
</tr>
</tbody>
</table>

Source: Federal Employee Viewpoint Survey, Trends Data

4 There is some conflict in the literature about the usefulness of Cronbach’s alpha in the behavioral literature for determining sufficient internal consistency in factor analysis (e.g., Sijtsma 2009). The results are provided here to show that, under the parameters of the test, results show an acceptable level (>0.70) of internal consistency among the factors used.
Controls

A few key points regarding the demographic makeup of the respondent pool are important to point out, as different demographic contexts may affect responses to the survey questions used to operationalize these variables. Thirty-three percent of the respondents indicate that they have “minority status,” which is a recoded\textsuperscript{5} variable across the years of the FEVS survey. Forty-six percent of the respondents indicated that they had tenure of fifteen years or more. Approximately fifty-three percent of respondents indicate that they are male, and twenty-four percent of the overall respondents hold some form of supervisory status.

Along with the demographic controls, several other measures are needed to account for possible variation in answers to the question about overall job satisfaction: variables concerning 1) specific satisfaction levels with other job elements, and 2) worker perceptions on the importance of their own work.

Specific satisfaction. Overall measures of job satisfaction have not been convincingly shown to equal the sum of their parts; simply adding up an arbitrary number of sub-satisfaction measures (e.g., with pay, with scheduling, with work/life balance) does not necessarily equate to overall job satisfaction (Scarpello & Campbell 1983). For example, dissatisfaction with a number of lower-level measures may result in an individual being very satisfied in the job \textit{despite} these elements, and perhaps even seeing those elements as challenges to pursue. In light of these potential scenarios, several lower-level measures of satisfaction with individual job characteristics—specifically, pay and training opportunities—are included as controls in this study. Specific satisfaction of the worker with regard to rewards (i.e., remuneration) has been

\textsuperscript{5} The Office of Personnel Management, in releasing the “trends” dataset for the FEVS, compiled multiple years of responses wherein slight variation in some questions occurred across years of implementation. “Minority status” is one such variable, where different minority categories appeared as answer selections across years. OPM recoded the variable for consistency in this combined dataset (Fernandez, et al. 2015).
shown to be related to overall job satisfaction (Locke 1976). Rewards for work are firmly
grounded in expectancy theory, where motivation is impacted by a reward’s value to the worker,
its usefulness, and the worker’s perception that the reward-incurring task is indeed possible to
achieve (within the worker’s abilities and willingness to perform it) (Vroom 1964; Isaac, Zerbe,
& Pitt 2001).

Hackman and Oldham’s (1974, 1975, 1976, 1980) job characteristics model relates
particular job elements to “increased job satisfaction, motivation, and work performance” (Fried
& Ferris 1987, 287). An increase in five job characteristics—“skill variety, task identity, task
significance, autonomy, and feedback”—ultimately lead to increased job satisfaction (Fried &
Ferris 1987, 287). Job training opportunities offer employees a chance to bolster their
perceptions of the job: training can allow employees to obtain more skills to improve the skill
variety performed at work, better understand their job responsibilities thereby improving task
identity, and take more ownership over their job responsibilities giving them a sense of
autonomy in the job. Furthermore, job training satisfaction has explicitly been shown to have a
significant and positive relationship with overall job satisfaction (Schmidt 2004).

*Importance of the Work.* Task significance from Hackman and Oldham’s work also
plays an important role in job satisfaction through motivation. Understanding the importance of
the work itself, or rather the work having some perceived contributive value to the worker, is
related to job satisfaction (Hackman & Oldham 1976; Wall & Martin 1987). Thus, an indicator
for self-reported work importance is included in these models.
Results

Table 3.5 Overall Job Satisfaction and Cooperation at Work (Robust Standard Errors)

<table>
<thead>
<tr>
<th>Overall Job Satisfaction</th>
<th>Ordered Probit 1</th>
<th>Ordered Probit 2</th>
<th>Ordered Probit 3</th>
<th>Fully Standardized Coefficients of Ordered Probit 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized</td>
<td>Unstandardized</td>
<td>Unstandardized</td>
<td>(Added Lower Satisfaction Variables)6</td>
</tr>
<tr>
<td></td>
<td>(Cooperation)</td>
<td>(Added Controls)</td>
<td>(Added Lower Satisfaction Variables)6</td>
<td>(SD of x: 0.873)</td>
</tr>
<tr>
<td>Key Independent Variable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooperation at work</td>
<td>1.004 ***</td>
<td>0.915 ***</td>
<td>0.653 ***</td>
<td>0.360 ***</td>
</tr>
<tr>
<td>(factor-based score)</td>
<td>(.001)</td>
<td>(.001)</td>
<td>(.001)</td>
<td></td>
</tr>
<tr>
<td>Controls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfied with Training</td>
<td>---</td>
<td>---</td>
<td>0.399 ***</td>
<td>0.284 ***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(.001)</td>
<td></td>
</tr>
<tr>
<td>Important Work</td>
<td>---</td>
<td>0.460 ***</td>
<td>0.440 ***</td>
<td>0.215 ***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.001)</td>
<td>(.001)</td>
<td></td>
</tr>
<tr>
<td>Satisfied with Pay</td>
<td>---</td>
<td>---</td>
<td>0.281 ***</td>
<td>0.206 ***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(.001)</td>
<td></td>
</tr>
<tr>
<td>Minority Status</td>
<td>---</td>
<td>0.067 ***</td>
<td>0.075 ***</td>
<td>0.022 ***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.002)</td>
<td>(.002)</td>
<td></td>
</tr>
<tr>
<td>Tenure 15 Years or &gt;</td>
<td>---</td>
<td>0.042 ***</td>
<td>0.019 ***</td>
<td>0.006 ***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.002)</td>
<td>(.002)</td>
<td></td>
</tr>
<tr>
<td>Male Respondent</td>
<td>---</td>
<td>-0.030 ***</td>
<td>-0.003 *</td>
<td>-0.001 *</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.002)</td>
<td>(.002)</td>
<td></td>
</tr>
<tr>
<td>Supervisor Status</td>
<td>---</td>
<td>-0.025 ***</td>
<td>-0.078 ***</td>
<td>-0.021 ***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.002)</td>
<td>(.002)</td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>2,581,308</td>
<td>1,878,182</td>
<td>1,863,856</td>
<td>1,863,856</td>
</tr>
<tr>
<td>Prob&gt;chi-squared</td>
<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
<td>---</td>
</tr>
<tr>
<td>Pseudo R-squared</td>
<td>0.181</td>
<td>0.213</td>
<td>0.308</td>
<td>---</td>
</tr>
<tr>
<td>AIC</td>
<td>5766905</td>
<td>4018839</td>
<td>3617576</td>
<td>---</td>
</tr>
<tr>
<td>BIC</td>
<td>5766969</td>
<td>4018963</td>
<td>3617725</td>
<td>---</td>
</tr>
</tbody>
</table>

***p<.001; **p<.01; *p<.05

Source: Federal Employee Viewpoint Survey, Trends Data

An ordered probit model is commonly used in research where job satisfaction survey responses are used for the latent dependent variable construct (e.g., Fernandez 2008). It adequately accounts for the biased coefficients that could result if ordinary least squares (OLS) regression were used (McKelvey and Zavoina 1975; Winship and Mare 1984). OLS does not account for the ordinal nature of the data wherein the categories may not be equidistant (Fernandez 2008). “Likert-type scales are generally not perceived as equidistant by subjects,”

6 This model was also executed in two other iterations: one with year fixed-effects dummy variables included, and another with clustered robust standard errors by agency/sub-agency. Results were substantively unchanged by these additions.
wherein labels for each category in the ordered scale tend to have a “middle-of-scale” effect that widens the distance between central items more than “end-of-scale” items (Lantz 2013, 16).  

Table 3.5 shows the ordered probit regression that includes the cooperation at work variable and the controls. In addition, for somewhat easier interpretation, fully standardized coefficients were produced (see column 5). The results reject the null hypothesis that there is no relationship between cooperation at work and job satisfaction. Cooperation at work is positively and significantly related to job satisfaction at the .001 alpha level. The standardized coefficient on cooperation at work can be interpreted to mean that a one-standard-deviation increase in cooperation at work (SD of x=0.873) is associated with a 0.360 standard deviation increase in job satisfaction.

While this relationship may seem modest in magnitude, prior research indicates that job satisfaction is a complex concept affected by many elements of the job. Showing that cooperation at work is associated with job satisfaction by approximately a third of a standard deviation indicates that cooperation at work is a part of the story and is worthy of further investigation from both a causal and practical perspective. Furthermore, the standardized coefficient’s magnitude is indeed larger than all other controls in the model that have been shown throughout the literature to have significant relationships to job satisfaction.

Interestingly, the demographic factors in the models were also found to be related to job satisfaction: minority status and tenure of 15 year or more were positively related to job satisfaction, while gender (i.e., being male) and having supervisory status were both negatively

---

7 A Brandt Test using gologit2 in Stata (Williams 2005, 2006, 2016) was performed to diagnose for the parallel lines assumption and ascertain the appropriateness of using an ordered probit model. The test produced a Prob>chi-squared = 0.001, indicating that the parallel lines assumption is indeed violated, necessitating the use of an ordered model in this case. Ordered probit is the option selected here.
8 Scholars have pointed out concerns in using standardized coefficients to ascertain the “relative importance” of specific parameters in a model (e.g., Willet, Singer, & Martin 1998, 412). The fully standardized coefficients are shown here to arrive at a more conservative estimate of cooperation’s impact on satisfaction.
and related to job satisfaction. These results may indicate that respondents in contexts with
different demographic make-ups may react differently. However, the other satisfaction variables,
as well as the importance of work, showed a clearer (higher standardized magnitude) relationship
to job satisfaction than any of the demographic controls. The lower-level satisfaction variables
(with pay and training) improve the model specification, with an R-squared increase of
approximately nine percent, and decreased Akaike information criterion (AIC) and Bayesian
information criterion (BIC) scores. These results indicate that there is a relationship between
lower-level satisfaction measures and overall satisfaction—though these measures do not
account for the entire satisfaction story.

Possible Limitations

Common Source/Method Bias

Common source bias (CSB) has been shown to influence outcomes when same-survey
responses appear in models together as both dependent and independent variables (Podsakoff, et
al. 2003). As the parameters for this model come from the same survey (though responses
occurred in separate iterations across multiple years), subsequent chapters introduce parameters
that do not share a common source of data for the dependent and key independent variables.9

Multicollinearity

In order to check for problematic multicollinearity among the variables, a check of the
variance inflation factors (VIFs) was performed after a simple ordinary least squares regression.
The VIF scores for all variables were below 2.0—well under Kennedy’s (2003) recommended

---

9 A Harman test was performed on the whole range of survey items included in this chapter’s model. Four factors
with an Eigenvalue of greater than 1.0 were observed, accounting for 88.44% of the cumulative variance. This
indicates that common source bias may be explaining some of the variance in this model.
limit of 10.0—indicating that multicollinearity does not appear to be dramatically biasing the estimates in this model.

**Causal Direction**

First, it is important to note that only the relationship between cooperation at work and job satisfaction is examined here—not the causal direction of that relationship. There is, however, some theoretical basis for causal claims. Vallander and Losier (1999) hypothesized that “the motivational impact of social factors inherent in sport, such as competition/cooperation, success/failure, and coaches’ behavior toward athletes, takes place through their influence on athletes’ perceptions of autonomy, competence, and relatedness (i.e., the psychological mediators)” (142). Thus, their theoretical premise relies on the causal direction implicit in the way the model in this study is constructed: cooperation affects satisfaction (not the other way around). As athletes predominantly work in teams and are supervised by coaches, the natural workplace analog would be the supervised work group or team.

The same direction is confirmed methodologically in Wright and Davis’s (2003) work on job satisfaction being affected by the environment where work takes place: elements like “routineness,” “specificity,” and “human resource development” all were shown to affect job satisfaction in a causal-based covariance structure model (83). While cooperation was not included in the model, sub-components of their three elements overlap with the components of cooperation explored in this chapter (specifically “feedback,” “organizational goal specificity,” and “organizational conflict”) (83). However, the models in this chapter cannot be said to offer definitive evidence as to a causal claim: cooperation may lead to satisfaction, or more satisfied employees may tend to perceive cooperation more positively.
Of course, further complicating the causality issue is that there might be reasons that job satisfaction may appear to suffer even as perceptions of cooperation improve. In a highly collaborative environment, improved cooperation improvement may be in response to a situation wherein satisfaction is low to begin with—so more cooperation may be a tool that managers use as leverage to correct problems related to already-existing dissatisfaction. An employee may see coworkers as highly effective collaborators, but that group dynamic may simply not be enough to overcome deficits in job satisfaction elsewhere at a given point in time.

**Implications**

This chapter began by asking whether a relationship exists between cooperation at work and overall job satisfaction. The results provide evidence that cooperation at work and job satisfaction are positively and significantly related. Understanding that cooperation at work is a factor related to job satisfaction levels, managers could be empowered to incorporate cooperation management into their strategies for keeping workers satisfied in their jobs when context necessitates more cooperative behavior to accomplish desired public outcomes.

Practically speaking, managers may not implement a plan to improve cooperation merely to achieve modest improvements in satisfaction. However, knowing cooperation is a piece of the satisfaction puzzle may inform broader strategy around satisfaction, recruitment, and retention, for example. Also compelling is that, even after controlling for individual specific satisfaction levels with regard to important work, pay, and training (all of which are significant), cooperation at work retains significance.

This information about cooperation and satisfaction’s relationship may be useful for management in practice because it shows that cooperation may be a useful tool to either leverage
increased satisfaction by incorporating cooperation into the work environment or encourage already-satisfied employees to behave more cooperatively to improve the workplace culture.

These results bolster the case for management intervention in facilitating a cooperative atmosphere in the workplace and beyond organizational boundaries. However, the current context of public service work necessitates going deeper into the relationships described here. While individual-level analysis may be helpful for discussing relationships among various attitudinal responses, clearly organizational-level phenomena are at work here as well. The next two chapters investigate a specific organization-level management context—contracting—where cooperation and job satisfaction may be perceived differently within an increasingly complex organizational work environment. Further implications—for theory, research, and practice—pertaining to the findings in this chapter appear in Chapter 6.
CHAPTER 4: Is Contracting Related to Discord?  
Contracting and Cooperation at Work

Is government contracting related to reduced cooperation at work? Recent news provides at least some anecdotal reasons to think it might. A recent article from *Politico* describes in great detail the predicament in which the current U.S. State Department finds itself: with the abrupt exit of Secretary of State Rex Tillerson, the planned reforms and “redesign” at State are in question (Toosi 2018). Under Sec. Tillerson, approximately $12 million in consulting contracts to assess the department were implemented, creating a tense work environment between seasoned public servants and “contractors and consultants who knew nothing about the organization” (Toosi 2018). Differences in how civil servants and contracted consultants perceived their work were reported. One State staffer made an especially enlightening point while describing the private consultants:

“They would say something like, 'If I said to you, 'Get me some water,' you'd know to get a cup and go to the sink and bring me back the water, but if you said that to someone in China, they might just scoop up some water from a puddle on the ground.' And they said this to a room full of diplomats!” the staffer said. "It was painful. We were literally objecting to the way they were talking. We were trying to educate them on what we did so that they could actually help do the job they were hired to do" (Toosi 2018).

Due to material differences in their framework for executing public work, State Department civil servants and consultants developed a faction-based, seemingly-adversarial relationship, which transcended the question of what is important and made simple cooperation within a diplomatic framework untenable. In this chapter, I test if the shift in employee attitudes that occurred in this recent anecdote persists across the federal bureaucracy.
Theory: Cooperation and Contracting

The theoretical literature directly pertaining to government contracting and worker perceptions of cooperation is sparse. Much contracting research delves into the power of the “make or buy” decision and how to effectively make that decision so that one party is not lopsidedly disadvantaged in the arrangement (e.g., using transaction costs and measures of uncertainty as components of benefit-cost analysis; see Feiock, et al. 2007). However, there are several theoretical frames that speak to how workers might react in certain conditions inherent to a highly contracted environment.

Organization-level cooperation with contractors, particularly with negotiation of the processes used during the term of the contract, is one such area that appears in the literature. Development of trust and transparent processes across organizational boundaries appear to be the running themes throughout this literature. Cooperation in contracting may be necessary when a more competitive model for procurement of goods and services is unviable: namely, when there are limited resources, limited knowledge or experience in service delivery, or highly complex or quickly evolving environment (Williamson 1975; DeHoog 1990)—conditions under which governments frequently operate (DeHoog 1990).

Rowlinson and Cheung (2004) use a cultural bias toward “distrust” in the construction industry to exemplify how cooperative contracting can be used to improve relations between clients and contractors, particularly with the passage of time (1). Das and Teng (1998) also propose that trust is a critical element in cooperation during contracting, operating in conjunction with contractual “control mechanisms” for the parties involved in the contracting relationship (491). While these works describe organizational cooperation and may offer a foundation for how people within and outside organizations perceive them as cooperating or collaborating...
across organizational boundaries, none deal with the perceptions of cooperation by individuals inside an organization about their own work units.

Another framework for cooperation in the contracting research parses out best practices in contracting, referencing historical norms in well-known public-private arrangements in education and healthcare (Schaeffer & Loveridge 2002)—generally equating cooperation with collaboration. The literature on collaboration in the public sector (e.g., McGuire & Agranoff 2004) alludes to a new environment in which government works with private firms and nonprofits, not merely against them through regulation of their organization-level behavior (Salamon, 2002). However, this idea that contracting is the root or product of effective partnerships has its skeptics. Organization leaders can elect not to partner with each other or the government for reasons such as capacity, past record with collaboration, or political inclination against intersectoral collaboration (Gazley 2010). Thus, contracting’s depiction in the literature as a (somewhat) universal fix for capacity issues and creating efficiencies is not universally accepted.

Literature that addresses worker perceptions around managerial actions concerning human resource allocations for work (i.e., how money is spent to get the right people doing the work) largely deals with feelings around downsizing, layoffs, or reductions in force (RIFs). When it comes to jobs, the quality and implementation of any shift in status quo appears to matter: in one study, while “survivors of layoffs perceived lower organizational performance, job security, affective attachment, calculative attachment, and had higher turnover intentions… outsourcing survivors generally did not have more negative outcomes than the no-downsizing group” (Maertz, et al. 2010, 275). This study observed employees in general without respect to sector; therefore, the findings may not apply directly to public sector work contexts. However,
according to this study, when a RIF looks like a layoff, workers suffer. When it looks like outsourcing, they may be no worse off. So, public sector workers’ views about the type of contracting relationship may affect how they are personally affected by it in their own work.

Another study examines fairness in the context of “divestitures,” or company restructuring, which often entails layoffs or other threats to job security (Gopinath & Becker 2000, 63). In this example, fairness around the management actions taken were a key component in how the surviving workers felt about the events: if workers felt informed through communication from management, and subsequently interpreted the actions as fair, trust in new leadership and organizational commitment were maintained. These results indicate that management and leadership have an impact on worker attitudes around equity and justice, which can affect their subsequent feelings on changes in their jobs. Feelings of security and commitment are bolstered when fairness and transparency are perceived.

Given the previous literature on contracting and cooperation, I hypothesize a negative relationship between the amount of agency-level contracting and cooperation at work. This finding would imply that public managers in increasingly contracted-out environments should work to reassure and support workers by fostering greater focus on building systems of cooperation in high contracting environments.

**Hypothesis 2:** Agency-level contracting and perceptions of cooperation in that agency are negatively related.

**Data**

As in Chapter 3, data come from the Federal Employee Viewpoint Survey (FEVS) from 2004, 2006, 2008, and 2009-15, containing over 2 million survey response sets answering approximately 100 questions about a variety of job-related and status-based topics, aggregated to
the agency level by taking the mean of the respondents within agency. The aggregation process produced a reduced number of observations \( n=275 \) for the models presented later in this chapter compared to Chapter 3, which was individual-level data. Again, the FEVS only surveys government employees, not contracted employees. Contracting data come from the Federal Procurement Data System (FPDS) from 2003-2015 at the agency level for agencies or sub-agencies that appear in the FEVS. Therefore, the unit of analysis in this chapter is the agency-year and deals with only agency-level phenomena.

Contracting dollars at the agency or sub-agency level are shown in two forms: 1) billions of dollars, logged to normalize the distribution, and lagged one year to allow for delayed effects of public workers recognizing that dollars are flowing out of the agency toward private contractors; and 2) dollars per survey respondent (by agency or sub-agency), logged, and lagged one year. In the second form, the lag is achieved by dividing the previous-year dollars by current-year respondent numbers. Transforming the contracting dollars to the dollars-per-respondent measure serves to control for agency size by employment. The goal is to standardize across large and small agencies the dollars contracted out. The number of observations reflects the number of federal agencies or sub-agencies that had responses and variation across the years of data. As seen in Table 4.1, the dollars-per-respondent variable’s number of observations is lower than the raw-dollars measure because it only contains agency-years for which the FEVS had survey respondents within that agency.

---

10 Scholars have varied opinions across fields of study about the use of Likert-scale means (e.g., Sullivan & Artino 2013). Means of Likert scale items are used in this study as an aggregation method to observe phenomena at the agency level. While there may be individual-level implications for phenomena studied here, care was taken not to draw broad individual-level conclusions from agency-level aggregations.
### Table 4.1 Descriptive Statistics at the Agency Level

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Min.</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agency-Level Cooperation at Work (factor-based score)</td>
<td>579</td>
<td>3.649</td>
<td>0.197</td>
<td>2.662</td>
<td>4.301</td>
</tr>
<tr>
<td><strong>Key Independent</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agency Contracting (SBIL, logged, lag 1 yr.)</td>
<td>865</td>
<td>-0.608</td>
<td>2.635</td>
<td>-12.717</td>
<td>5.115</td>
</tr>
<tr>
<td>Agency Contracting ($/respondent, logged, lag 1 yr.)</td>
<td>564</td>
<td>12.752</td>
<td>1.956</td>
<td>3.301</td>
<td>17.581</td>
</tr>
<tr>
<td><strong>Controls</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Unit Recruitment (Finding the Right People)</td>
<td>579</td>
<td>3.221</td>
<td>0.263</td>
<td>2.295</td>
<td>4.152</td>
</tr>
<tr>
<td>Clear Job Expectations</td>
<td>421</td>
<td>3.960</td>
<td>0.166</td>
<td>3.041</td>
<td>4.469</td>
</tr>
<tr>
<td>Agency Successful at Mission</td>
<td>421</td>
<td>3.918</td>
<td>0.243</td>
<td>2.733</td>
<td>4.415</td>
</tr>
<tr>
<td>Supervisor Treats Me with Respect</td>
<td>421</td>
<td>4.121</td>
<td>0.140</td>
<td>3.631</td>
<td>4.582</td>
</tr>
<tr>
<td>Agency Percent of Minority Status</td>
<td>372</td>
<td>0.312</td>
<td>0.132</td>
<td>0.098</td>
<td>0.905</td>
</tr>
<tr>
<td>Agency Percent of Tenure 15 Years or &gt;</td>
<td>276</td>
<td>0.483</td>
<td>0.113</td>
<td>0.070</td>
<td>0.790</td>
</tr>
<tr>
<td>Agency Percent of Male Respondents</td>
<td>372</td>
<td>0.552</td>
<td>0.158</td>
<td>0.123</td>
<td>1.000</td>
</tr>
<tr>
<td>Agency Percent of Supervisor Respondents</td>
<td>579</td>
<td>0.242</td>
<td>0.144</td>
<td>0.000</td>
<td>0.749</td>
</tr>
</tbody>
</table>

Sources: Federal Employee Viewpoint Survey, Trends Data; Federal Procurement Data System—Next Generation

### Measures

Table 4.1 contains descriptive statistics for the model’s dependent variable (cooperation at work), its key independent variable (contracting dollars by agency in both forms), and controls accounting for perceptions of effective recruitment, clear job expectations, perceptions of agency mission success, supervisor relationship, and other demographic characteristics. As noted in Chapter 3, the cooperation at work variable takes the mean of four survey items into one factor-based score. Also included are other relevant attitudinal and demographic variables. Specific survey questions and answer choices corresponding to each variable in Table 4.1 can be found in appendix Table A.1.

### Controls

**Finding the right people.** The equity theory of motivation pertains directly to the concept of cooperation in that it deals with the transactional exchange of effort and consequent rewards; moreover, equity theory deals with the perceptions that efforts lead to relatively fair or equitable rewards across individuals (Lawler 1968). In public service, equity has particular implications when ascertaining the worthiness of colleagues and the rewards receive for the work they do.
Consider my friend from Chapter 1: how was he perceived by his colleagues when he returned to work as a contractor, perhaps making a salary far different than that of his coworkers doing similar work? If my colleagues are considered to be worthy of their rewards, and I do similar work, inequity arises when I receive less for the same efforts. This may consequently affect my efforts to cooperate with those I perceive as unfairly receiving rewards.

**Clear job expectations.** One component of Hackman and Oldham’s (1976, 1980) jobs characteristics model is task identity, which leads to greater motivation on the job and subsequently to improved performance (Fried & Ferris 1987). A lack of clarity about job responsibilities could lead to isolationism on the job, or a fear of being “found out” as a fraud for not knowing one’s job. Definitively knowing one’s job responsibilities may help a person feel secure in the job and be more open to cooperative behaviors like sharing knowledge and being more transparent.

**Association/relatedness and commitment to agency.** Self-determination theory provides a sound background under which to discuss commitment, relatedness, and empowerment as they affect behavior in organizations (Ryan & Deci 2000, Fernandez & Moldogaziev 2013). Bowen and Lawler’s (1992, 1995) exploration of employee empowerment asserts that employees are more empowered when managers 1) share knowledge about performance, and 2) share knowledge that enables employees to contribute to that performance (Bowen & Lawler 1992, 1995; Fernandez & Moldogaziev 2013). Knowledge sharing is one component of cooperation as demonstrated in Chapter 3. Additionally, as knowledge is shared, and employees are empowered, a sense of ownership in the organization gives rise to as sense of association or relatedness. Knowledge about performance allows the employee to ascertain whether the organization is successful at meeting its mission and how to help contribute to that success.
Supervisor relationships. Social exchange theory (Blau 1964) provides a base for explaining the relationship between supervisor relationships and cooperation. One act of social benevolence begets another in response. When supervisors nurture a productive and respectful relationship with their employees, under social exchange theory, employees are more likely to return the favor (Gouldner 1960). Low-risk exchange takes place at first, and willingness to exchange more and at higher-risk gradually increases as trust is built (Boon & Holmes 1991)—whereupon these exchanges become cooperation. Examples of this might be exchanging knowledge, sharing common objectives (perhaps under a shared accountability system), being honest and transparent with one another, and preventing and managing conflict effectively—all elements of cooperation explored more extensively in Chapters 2 and 3.

Given the challenges that might arise in 1) finding the right people for the job, 2) conveying clear job expectations under a potentially divided public-private workforce, 3) equity and social exchange issues, and 4) potential differential levels of association with contracted employees, controls for these elements are included in the models presented in the next section.
Results

Table 4.2 Agency-Level Cooperation at Work and Contracting Dollars\textsuperscript{11} (All Unstandardized Coefficients and Robust Standard Errors)

<table>
<thead>
<tr>
<th>Agency-Level Cooperation at Work</th>
<th>OLS (Robust SE)</th>
<th>OLS with Year Fixed-Effects (Robust SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key Independent Variable</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agency Contracting (SBIL, logged, lag 1 yr.)</td>
<td>0.006 **</td>
<td>0.006 **</td>
</tr>
<tr>
<td></td>
<td>(.002)</td>
<td>(.002)</td>
</tr>
<tr>
<td><strong>Controls</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Unit Recruitment (Finding the Right People)</td>
<td>0.230 ***</td>
<td>0.210 ***</td>
</tr>
<tr>
<td></td>
<td>(.028)</td>
<td>(.029)</td>
</tr>
<tr>
<td>Clear Job Expectations</td>
<td>0.075</td>
<td>0.084</td>
</tr>
<tr>
<td></td>
<td>(.044)</td>
<td>(.043)</td>
</tr>
<tr>
<td>Agency Successful at Mission</td>
<td>0.148 ***</td>
<td>0.117 ***</td>
</tr>
<tr>
<td></td>
<td>(.031)</td>
<td>(.030)</td>
</tr>
<tr>
<td>Supervisor Treats Me with Respect</td>
<td>0.717 ***</td>
<td>0.807 ***</td>
</tr>
<tr>
<td></td>
<td>(.041)</td>
<td>(.045)</td>
</tr>
<tr>
<td>Agency Percent of Minority Status</td>
<td>-0.115 **</td>
<td>-0.097 *</td>
</tr>
<tr>
<td></td>
<td>(.038)</td>
<td>(.038)</td>
</tr>
<tr>
<td>Agency Percent of Tenure 15 Years or &gt;</td>
<td>0.160 ***</td>
<td>0.147 ***</td>
</tr>
<tr>
<td></td>
<td>(.034)</td>
<td>(.032)</td>
</tr>
<tr>
<td>Agency Percent of Male Respondents</td>
<td>-0.034</td>
<td>-0.029</td>
</tr>
<tr>
<td></td>
<td>(.032)</td>
<td>(.030)</td>
</tr>
<tr>
<td>Agency Percent of Supervisor Respondents</td>
<td>0.096 *</td>
<td>0.098 *</td>
</tr>
<tr>
<td></td>
<td>(.040)</td>
<td>(.040)</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.979 ***</td>
<td>-1.205 ***</td>
</tr>
<tr>
<td></td>
<td>(.152)</td>
<td>(.145)</td>
</tr>
</tbody>
</table>

Observations 275\textsuperscript{12} 275
Prob>F 0.001 0.001
R-squared 0.908 0.921
Highest VIF 3.52 4.01
AIC -775 -806
BIC -739 -752

\*\*\*p<.001; \*\*p<.01; \*p<.05
Sources: Federal Employee Viewpoint Survey, Trends Data; Federal Procurement Data System—Next Generation

Table 4.2 shows the relationship between agency contracting and perceptions of cooperation at work aggregated to the agency level. Ordinary least squares models were used because the dependent variable is continuous when aggregated to the agency level. Results

\textsuperscript{11} These models account for survey years 2010-2015. Specific questions included in the models were not introduced in the FEVS until 2010, thus reducing the number agency-year observations.
\textsuperscript{12} The unit of analysis is agency-year. The number of observations reflects the number of agency-years that had reports for the survey questions across six years of FEVS data (2010-2015), which were aggregated to the agency level. Earlier survey years were dropped as a result of specific questions being introduced in later years.
remained consistent in year-fixed-effects models, used to account for potential unobserved variation across years—with both the AIC and BIC statistics showing that the non-fixed-effects model is a better fit. The model shows a positive relationship between contracting and cooperation and statistical significance for the contracting variable. In light of these results, hypothesis 2 is rejected. Interestingly, significance is found for a relationship, but in the opposite direction hypothesized (positive rather than negative). Implications for this surprising finding are explored in the following section.

Here again, any interpretation of the coefficient’s magnitude is difficult to apply in a practical fashion: no manager would advocate increasing an agency’s contracting budget by billions of dollars in order to modestly improve perceptions of workplace cooperation. However, knowing that perceptions of cooperation tend to be higher in agencies where more dollars are allocated to contracting, managers might attempt to leverage the potential improvements in cooperation by fostering, supporting, and reinforcing cooperative behavior—perhaps even to mitigate the possible negative effects contracting may have on other attitudes in the workplace.

Table 4.3 uses the exact same model specification but employs the second operationalization of the contracting variable: dollars-per-respondent. Results remain consistent regardless of which operationalization is used, and the AIC and BIC scores reflect very similar fit to the models in Table 4.2.
Table 4.3 Agency-Level Cooperation at Work and Contracting Dollars Per Survey Respondent\textsuperscript{13} (All Unstandardized Coefficients and Robust Standard Errors)

<table>
<thead>
<tr>
<th>Key Independent Variable</th>
<th>OLS (Robust SE)</th>
<th>OLS with Year Fixed-Effects (Robust SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency Contracting ($/resp., logged, lag 1 yr.)</td>
<td>0.005 * (0.002)</td>
<td>0.006 * (0.002)</td>
</tr>
<tr>
<td>Work Unit Recruitment (Finding the Right People)</td>
<td>0.227 *** (0.028)</td>
<td>0.205 *** (0.028)</td>
</tr>
<tr>
<td>Clear Job Expectations</td>
<td>0.082</td>
<td>0.098 * (0.048)</td>
</tr>
<tr>
<td>Agency Successful at Mission</td>
<td>0.140 *** (0.034)</td>
<td>0.103 ** (0.033)</td>
</tr>
<tr>
<td>Supervisor Treats Me with Respect</td>
<td>0.726 *** (0.041)</td>
<td>0.822 *** (0.045)</td>
</tr>
<tr>
<td>Agency Percent of Minority Status</td>
<td>-0.116 ** (0.039)</td>
<td>-0.100 ** (0.038)</td>
</tr>
<tr>
<td>Agency Percent of Tenure 15 Years or &gt;</td>
<td>0.148 *** (0.035)</td>
<td>0.134 *** (0.033)</td>
</tr>
<tr>
<td>Agency Percent of Male Respondents</td>
<td>-0.039</td>
<td>-0.034 (0.033)</td>
</tr>
<tr>
<td>Agency Percent of Supervisor Respondents</td>
<td>0.091 * (0.042)</td>
<td>0.091 * (0.041)</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.053 *** (0.158)</td>
<td>-1.310 *** (0.154)</td>
</tr>
</tbody>
</table>

Observations 275\textsuperscript{14} 275
Prob>F 0.001 0.001
R-squared 0.907 0.920
Highest VIF 4.10 4.28
AIC -772 -804
BIC -736 -749

\textsuperscript{**}p<0.001; \textsuperscript{*}p<0.01; \textsuperscript{*}p<0.05

Sources: Federal Employee Viewpoint Survey, Trends Data; Federal Procurement Data System—Next Generation

Discussion

The initial hypothesis was for the opposite direction of the eventual results, providing evidence that contracting is positively and significantly related to perceptions of cooperation in the public sector. Some scholarly work suggests that a contracting agreement’s institutional requirements may encourage or require cooperation because of the more complex nature of the

\textsuperscript{13} These models account for survey years 2010-2015. Specific questions included in the models were not introduced in the FEVS until 2010, thus reducing the number agency-year observations.

\textsuperscript{14} The unit of analysis is agency-year. The number of observations reflects the number of agency-years that had reports for the survey questions across six years of FEVS data (2010-2015), which were aggregated to the agency level. Earlier survey years were dropped as a result of specific questions being introduced in later years.
relationships being managed (e.g., Reeves 2008)—which may positively influence perceptions about knowledge, transparency, and effective conflict management.

The previously cited work on competition and cooperation (see Chapter 3) may apply here as well (Deutsch 2003). With the particular operationalization of cooperation, the FEVS question on knowledge sharing refers to “work units.” In a competitive environment especially, respondents’ interpretation of the question may not include even those contractors with whom they work closely. If an agency has developed factions of employees based on contractor status, perceived intra-faction cooperation may arise resulting from an “us vs. them” mentality, which may be what respondents are conveying when answering questions about cooperation within their work unit—mentally excluding those who work for contractors as not being relevant to the question posed in the survey. Furthermore, variation may be present in how respondents interpret the term cooperation in the survey. Further study may be needed to ascertain how respondents in specific contexts interpret the meaning of cooperation, and to what kinds of relationships they apply the definition.

Expanding on the idea that context may be affecting how respondents answer questions concerning cooperation, the term may also take on a different context depending on the status of the employee. While this study controls for supervisor status—where the employee’s role in the organization may affect perceptions of cooperation and even its definition to the respondent—other factors like social desirability bias could be influencing how respondents define and answer questions concerning cooperation. Some employees may be skeptical that their answers on employment surveys remain anonymous (Thompson, et al. 2003). Thus, answering more negatively about how one perceives cooperation, transparency, knowledge sharing, and conflict resolution might be perceived to elicit eventual agency-wide policy changes with respect to
manager job expectations. Respondents may be concerned about what it says about them and their agency if they perceive their work unit, team, or agency not cooperating well. Any inflation of responses at the individual level could affect aggregation to the agency level and could subsequently bear some responsibility in portraying a positive relationship here. However, concerns about this kind of bias may be overstated, as the study referenced above found that only ten percent of respondents were concerned about anonymity of online employee surveys (Thompson, et al. 2003).

Possible Limitations

Multicollinearity

As in Chapter 3, in order to check for problematic multicollinearity among the variables, the variance inflation factors were tested after the ordinary least squares regression. Regarding the models in Table 4.2, the VIF scores for the first model were below four, while the year fixed-effects model’s VIF scores were only slightly above four (highest was 4.01). Similarly, the VIFs for models in Table 4.3 were all under five (highest was 4.28), indicating that multicollinearity does not appear to be dramatically biasing the estimates in these models.

Causal Direction

The contracting variable was lagged and came from a different dataset altogether, suggesting a causal relationship may be possible. As contracting decisions in the public sector are often based, at least in part, on efficiency-driven or budgetary concerns (Moore 1987), the opposite causal direction (i.e., cooperation leads to more contracting) seems unlikely. Perhaps highly cooperative agencies may be more confident of being able to manage a contract effectively, but cooperation being a major causal factor in the management decision to contract out seems a bit far-fetched. Furthermore, the literature cited above in the discussion section also
supports the idea that contracting may positively influence perceptions of cooperation. However, a direct causal link where other possible confounding variables are summarily ruled out would be necessary to strengthen this conclusion. The variables included in this model explain approximately 92% of the variance in cooperation (or 90% without the year-fixed effects), and even when demographic variables are included, the positive and significant relationship between cooperation and contracting persists.

Variable Operationalization

As stated, the contracting variables used in this study are operationalized in two different ways: 1) in raw-dollars, logged, and lagged one year, and 2) in dollars-per-respondent in the FEVS. The second measure produces remarkably similar results to the first. However, the dollars-per-respondent measure only approximates a standardization by agency size. Other measures of agency size (i.e., employment numbers by agency) may be used in future research to ensure that the standardized measure captures the relative magnitude of contracting’s culture and its possible impacts on worker attitudes.

Another point that arises out of variable operationalization is the range of variation in dependent variable, cooperation at work. The range is compressed, likely due the process of taking means during factor-based scoring process (from Chapter 3), and then taking the means by agency to aggregate up. The range of response means (as noted in Table 4.1) is approximately 2.7–4.3 on a 5-point Likert scale. This may have a shrinking effect on the size of the coefficients of this chapter’s models relative to the actual magnitude of the relationship in practice, given that the range of data is more compressed relative to the ranges of other variables in the models.
Implications

This chapter began by asking whether there might be a relationship between cooperation at work and contracting. The results bolster even further the case for management intervention in facilitating cooperation in the workplace (i.e., encouraging knowledge sharing, transparency, honesty, integrity, and actively managing to address and resolve conflict). Contrary to the assumption that contracting might lead to discord by negatively impacting cooperation as workers become more protective or insular in their jobs out of fear, results indicate that, at least generally, perceptions of cooperation are improved as contracting increases at the agency or sub-agency level. A possible explanation is that the institutional requirements of government contracts may necessitate a certain amount of cooperation as part of the contracting relationship, making it assumed, enforced, and part of common procedure. Reporting requirements and communication-focused contract provisions may enforce cooperation across the agency boundaries and lead to improved perceptions of communication.

Another possible explanation for a positive relationship is that extreme cases of discord like the U.S. State Department anecdote that began this chapter may only appear when other preventative measures or productive organizational change mechanisms (as suggested in Fernandez & Rainey 2006) are not observed. Finally, a third possibility is that contracting does not generally evoke an adversarial situation at all: contracting may be seen by many as a tool for accomplishing goals in certain contexts, thus allowing for more help, expertise, and person-power without compromising the payroll budget as the dollars for employees and contractors may be sourced differently. This explanation would account for the positive and significant relationship of the percent of supervisor respondents on cooperation: a higher percent of supervisor respondents at the agency level is related to better responses about cooperation, even
when contracting is already accounted for in the model. Although hypothesis 2 was not supported, the presence of a significant and negative constant term suggests the possibility of elements not included in this model exerting downward pressure on agency-level cooperation. These elements should be addressed in other studies. Further implications—for theory, research, and practice—pertaining to these findings appear in Chapter 6.

From here, Chapter 5 returns to the model proposed in Chapter 3 on job satisfaction, but it does so at the agency level and incorporates the contracting phenomenon introduced in Chapter 4. The next chapter’s models also account for the discovered positive relationship between cooperation at work and job satisfaction.
CHAPTER 5: Is Contracting Related to Satisfaction?
Contracting & Civil Servant Job Satisfaction

My father worked for a large manufacturing company for about thirty years—an achievement that happens far more rarely now than when he started working, regardless of sector. Two years before he was eligible to receive his full retirement, upper management descended on the manufacturing plant where he had worked his way up into a specialized management position over the course of his career, and they informed the employees that the plant was to be closed. Throughout his career, my dad had built relationships, and while he never let his job define him, he had a certain amount of satisfaction in doing his job—especially the part that dealt with managing people. He was well liked and a hard worker, and luckily, the company found a way to keep him employed for a couple more years to get him to retirement. However, those two years were tough: he watched as the place he had worked for most of his adult life—the place that enabled him to help send his children to college—disappeared around him.

More than that, he was expected to help it disappear: the manufacturing equipment had to be disassembled, moved to Mexico, and reassembled so that the same work could be done there for a fraction of the labor costs. My dad knew that equipment well, and when they asked him to take part in the move, he complied. I saw any joy that my father had once displayed for his job also disappear in those two years. Any satisfaction he once felt for his job was replaced by anxiety, fear, and self-preservation.

This anecdote is not a perfect parallel to public sector contracting. After all it takes place in a private sector setting, and many government contracts operate in partnership where public workers do not necessarily fear for their jobs. However, with increased contracting, some almost assuredly do fear that they will be replaced by consultants or private service providers. Some
may also have to partner with contractors where they once partnered with colleagues, much like my dad had to partner with the team in Mexico to reassemble the relocated equipment. In this kind of culture where workers see the shifting dynamics of how their work may be valued (or not), might contracting out be related to the overall job satisfaction of civil servants? The following chapter answers that question.

**Theory: Contracting and Job Satisfaction**

“The effective customer representative derives job satisfaction, not from prescribing solutions to contractor problems but from identifying them, and thus being the causative agent by which contractor personnel are led to both technically and managerially sound resolution” (Crawford & Krahn 1998). Here, Crawford and Krahn refer to public managers as “customer representatives,” because their organizations act as customers buying a service from a contractor. So public managers are most satisfied when they are engaged identifying problems in the implementation of contract arrangements rather than the actual fixing of those problems. So say Crawford and Krahn, two well-respected and prominent civil servants—a sound place to begin discussing the relationship between contracting and job satisfaction. Crawford and Krahn assert that public managers in contracting arrangements can play the proverbial middle-man between their agencies and the contractor, and that they are most satisfied when being diagnosticians, not healers. If this is true, then public contracts requiring public managers to problem solve may negatively affect satisfaction. While this view may be limiting in describing the capability of modern public managers, it serves as a starting point for discussion about an environment wherein managers have reported lower satisfaction when being bogged-down with contract management or red-tape (Feeney & Bozeman 2009).
Job satisfaction has been shown to vary when employee job security is viewed as vulnerable. One study compared attitudes of permanent and temporary employees and found that permanent employees engage in more “relational psychological contracting,” (Rousseau 1995; Millward & Brewerton 2000; Cuyper & Witte 2006, 395)—which focuses predominantly on the social exchange of employee “job security in exchange for loyalty,” (Cuyper & Witte 2006, 397) and leads to negative effects on job satisfaction and organizational commitment when job security is questioned (Cuyper & Witte 2006). If public sector managers view their jobs as being less secure in a high-contracting environment, this could lead to negative effects on their job satisfaction.

Furthermore, the principal-agent relationship of the contractor may play a role in employee attitudes. Another study compared attitudes on commitment and loyalty to a hospital in Britain’s National Health Service as they outsourced the management and monitoring of employees (Indridason & Wang 2008). The authors point to the following shift over the two years of the contract:

It seems that, while employees have developed a sense of commitment and loyalty towards their new managing organization, their ties with their employing organization, the hospital, have weakened with employees seeing themselves primarily as the private partner’s staff… Moreover, a sense of weaker attachment to the employing organization may be accentuated by the perception that other hospital staff see the seconded employees less as a part of the Hospital and more as contracted workforce (85).

If contracted workers have oversight over non-contracted workers, seemingly the sense of association and belonging for the overseen may shift away from the employing organization as the employees identify more closely with the contracting partner. This shift would be a startling revelation if it transcended this context into other areas of public service. With respect to job
satisfaction, this could have implications on different factions of employees in the same workplace, much like my DHS contractor friend from Chapter 1.

A relationship between contracting and job satisfaction is also evidenced in a cross-sectional study of job satisfaction using only the 2006 data of the FEVS and contracting dollars data sourced from the Census Bureau (Yang & Kassekert 2009). A negative relationship between contracting and job satisfaction was found. However, much data have been collected since 2006, and the contracting environment has only grown in complexity and prevalence since then, warranting a revisit to this phenomenon.

One study points to the importance of job satisfaction being measured in contracting environments. Feeney & Bozeman (2009) measure perceptions of red-tape among government employees and find a negative association between job satisfaction and red-tape, both within the organization and in dealing with private contractors: so, the less satisfied employees report more red-tape. The causal direction is not indicated in their results, but whether red-tape with contractors causes dissatisfaction or dissatisfied people report seeing more red tape, the possible negative effects on job satisfaction are worth considering. With complex contracting relationships, red-tape’s correlation with dissatisfaction may be a reality that should be accounted for in the management of employees.

Given the potential theoretical risk that contracting poses to job satisfaction, and preliminary results from a more limited prior analysis, I test whether contracting and job satisfaction are related for government employees.

**Hypothesis 3:** Agency-level contracting and overall job satisfaction in that agency are negatively related.
Data

As in Chapter 4, data come from the Federal Employee Viewpoint Survey (FEVS) from 2004, 2006, 2008, and 2009-15, containing over 2 million survey response sets answering approximately 100 questions about a variety of job-related and status-based topics, aggregated to the agency level. Again, the FEVS only surveys government employees, not contracted employees. Contracting data come from the Federal Procurement Data System (FPDS) from 2003-2015 for agencies or sub-agencies that appear in the FEVS. Therefore, as with Chapter 4, the unit of analysis is the agency-year and deals with only agency-level phenomena. Contracting dollars at the agency or sub-agency level are shown in two forms: 1) billions of dollars, logged to normalize the distribution, and lagged one year; and 2) dollars-per-respondent (by agency or sub-agency), logged, and lagged one year. The number of observations reflects the number of federal agencies or sub-agencies that had responses and variation across the years of data.

Measures

Table 5.1 contains descriptive statistics for this Chapter’s dependent variable (agency-level job satisfaction); its key independent variable (agency contracting dollars in both forms); the cooperation measure derived in Chapter 3 and used in Chapter 4 at the agency level; and controls accounting for satisfaction with training and pay, the importance of work, and demographic characteristics. As noted in Chapter 4, the cooperation at work variable initially takes the mean of four survey items to create one factor-based score. Specific survey questions and answer choices corresponding to each variable in Table 5.1 can be found in appendix Table A.1.
Table 5.1 Descriptive Statistics at the Agency Level

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Min.</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agency-Level Job Satisfaction</td>
<td>579</td>
<td>3.736</td>
<td>0.186</td>
<td>2.677</td>
<td>4.337</td>
</tr>
<tr>
<td><strong>Key Independent</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agency Contracting (SBIL, logged, lag 1 yr.)</td>
<td>865</td>
<td>-0.608</td>
<td>2.635</td>
<td>-12.717</td>
<td>5.115</td>
</tr>
<tr>
<td>Agency Contracting ($/respondent, logged, lag 1 yr.)</td>
<td>564</td>
<td>12.752</td>
<td>1.956</td>
<td>3.301</td>
<td>17.581</td>
</tr>
<tr>
<td>Cooperation at Work (factor-based score)</td>
<td>579</td>
<td>3.649</td>
<td>0.197</td>
<td>2.662</td>
<td>4.301</td>
</tr>
<tr>
<td><strong>Controls</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfied with Training</td>
<td>579</td>
<td>3.404</td>
<td>0.229</td>
<td>2.645</td>
<td>4.133</td>
</tr>
<tr>
<td>Important Work</td>
<td>579</td>
<td>4.344</td>
<td>0.114</td>
<td>3.846</td>
<td>4.667</td>
</tr>
<tr>
<td>Satisfied with Pay</td>
<td>579</td>
<td>3.585</td>
<td>0.211</td>
<td>2.761</td>
<td>4.305</td>
</tr>
<tr>
<td>Agency Percent of Minority Status</td>
<td>372</td>
<td>0.312</td>
<td>0.132</td>
<td>0.098</td>
<td>0.905</td>
</tr>
<tr>
<td>Agency Percent of Tenure 15 Years or &gt;</td>
<td>276</td>
<td>0.483</td>
<td>0.113</td>
<td>0.070</td>
<td>0.790</td>
</tr>
<tr>
<td>Agency Percent of Male Respondents</td>
<td>372</td>
<td>0.552</td>
<td>0.158</td>
<td>0.123</td>
<td>1.000</td>
</tr>
<tr>
<td>Agency Percent of Supervisor Respondents</td>
<td>579</td>
<td>0.242</td>
<td>0.144</td>
<td>0.000</td>
<td>0.749</td>
</tr>
</tbody>
</table>

Sources: Federal Employee Viewpoint Survey, Trends Data; Federal Procurement Data System—Next Generation

**Controls**

The same controls for specific satisfaction with pay and training from Chapter 3 are included in these models, albeit aggregated to the agency level. Also included from Chapter 3’s model is the importance of the work itself (also aggregated to the agency level), which has been shown to be related to job satisfaction (Hackman & Oldham 1976; Wall & Martin 1987). Finally, similar demographic measures to those in Chapter 3’s model—minority status, tenure fifteen years and over, gender, and supervisor status—are also included. However, as these are agency-level measures, they are represented as the percent of survey respondents (by agency or sub-agency) who possess those characteristics or status measures.
Results

Table 5.2 Agency-Level Job Satisfaction, Contracting Dollars, and Cooperation at Work (All Unstandardized Coefficients and Robust Standard Errors)

<table>
<thead>
<tr>
<th>Agency-Level Job Satisfaction</th>
<th>OLS 1 (Controls Only)</th>
<th>OLS 2 (Added Contracting and Cooperation)</th>
<th>OLS 3 (Added Lower Job Satisfaction Measures)</th>
<th>OLS 4 (Added Year Fixed Effects)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Independent Variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agency Contracting ($BIL, logged, lag 1 yr.)</td>
<td>---</td>
<td>-0.007 **</td>
<td>-0.008 ***</td>
<td>-0.008 ***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.003)</td>
<td>(.002)</td>
<td>(.002)</td>
</tr>
<tr>
<td>Cooperation at Work (factor-based score)</td>
<td>---</td>
<td>0.696 ***</td>
<td>0.406 ***</td>
<td>0.395 ***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.027)</td>
<td>(.035)</td>
<td>(.037)</td>
</tr>
<tr>
<td>Controls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfied with Training</td>
<td>---</td>
<td>0.192 ***</td>
<td>0.199 ***</td>
<td>0.199 ***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.031)</td>
<td>(.032)</td>
<td>(.032)</td>
</tr>
<tr>
<td>Important Work</td>
<td>1.138 ***</td>
<td>0.783 ***</td>
<td>0.744 ***</td>
<td>0.728 ***</td>
</tr>
<tr>
<td></td>
<td>(.110)</td>
<td>(.043)</td>
<td>(.040)</td>
<td>(.043)</td>
</tr>
<tr>
<td>Satisfied with Pay</td>
<td>---</td>
<td>0.155 ***</td>
<td>0.150 ***</td>
<td>0.150 ***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.018)</td>
<td>(.020)</td>
<td>(.020)</td>
</tr>
<tr>
<td>Agency Percent of Minority Status</td>
<td>-0.212 **</td>
<td>0.235 ***</td>
<td>0.119 ***</td>
<td>0.119 ***</td>
</tr>
<tr>
<td></td>
<td>(.079)</td>
<td>(.037)</td>
<td>(.028)</td>
<td>(.028)</td>
</tr>
<tr>
<td>Agency Percent of Tenure 15 Years or &gt;</td>
<td>0.413 ***</td>
<td>0.288 ***</td>
<td>0.252 ***</td>
<td>0.263 ***</td>
</tr>
<tr>
<td></td>
<td>(.108)</td>
<td>(.044)</td>
<td>(.038)</td>
<td>(.039)</td>
</tr>
<tr>
<td>Agency Percent of Male Respondents</td>
<td>0.087 **</td>
<td>0.120 **</td>
<td>0.051</td>
<td>0.055</td>
</tr>
<tr>
<td></td>
<td>(.073)</td>
<td>(.040)</td>
<td>(.033)</td>
<td>(.033)</td>
</tr>
<tr>
<td>Agency Percent of Supervisor Respondents</td>
<td>-0.399 ***</td>
<td>-0.149 **</td>
<td>-0.236 ***</td>
<td>-0.261 ***</td>
</tr>
<tr>
<td></td>
<td>(.094)</td>
<td>(.047)</td>
<td>(.036)</td>
<td>(.038)</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.30 **</td>
<td>-2.426 ***</td>
<td>-2.304 ***</td>
<td>-2.200 ***</td>
</tr>
<tr>
<td></td>
<td>(.459)</td>
<td>(.165)</td>
<td>(.155)</td>
<td>(.179)</td>
</tr>
<tr>
<td>Observations</td>
<td>275</td>
<td>275</td>
<td>275</td>
<td>275</td>
</tr>
<tr>
<td>Prob&gt;F</td>
<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.422</td>
<td>0.839</td>
<td>0.893</td>
<td>0.897</td>
</tr>
<tr>
<td>Highest VIF</td>
<td>1.39</td>
<td>1.64</td>
<td>3.41</td>
<td>3.73</td>
</tr>
<tr>
<td>AIC</td>
<td>-308</td>
<td>-655</td>
<td>-764</td>
<td>-764</td>
</tr>
<tr>
<td>BIC</td>
<td>-286</td>
<td>-626</td>
<td>-728</td>
<td>-710</td>
</tr>
</tbody>
</table>

***p<.001; **p<.01; *p<.05
Sources: Federal Employee Viewpoint Survey, Trends Data; Federal Procurement Data System—Next Generation

All models use ordinary least squares regression (OLS) and robust standard errors because the dependent variable contains agency-level means, which are continuous (rather than ordinal at the individual level as in Chapter 3). Table 5.2 displays the tests for contracting’s relationship with job satisfaction. A negative and significant relationship is found between contracting and job satisfaction, along with supporting evidence that the relationship between
cooperation and satisfaction is positive and significant—consistent with results in Chapter 3. The step-wise model (OLS 1) begins with only the control variables’ unstandardized coefficients to achieve a baseline R-squared (~0.42). Adding the contracting and cooperation measures (significant in all subsequent models) generates an R-squared of approximately 0.84. Adding the lower-level satisfaction controls (OLS 3) appears to uncover some additional variation in the contracting measures, as the coefficient size increases. Adding these measures also increases the R-squared to approximately 0.89. Adding year fixed effects dummy variables does not appear to impact the model or change the results.

Given these results, the null hypothesis of no relationship between agency contracting and agency-level job satisfaction is rejected. These results suggest that there is a negative and significant relationship between contracting and job satisfaction, and the positive relationship between cooperation and satisfaction persists. These findings offer evidence that a contracting culture may exist, which could serve as a drag on job satisfaction in certain environments.

Some might jump to interpret these results as implicating contracting as being a problem for workers. That interpretation is overreaching. What these results do suggest is that job satisfaction tends to be consistently lower in agencies that spend a lot on contracting as compared to those agencies that spend less on contracting, even when cooperation’s positive and persistent relationship with job satisfaction is included in the model. This finding suggests that, while cooperation may be one tool to counteract negative job satisfaction, it does not appear to wholly counteract the negative relationship between contracting and satisfaction. The findings also indicate that management can help here. While individual managers may not have the power to summarily change the contracting budget, they can manage for context: knowing that

---

15 For consistency, variables in Tables 5.2 and 5.3 appear in descending order of the standardized coefficients from Chapter 3.
higher-contracting environments (agencies) tend to experience lower agency-level job satisfaction is valuable information, and managers may be inclined to intervene to mitigate those circumstances.

Table 5.3 Agency-Level Job Satisfaction, Contracting Dollars Per Survey Respondent, and Cooperation at Work (All Unstandardized Coefficients and Robust Standard Errors)

<table>
<thead>
<tr>
<th>Agency-Level Job Satisfaction</th>
<th>OLS 1 (Controls Only)</th>
<th>OLS 2 (Added Contracting and Cooperation)</th>
<th>OLS 3 (Added Lower Satisfaction Measures)</th>
<th>OLS 4 (Added Year Fixed-Effects)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency Contracting ($/resp., logged, lag 1 yr.)</td>
<td>---</td>
<td>-0.006*</td>
<td>-0.010***</td>
<td>-0.010***</td>
</tr>
<tr>
<td>Cooperation at Work (factor-based score)</td>
<td>---</td>
<td>0.700***</td>
<td>0.407***</td>
<td>0.391***</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Key Independent Variables</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfied with Training</td>
<td>---</td>
<td>---</td>
<td>0.195***</td>
<td>0.205***</td>
</tr>
<tr>
<td>Important Work</td>
<td>1.138***</td>
<td>0.783***</td>
<td>0.738***</td>
<td>0.724***</td>
</tr>
<tr>
<td>Satisfied with Pay</td>
<td>---</td>
<td>---</td>
<td>0.166***</td>
<td>0.165***</td>
</tr>
<tr>
<td>Agency Percent of Minority Status</td>
<td>-0.212**</td>
<td>0.233***</td>
<td>0.112***</td>
<td>0.109***</td>
</tr>
<tr>
<td>Agency Percent of Tenure</td>
<td>0.413***</td>
<td>0.293***</td>
<td>0.246***</td>
<td>0.254***</td>
</tr>
<tr>
<td>Agency Percent of Male Respondents</td>
<td>0.087</td>
<td>0.123**</td>
<td>0.047</td>
<td>0.049</td>
</tr>
<tr>
<td>Agency Percent of Supervisor Respondents</td>
<td>-0.399***</td>
<td>-0.133**</td>
<td>-0.203***</td>
<td>-0.226***</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.30**</td>
<td>-2.364***</td>
<td>-2.198***</td>
<td>-2.115***</td>
</tr>
</tbody>
</table>

Observations: 275
Prob>F: 0.001
R-squared: 0.422
Highest VIF: 1.39
AIC: -308
BIC: -286

***p<.001; **p<.01; *p<.05
Sources: Federal Employee Viewpoint Survey, Trends Data; Federal Procurement Data System—Next Generation

Table 5.3 displays the results from the alternative operationalization for contracting: dollars-per-respondent. The only difference across Tables 5.2 and 5.3 is the measure for contracting, and similar results persist in both iterations. The operationalization of contracting
does not appear to dramatically impact results. Furthermore, OLS 3 and OLS 4 in both tables have marginal differences with respect to AIC and BIC fit scores, indicating that the year fixed-effects do not dramatically improve the model specification. The following sections offer possible limitations to this research and some practical implications for public managers in the field.

**Possible Limitations**

*Multicollinearity*

As in Chapters 3 and 4, in order to check for problematic multicollinearity among the variables, the variance inflation factors were tested after the ordinary least squares regressions. Regarding the models in Tables 5.2 and 5.3, the VIF scores for all models were below four, indicating that multicollinearity does not appear to be biasing the estimates in these models.

*Causal Direction*

While, here again, the time-lagged nature of the contracting variable offers some support that a causal relationship may be possible, this variable’s inclusion is not enough to definitively claim that contracting negatively impacts job satisfaction. However, similarly to Chapter 4, the causal direction is justified by the implausibility of the opposite direction at the agency level: job satisfaction seems to be an unlikely major driver for the decision to contract out, as many contracting decisions are made as a result of budgetary concerns (Moore 1987). Now, whether contracting affects job satisfaction, or agencies already suffering low job satisfaction have a tendency to contract out more, the causal direction may be murkier. However, the time lagged nature of the dependent variable would at least suggest the former scenario is more plausible.
**Variable Operationalization**

As stated in Chapter 4, the contracting variables used in this study are operationalized in two different ways: 1) in raw-dollars, logged, and lagged one year, and 2) in dollars-per-respondent in the FEVS. As in Chapter 4, the second measure produces remarkably similar results to the first. However, the dollars-per-respondent measure only approximates a standardization by agency size. To reiterate, other measures of agency size (i.e., employment numbers by agency) may be used in future research to ensure that the standardized measure captures the relative magnitude of contracting’s culture and its impact on worker attitudes.

**Generalizability to Other Contexts**

Contexts where the survey respondents’ demographic makeup by agency is dramatically different may yield different results as well. In contexts where the balance of minority status, gender, tenure of the employees, or supervisory status is different than the federal agencies studied here, survey answers may differ in response to environmental conditions (e.g., a racially polarized environment, or where a large gender gap in employment exists) not picked up by the models tested in Chapters 4 and 5.

**Contracting Measurement and What Work is Contracted?**

This study answers questions about relationships among contracting and attitudinal variables concerning work. However, the term “contracting” can have different meanings in different contexts. Here, it is generally operationalized in dollars, but other research might use other measures, such as contract actions to ascertain how much activity is occurring.\(^{16}\)

\(^{16}\) Contract actions are not used in this study because the data are presented in “total actions” in the FPDS, not “number of contracts.” Hundreds or thousands of “actions” might take place with one particular contract. Using this measure risks vast inflation of the amount of contracting taking place in federal agencies. Future studies may find a way to more accurately portray this action-based measure.
Furthermore, this study does not parse out the kind of contracting occurring within each agency. Chapters 4 and 5 both operationalize contracting in dollars, but the impacts of different types of contracting may be more fine-grained than the data used here allow. For example, separating the contracting measure into contracts that buy “things” rather than those that buy “services” or “employees” may be necessary to capture the possible differential effects. Hiring consultants instead of in-house employees is a different kind of contracting than the Department of Defense hiring Boeing to build an airplane.

**Implications**

As in other chapters, the magnitudes of the coefficients are a bit amorphous to apply in a practical way: managers are unlikely to advocate for less contract spending because agency employees are suffering low job satisfaction. Even under the most compelling causal argument, a manager advocating that an agency should slash its contracting budget this year to effect positive changes to job satisfaction next year might have his sanity questioned. However, knowing that agencies with higher contracting report lower levels of satisfaction could help managers take steps to mitigate the possible impacts on their employees as contracts are implemented. For example, research suggests that—especially in the public sector—managing toward “extrinsic social rewards” for employees has in impact on job satisfaction because these rewards tend to follow the intrinsic rewards achieved in publicly motivated workers, and they necessitate supportive interaction between coworkers and supervisors (Mottaz 1985, 365). Taking these kinds of steps could help mitigate lower satisfaction in high contracting environments. Further implications—for theory, research, and practice—pertaining to the findings in this and other chapters appear in Chapter 6.
CHAPTER 6: Conclusion

In Chapter 1, I presented a brief introduction, where I shared a conversation I had with a friend who was deciding where he should work. He ultimately left his position with the government contractor to return to graduate school and finish his degree—during which time our conversation actually took place. His story provided context for the kinds of issues public managers deal with in a complex and diverse workplace. Chapter 2 provided the main research questions inspired by my friend’s story: How is agency contracting related to civil servant attitudes? What are civil servants’ impressions of cooperation and overall job satisfaction in a work environment where contracting is used? Chapter 2 also provided theoretical background describing the environment civil servants must navigate in the modern public service.

Figure 6.1
Chapter 3 offered analysis of the two dependent variables in this dissertation—cooperation at work and job satisfaction—and their relationship to one another. As shown in Figure 6.1, findings indicated that civil servants who report more positive perceptions of cooperation at work also report higher job satisfaction. Chapter 4 offered agency-level empirical analysis of government contracting’s relationship with cooperation at work, which showed that agencies with more contracting have more positive perceptions of cooperation on average. Chapter 5 offered empirical analysis of contracting’s relationship with job satisfaction, which showed that agencies with more contracting have lower job satisfaction on average. This concluding chapter summarizes the key findings, and details the contributions made by this research for theory, research, and practice. Finally, I offer some concluding thoughts on future research opportunities.

**Contribution & Implications**

This dissertation answers the following questions: How is agency contracting related to civil servant attitudes? What are civil servants’ impressions of cooperation and of their overall job satisfaction in a work environment where contracting is used? The answers to these questions—that cooperation is positively related to job satisfaction, and that contracting is positively related to cooperation and negatively related to job satisfaction—add to what we know about government’s use of contracting as tool and how we might approach managing in the current environment. This research has implications for theory, research, and practice.

**For Theory**

The answers to these questions, and this research in particular, contribute to public administration theory by: 1) clarifying the definition of cooperation at work using its appearance in different literatures; 2) expanding on research of public worker attitudes beyond the popular
construct of public service motivation (PSM) (Perry & Wise 1990; Perry, Hondeghem, & Wise 2010); and 3) expanding the theoretical boundaries of contracting theory and decision-making by considering potential employee attitudes as part of the calculus in the management of such contracts.

The literatures dealing with cooperation are dispersed across the fields of psychology, sociology, and organizational behavior. This dissertation pulls together components of cooperation from these literatures and theorizes cooperation as a latent composite construct made up of common objectives, knowledge sharing, honesty and transparency, and conflict resolution.

Public service motivation is a latent theoretical construct used in public administration literature to explain behavior and attitudes of civil servants and has gained much scholarly attention over the past two decades (Perry 1996). This dissertation expands on the efforts of scholars to define, measure, and assess antecedents and outcomes of worker attitudes—job satisfaction and cooperation as they relate to agency contracting—reaching beyond PSM to explain variation in these relationships.

Much contracting research focuses on performance outcomes and accountability (e.g., Blasi 2002), specific contract types and provisions (e.g., DeHoog 1990), and high-level stakeholder relationships and values (e.g., Brown, Potoski, & Van Slyke 2006). This dissertation expands on the contracting research field by considering the theoretical ramifications of environmental conditions—perhaps a contracting culture—in government. This expansion is presented not just through the larger “hollow state” or “democratic governance” lenses, but with factors concerning attitudes of workers, managers, and implications for agencies in government.
For Research

This research also contributes to the field of public administration by: 1) providing future researchers with a practical and perceptually-based construct for measuring cooperation at work; 2) adding to the literature on job satisfaction and what the field knows about how public servants fare on this dimension in a contracting context; 3) adding to the body of contracting research and testing relationships between employee attitudes and the volume of government contracting taking place; 4) combining data in unique ways to test relationships using different data sources, which adds to the growing body of literature combating the methodological assumption of common source bias in public administration and other behavioral research (Podsakoff, et al. 2003); and 5) leveraging the Federal Employee Viewpoint Survey (FEVS) despite its shortcomings (Fernandez, et al. 2015) to show its continuing usefulness in answering questions about the federal bureaucracy.

Chapter 3 provided means for measuring cooperation at work, a latent construct based on the self-reported perceptions of employee cooperation in their work units and agencies. This approach provides a way forward to continue research in cooperation and consistently measure it across time and different work contexts. Opportunities for measuring cooperation lie across the various sectors, across national boundaries, under specific demographic and policy-based circumstances, and at state and local levels of government.

Chapters 3 and 5 offer additional insight into the possible antecedents of job satisfaction. While job satisfaction research has uncovered much about what affects this important work-based phenomenon, additional knowledge in specific contexts is important for managers’ abilities to apply what is learned appropriately. This study provides additional insight into how
satisfaction fares in contracting culture, while considering cooperation’s role in managing toward a more satisfied workforce.

Chapters 4 and 5 contribute to the abundant literature on contracting out, while considering a lesser-studied aspect in contracting research: employee attitudes. While job satisfaction and the perceptions of cooperation on the job may not be a major consideration in the decision to contract out, they should be considerations as contracts are undertaken and implemented. This study contributes to the contracting literature through a more sociological lens, offering insight into the potential consequences of creating a contract culture.

Chapters 4 and 5 contain two sets of models, the dependent and independent variables of each derived from different datasets. There is a growing consensus in academic peer-reviewed journals about common source bias (e.g., Chang, Van Witteloostuijn, & Eden 2010). This dissertation adds to the body of research that considers common source bias at the research design phase, using different sources of data to test relationships among relevant phenomena.

This research also leverages two useful datasets—FEVS and FPDS—to answer important questions in public administration. Despite its weaknesses (Fernandez, et al. 2015), the Federal Employee Viewpoint Survey provides valuable attitudinal data across the federal bureaucracy. In combining attitudinal data with other sources like the procurement data in the FPDS, the potential of the FEVS is extended in this study, even without any adjustments to implementation from the Office of Personnel Management (as was recommended to OPM by Fernandez, et al., 2015).
**For Practice**

Furthermore, this research contributes to public management practice by exploring worker attitudes that matter for managers in the workplace for issues like employee turnover (Mobley 1977; Kim & Min Park 2014; Lu, et al. 2016), absenteeism (Diestel, Wegge, & Schmidt 2014), commitment (Yousef 2017), innovation (Fernandez & Moldogaziev 2012; Niu 2014), empowerment (Fernandez & Moldogaziev 2015), and performance (Fu & Deshpande 2014)—all of which have been shown in research to be related to job satisfaction.

Job satisfaction has also been shown to be highly correlated with life satisfaction (Judge & Watanabe 1994; Judge & Church 2000), which may be particularly important for public sector workers possessing public service motivation or who may simply be less “extrinsically” motivated by “economic rewards” (Buelens & Van den Broeck 2007, 65-66). This complication means that public managers may need to tap into workers’ “extrinsic social rewards” using “cohesiveness of work groups” and “supportive co-workers and supervisors” to inspire motivation from employees (Mottaz 1985, 365-366). Fostering a cooperative work environment may serve as a way to facilitate such extrinsic social rewards. The findings in Chapters 3, 4, and 5 concerning how employees perceive their own work—especially in contexts shaped by organization-level management decisions like contracting out—can also help managers be more informed about how workers may perceive work under similar contexts in the midst of future management decisions.

Several other practical implications for Chapter 3’s findings—that cooperation at work and job satisfaction are positively related—are worth noting. Depending on the causal direction, there are two potentially-overlapping interpretations for how managers may use this information: 1) foster cooperative behavior to elicit improved job satisfaction (i.e., cooperation leads to
satisfaction), or 2) elicit more cooperative behavior from already-satisfied employees to foster an even more cooperative work environment (i.e., satisfied employees tend to cooperate). Chapters 4 and 5’s findings that contracting at the agency level is related to positive perceptions of cooperation and negative job satisfaction also have implications for practice. Managers may use this information to: 1) foster cooperation to improve job satisfaction in a highly contracted environment, or 2) leverage the cooperation already happening in the highly contracted environment to blunt the possible negative effects of contracting out on job satisfaction.

In a contracting culture, how managers behave and what managers know matter. However, this dissertation should be read not as an indictment against contracting as a “tool of public action [or government]” (Salomon 2002, 1), but as information for managers to use as levers for behavior based on worker attitudes. Few practitioners would argue that managing people for the work context (highly-contracted or not) is pointless for productive outcomes, and this research helps managers and practitioners understand how people feel and may be inclined to behave in a highly-contracted environment.

**Future Research**

A number of opportunities exist for moving ahead with this research from here. The first is leveraging the publicly available employment data on civil servants, what they do, and their rates of turnover. Leveraging employment data by agency may give a closer approximation for the second contracting dollars operationalization used in Chapters 4 and 5. This study used the numbers of respondents disclosed in the FEVS by agency as a proxy for agency size by employment. While these numbers track relatively closely with actual employment (though over a smaller range, of course), more precision could be gained with the addition of real employment numbers across the years of the data. However, seeing as the results persisted across both
operationalizations of the contracting measure, this precision may simply serve as a robustness check on the results presented in this study. An intriguing next step would be to incorporate turnover rates by agency to account for another potential dimension of contracting culture, especially in light of the possibility that “turnover” looks like it did when my friend left DHS as an employee and returned the following week as a contractor. The potential for uncovering these phenomena lies in finding or gathering data that accurately reflects how turnover is defined in government and how it actually occurs.

Another opportunity for augmenting this research lies in the more granular data available from the Federal Procurement Data System (FPDS) on what is being contracted. As stated previously, data are available (albeit challenging to access) on the types of contracting occurring by agency—for example, contracting for people and expertise though consulting contracts, or contracting for physical assets through building contracts. Uncovering this aspect of contracting would offer more richness to future analysis.

This study uses large, publicly available datasets to answer questions about what is happening with civil servant attitudes under the specific context of contracting out. However, ascertaining precisely why these attitudinal shifts occur requires alternative data collection methods. Qualitative interviews and case study research will offer not only methodological diversity, but also insight into why shifts in attitudes occur under these circumstances, and how managers might tailor their approaches to their agency-specific contexts.

The data used in this study come exclusively from the context of the U.S. federal government. Analysis with data from other national contexts may yield the same results, but confirmation of such generalizability would need to be tested. Similar surveys have been implemented in Australia, the United Kingdom, Canada, Germany, and Switzerland (Fernandez,
et al. 2015), offering potential opportunities to confirm the results found in this study, and to ascertain whether the results apply outside the United States generally.

Finally, while looking out beyond national borders may be helpful, looking internally at lower levels of government may also produce additional insights. Federalism may play a role here that goes unmeasured in the present study. State and local government employees may have different responses to these questions in highly contracted environments, where decisions to contract out work may be based on different circumstances than the federal context.

Final Words

This dissertation began with an anecdote about a friend deciding between work in a government agency and working for a private contractor. It seems that regardless of what he chose, he would have been performing some form of public service. Even just that change may indicate an evolution of what it means to work in “public service.” That statement is neither an indictment nor praise for how society views the people’s work and how it is accomplished. It simply is the state of affairs in public service. That said, attitude shifts about work happen in all sectors. One chapter in this study began with a story about my dad who, despite working in the private sector, experienced a shift in attitude about his job, resulting from his own job being outsourced and having to assist in its disappearance.

What mattered in both of these examples was management. Managed appropriately, my friend might have uneventfully continued in his work with the private contractor, performing service for the people, his technical placement off the government payroll being an incidental quirk of how public service gets done. Managed appropriately, my dad’s job satisfaction might not have taken the hit it did, even under those terrifying and perhaps unavoidable circumstances.
While the days of hiring hundreds of thousands of civil service employees to accomplish new goals under new bureaucracies and agencies might be a relic of the past, managers must manage in their surroundings using the knowledge and tools they have, evaluating the options before them, and considering the levers they are offered by their contexts. How they manage matters for the outcomes they desire to achieve. This dissertation has provided insight into how managers might begin to use awareness about worker attitudes while making decisions about the work environment and culture. Managers should at least be considering how people may fare under the circumstances created by their decisions—including decisions concerning contracting. Appropriate evidence-based steps should then be taken to mitigate the potential negative impacts and maximize the positive ones. When it comes to doing the people’s work, civil servants deserve at least that.
References


## Appendix

**Table A.1 Variable Specification and Survey Questions**  

<table>
<thead>
<tr>
<th>Variable</th>
<th>Survey Question</th>
<th>Answer Choices</th>
</tr>
</thead>
</table>
| Overall Job Satisfaction                      | Considering everything, how satisfied are you with your job?                   | 5: Very Satisfied  
4: Satisfied  
3: Neither Satisfied nor Dissatisfied  
2: Dissatisfied  
1: Very Dissatisfied |
| Cooperation/Common Objectives                 | The people I work with cooperate to get the job done.                        | 5: Strongly Agree  
4: Agree  
3: Neither Agree nor Disagree  
2: Disagree  
1: Strongly Disagree |
| Knowledge Sharing                             | Employees in my work unit share job knowledge with each other.                | 5: Strongly Agree  
4: Agree  
3: Neither Agree nor Disagree  
2: Disagree  
1: Strongly Disagree |
| Honesty & Transparency                        | My organization's senior leaders maintain high standards of honesty and integrity. | 5: Strongly Agree  
4: Agree  
3: Neither Agree nor Disagree  
2: Disagree  
1: Strongly Disagree |
| Managing Conflict                             | Arbitrary action, personal favoritism and coercion for partisan political purposes are not tolerated. | 5: Strongly Agree  
4: Agree  
3: Neither Agree nor Disagree  
2: Disagree  
1: Strongly Disagree |
| Satisfied with Training                       | How satisfied are you with the training you receive for your present job?    | 5: Very Satisfied  
4: Satisfied  
3: Neither Satisfied nor Dissatisfied  
2: Dissatisfied  
1: Very Dissatisfied |
| Important Work                                | The work I do is important.                                                  | 5: Strongly Agree  
4: Agree  
3: Neither Agree nor Disagree  
2: Disagree  
1: Strongly Disagree |
| Satisfied with Pay                            | Considering everything, how satisfied are you with your pay?                 | 5: Very Satisfied  
4: Satisfied  
3: Neither Satisfied nor Dissatisfied  
2: Dissatisfied  
1: Very Dissatisfied |
| Work Unit Recruitment (Finding the Right People) | My work unit is able to recruit people with the right skills.                | 5: Strongly Agree  
4: Agree  
3: Neither Agree nor Disagree  
2: Disagree  
1: Strongly Disagree |
| Clear Job Expectations | I know what is expected of me on the job. | 5: Strongly Agree  
4: Agree  
3: Neither Agree nor Disagree  
2: Disagree  
1: Strongly Disagree |
|-------------------------|------------------------------------------|------------------------------------------------------------------|
| Agency Successful       | My agency is successful at accomplishing its mission. | 5: Strongly Agree  
4: Agree  
3: Neither Agree nor Disagree  
2: Disagree  
1: Strongly Disagree |
| Supervisor Treats Me with Respect | My supervisor treats me with respect. | 5: Strongly Agree  
4: Agree  
3: Neither Agree nor Disagree  
2: Disagree  
1: Strongly Disagree |

Source: Federal Employee Viewpoint Survey, Trends Data Set
David M. Bredenkamp  
Curriculum Vitae

EDUCATION

Indiana University, Bloomington, IN  
School of Public and Environmental Affairs (SPEA)  
Ph.D., Public Affairs  
June 2018  
Major Fields: Public Management, Policy Analysis  
Minor: Organizational Behavior & Human Resources (Kelley School of Business)  
Committee: M. Baggetta, M. McGuire (co-chairs); S. Fernandez; B. Gazley  
Dissertation: Serving Alongside the Shadow: Civil Servants and Contracted Public Work  
Master of Public Affairs  
Concentrations: Public Management, Nonprofit Management  
Kelley School of Business (IUJSbM)  
Bachelor of Science, Voice  
May 2012  
Outside Field: Music Theater

UNDER REVIEW


WORKING PAPERS


Bredenkamp, D. “Work Group Cooperation and Job Satisfaction in the Public Sector.”

Bredenkamp, D. “Working with the Shadow: Public Worker Satisfaction and the Private Government Workforce”


CONFERENCE PAPERS & PRESENTATIONS


**RESEARCH EXPERIENCE**

**Graduate Assistant**, *Public Administration Review*, Indiana University  
Fall 2012-Fall 2017

**Graduate Research Assistant**, Prof. Matthew Baggetta  
Research Assistant Manager for Systematic Social Observation Study  
Indiana University  
May 2013-August 2015

**RESEARCH & TEACHING INTERESTS**

Public Management, Organizational Behavior, Public Service, Civil Service Employee Attitudes, Human Resources
TEACHING EXPERIENCE

**Associate Instructor**, SPEA-V236: Management Concepts and Applications I, Indiana University. Six semesters. Fall 2015-Spring 2018

**Guest Instructor/Lecturer,**
- SPEA-V561 Public HR Mgmt.: Impact of HR Activities: Reducing Turnover Costs November 2012
- SPEA-V450 Strategic HR Mgmt.: Strategic Compensation Systems April 2012
- SPEA-V373 HR Mgmt. in the Public Sector: Compensation Strategies and Legislation April 2012

**Teaching Assistant**, Prof. Daniel Grundmann, SPEA-V450 Strategic HR Management School of Public and Environmental Affairs, Indiana University Spring 2012

**Teaching Assistant**, Dr. James L. Perry, SPEA-V160 National and International Policy School of Public and Environmental Affairs, Indiana University Fall 2011

GRANT WRITING & AWARDS

**Spencer Foundation. Research Grant in The New Civics.** [$49,693]

**“Best Public Management Paper” Conference Award** [$250]
Association of SPEA PhD Students (ASPS) Annual Conference, Indiana University 2014

**Diversity Scholar Grant** [$250]
Association for Research on Nonprofit Organizations and Voluntary Action (ARNOVA) 2012

**Dean of Music Award Scholarship** [$12,000]
Jacobs School of Music, Indiana University Fall 1998-Spring 2002

SERVICE

**School of Public and Environmental Affairs Budget Committee**
Indiana University, Graduate Student Member Spring 2015

**LGBTQ+ Culture Center Advisory Board**
Indiana University, Graduate Student Member October 2011-April 2015

**WFIU, Indiana Public Media**
Community Events/Public Announcement Intern October 2010-August 2013