

TECHNICAL REPORT

An Assessment of the Civilian Acquisition Workforce Personnel Demonstration Project

Laura Werber • Lindsay Daugherty • Edward G. Keating • Matthew Hoover

Prepared for the Office of the Secretary of Defense
Approved for public release; distribution unlimited



NATIONAL DEFENSE RESEARCH INSTITUTE

The research described in this report was prepared for the Office of the Secretary of Defense (OSD). The research was conducted within the RAND National Defense Research Institute, a federally funded research and development center sponsored by OSD, the Joint Staff, the Unified Combatant Commands, the Navy, the Marine Corps, the defense agencies, and the defense Intelligence Community under Contract W74V8H-06-C-0002.

The RAND Corporation is a nonprofit institution that helps improve policy and decisionmaking through research and analysis. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors.

RAND® is a registered trademark.

© Copyright 2012 RAND Corporation

Permission is given to duplicate this document for personal use only, as long as it is unaltered and complete. Copies may not be duplicated for commercial purposes. Unauthorized posting of RAND documents to a non-RAND website is prohibited. RAND documents are protected under copyright law. For information on reprint and linking permissions, please visit the RAND permissions page (<http://www.rand.org/publications/permissions.html>).

Published 2012 by the RAND Corporation
1776 Main Street, P.O. Box 2138, Santa Monica, CA 90407-2138
1200 South Hayes Street, Arlington, VA 22202-5050
4570 Fifth Avenue, Suite 600, Pittsburgh, PA 15213-2665
RAND URL: <http://www.rand.org/>
To order RAND documents or to obtain additional information, contact
Distribution Services: Telephone: (310) 451-7002;
Fax: (310) 451-6915; Email: order@rand.org

Preface

In February 2012, Garry Shafovaloff, deputy director, Human Capital Initiatives, Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics (OUSD[AT&L]), asked the RAND Corporation to undertake a study titled “Assessment of the Civilian Acquisition Workforce Personnel Demonstration Project.” The objective of this project was to accomplish the fiscal year (FY) 2012 Civilian Acquisition Workforce Personnel Demonstration Project (AcqDemo) assessment mandated in the National Defense Authorization Act (NDAA) for FY 2011 (Pub. L. 111-383).

This research should be of interest to U.S. Department of Defense (DoD) personnel involved with civilian manpower and personnel policy issues. Some expertise about government civilian personnel management is presumed in the reader.

This research was sponsored by the OUSD(AT&L) and conducted within the Forces and Resources Policy Center of the RAND National Defense Research Institute, a federally funded research and development center sponsored by the Office of the Secretary of Defense, the Joint Staff, the Unified Combatant Commands, the Navy, the Marine Corps, the defense agencies, and the defense Intelligence Community.

For more information on the RAND Forces and Resources Policy Center, see <http://www.rand.org/nsrd/ndri/centers/frp.html> or contact the director (contact information is provided on the web page).

Contents

Preface	iii
Figures	ix
Tables	xi
Summary	xiii
Acknowledgments	xix
Abbreviations	xxi
CHAPTER ONE	
Introduction	1
Purpose	3
Research Approach	3
Analytic Challenges	3
Data Sources and Analysis	5
Organization	8
CHAPTER TWO	
Assessment Criterion A: Workforce Description	11
Summary	13
CHAPTER THREE	
Assessment Criterion B: Explanation of Appointment Flexibilities	17
Summary	18
CHAPTER FOUR	
Assessment Criterion C: Explanation of Performance Appraisal Flexibilities	19
Summary	20
CHAPTER FIVE	
Assessment Criterion D: Steps to Ensure Fairness and Transparency	21
Summary	22
CHAPTER SIX	
Assessment Criterion E: How the Project Helps Organizations Better Meet Mission	
Needs	23
AcqDemo's Flexibilities	23
Hiring	23

Performance Appraisal	24
Job Assignments.....	24
Perceptions of AcqDemo’s Ability to Help Organizations Better Meet Mission Needs.....	25
Summary.....	28

CHAPTER SEVEN

Assessment Criterion F: Application of Flexibilities and Barriers to Their Use.....	29
Hiring Flexibilities	29
Appointment Flexibilities	31
Performance Appraisal Flexibilities	32
Barriers to Using Flexibilities Related to Hiring, Appointments, and Performance Appraisal	35
Lack of Familiarity with AcqDemo	35
Budget Constraints	36
Pay or Broad Band Limits.....	37
Perceived Lack of Fairness	38
Summary.....	40

CHAPTER EIGHT

Assessment Criterion G: Process for Performance Appraisal Feedback.....	41
Timetables for Performance Appraisals.....	41
Performance Feedback and Dialogue.....	42
Summary.....	44

CHAPTER NINE

Assessment Criterion H: Impact on Career Progression	45
AcqDemo’s Longer-Duration Employees.....	45
Compensation	46
Promotion.....	48
Professional Development.....	48
Retention.....	49
Summary.....	50

CHAPTER TEN

Assessment Criterion I: Appropriateness in Light of Complexities of the Workforce	51
Summary.....	52

CHAPTER ELEVEN

Assessment Criterion J: Sufficient Protections for Diversity in Promotion and Retention	55
Summary.....	58

CHAPTER TWELVE

Assessment Criterion K: Adequacy of Training.....	59
Summary.....	62

CHAPTER THIRTEEN

Assessment Criterion L: Process for Ensuring Employee Involvement.....	63
Summary.....	65

CHAPTER FOURTEEN

Conclusions 67
 Conclusions from Our 2012 Assessment 67
 Considerations for Future Assessments 68

APPENDIXES

A. Analysis of Survey Data 71
B. A Propensity Score Matching Exploration of AcqDemo’s Impact on Retention and Compensation of Unionized Employees 75
References 83

Figures

1.1.	AcqDemo End-of-Fiscal-Year Civilian Populations.....	5
2.1.	Age Distribution in AcqDemo Compared with Those in DoD and the Acquisition Workforce.....	13
2.2.	Years in Federal Service in AcqDemo Compared with Those in DoD and the Acquisition Workforce.....	14
2.3.	Educational Attainment in AcqDemo Compared with That in DoD and the Acquisition Workforce.....	14
2.4.	Annualized Basic Pay in AcqDemo Compared with That in DoD and the Acquisition Workforce.....	15
6.1.	Perceptions of Personnel System Flexibilities in Job Assignments.....	26
6.2.	AcqDemo and Comparison-Group Survey Respondents Have Similar Responses to Mission-Related Survey Items.....	27
6.3.	AcqDemo and Comparison-Group Survey Respondents Have Similar Views Related to Teamwork.....	27
7.1.	Supervisors Tend to Indicate No Basis to Judge AcqDemo Hiring Flexibilities.....	30
7.2.	Employees Have Mixed Views of AcqDemo Appointment Flexibilities.....	32
7.3.	AcqDemo Survey Respondents Are More Likely Than Those in the Comparison Group to Perceive a Link Between Contribution and Performance.....	33
7.4.	Supervisors Had Divergent Views About AcqDemo's Effect on Their Ability to Set Pay.....	34
7.5.	Employee Perceptions of Personnel System Fairness.....	39
8.1.	AcqDemo Survey Respondents Are as Likely as Those in the Comparison Group to Report Dialogue and Feedback.....	43
9.1.	AcqDemo 2008 and 2011 Populations, by Union Status.....	46
9.2.	AcqDemo 2008 and 2011 Populations, by Military Service.....	46
9.3.	The Reaction to AcqDemo's Impact on Pay Is Mixed.....	47
9.4.	AcqDemo Survey Respondents Are More Likely Than Those in the Comparison Group to Be Satisfied with Promotion Opportunities.....	49
9.5.	Evidence for AcqDemo's Impact on Retention Is Mixed.....	50
11.1.	Racial Diversity in AcqDemo Compared with That in DoD and the Acquisition Workforce.....	56
12.1.	AcqDemo Survey Respondents Reported Being More Satisfied Than Those in the Comparison Group with Information Received from Management and Their Organizations' Policies and Procedures.....	60
12.2.	Supervisors Are More Comfortable Than Those in the Comparison Group with the Contribution-Based Compensation and Appraisal System and More Satisfied with Information Provided by Management.....	61

B.1.	Percentage of September 30, 2008, Employees Still Employed by DoD.....	78
B.2.	Average Ratio of 2011 to 2008 Compensation Level, Conditional on Continued DoD Employment.....	79

Tables

S.1.	Legislatively Prescribed Assessment Criteria.....	xiv
1.1.	Legislatively Prescribed Assessment Criteria.....	3
1.2.	Legislatively Prescribed Assessment Criteria and the Data Sources We Used to Address Them	8
2.1.	Characteristics of AcqDemo’s Workforce as of September 30, 2011	12
7.1.	Survey Evidence of Changing Perceptions of AcqDemo Across Rating Cycles	36
10.1.	Education Levels and Favorability Toward AcqDemo	51
11.1.	Comfort with the Way the Appraisal System Is Administered.....	57
11.2.	Perceptions of Fairness in Compensation.....	57
11.3.	Satisfaction with Promotion Opportunities	58
11.4.	Plans for Retention	58
A.1.	Demographic Comparison of AcqDemo Population and Survey Sample	72
B.1.	AcqDemo Membership Logistic Regression Results	76
B.2.	Propensity Score Matching Diagnostics, Summary of Propensity Scores	77
B.3.	Propensity Score Matching Diagnostics, Paired T-Tests of Fit Variables.....	77
B.4.	2011 Retention Regressed on 2008 AcqDemo Status.....	79
B.5.	2011 Retention Regressed on 2008 AcqDemo Status, Racial, and Gender Variables....	80
B.6.	2011/2008 Income Ratio Regressed on 2008 AcqDemo Status	80
B.7.	2011/2008 Income Ratio Regressed on 2008 AcqDemo Status, Racial, and Gender Variables	80

Summary

The vast majority of U.S. Department of Defense (DoD) and, indeed, federal civilian employees work on the General Schedule (GS) personnel system. The GS system has 15 numbered grades (1 through 15) plus steps within each grade (1 through 10). However, some concerns have been raised about the GS system, including perceptions that poorly performing employees are tolerated for extended periods of time and that monetary rewards are not directly linked to performance.

In response to concerns of this nature, Congress has authorized some demonstration projects, in which additional flexibilities are provided, intending to produce better outcomes than if the employees were in the GS system. One such demonstration project, the DoD Civilian Acquisition Workforce Personnel Demonstration Project (AcqDemo), is the subject of this report. Implemented on February 7, 1999, AcqDemo was an opportunity to reengineer the civilian personnel system to meet the needs of the Acquisition, Technology, and Logistics workforce and to facilitate the fulfillment of the DoD acquisition mission.

Section 872(a)(1)(e) of the fiscal year (FY) 2011 National Defense Authorization Act (NDAA) required the Secretary of Defense to designate an independent organization to conduct two assessments of AcqDemo. The first of those assessments shall be completed not later than September 30, 2012; the second shall be completed not later than September 30, 2016. The Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics (OUSD[AT&L]), Human Capital Initiatives Office, which administers AcqDemo, asked the RAND Corporation to be the independent organization to conduct the first assessment.

Section 872(a)(1)(e) of the NDAA of FY 2011 also enumerates what criteria the assessment shall include. The required elements of the assessment are displayed in Table S.1.

Research Methodology

A compressed time frame limited the RAND project team's ability to engage in the primary data collection typical for such an assessment (e.g., survey, focus groups). Given this constraint, the study primarily drew on existing data sources, including a survey of the AcqDemo workforce and of a comparison, non-AcqDemo population; extensive AcqDemo program documentation; and data from the Defense Manpower Data Center (DMDC) describing AcqDemo employees. The RAND study team also conducted a series of interviews with subject-matter experts (SMEs).

The history of AcqDemo provides an analysis challenge. AcqDemo commenced in 1999. The population in the program increased through 2006. But then, in 2007, the vast majority of

Table S.1
Legislatively Prescribed Assessment Criteria

Criterion	Description
A	A description of the workforce included in the project.
B	An explanation of the flexibilities used in the project to appoint individuals to the acquisition workforce and whether those appointments are based on competitive procedures and recognize [veterans'] preferences.
C	An explanation of the flexibilities used in the project to develop a performance appraisal system that recognizes excellence in performance and offers opportunities for improvement.
D	The steps taken to ensure that such system is fair and transparent for all employees in the project.
E	How the project allows the organization to better meet mission needs.
F	An analysis of how the flexibilities in subparagraphs (B) and (C) are used, and what barriers have been encountered that inhibit their use.
G	Whether there is a process for—(i) Ensuring ongoing performance feedback and dialogue among supervisors, managers, and employees throughout the performance appraisal period; and (ii) Setting timetables for performance appraisals.
H	The project's impact on career progression.
I	The project's appropriateness or inappropriateness in light of the complexities of the workforce affected.
J	The project's sufficiency in terms of providing protections for diversity in promotion and retention of personnel.
K	The adequacy of the training, policy guidelines, and other preparations afforded in connection with using the project.
L	Whether there is a process for ensuring employee involvement in the development and improvement of the project.

SOURCE: Pub. L. 111-383, 2010, §872(a)(1)(e).

AcqDemo's employees were transferred into the National Security Personnel System (NSPS). However, in 2011, NSPS was terminated, and those employees and positions that had transferred out of AcqDemo into NSPS transferred back into AcqDemo.

As a result of this irregular history, the vast majority of AcqDemo's current employees have been in AcqDemo only fairly briefly. Hence, it is very hard to identify an "AcqDemo effect" because relatively few employees have been continuously in the program.

The demise of NSPS has "reset" AcqDemo. So, although we provide insights as to how AcqDemo is doing, our findings should be viewed as preliminary in light of the program's history.

We worked through each stipulated criterion. In this summary, we synopsise our results by criterion.

Criterion A: Workforce Description

DMDC data indicate that there were 15,250 DoD civilian employees in AcqDemo on September 30, 2011. Interestingly, only about 75 percent of these employees were in the acquisition workforce (AW) because organizations, not individuals, enter AcqDemo and organizations

bring along non-AW support employees. Almost 90 percent were nonunionized, and about half worked for the Army.

AcqDemo employees tend to be older, more experienced, more highly educated, and more highly paid than typical DoD civilian employees.

Criterion B: Explanation of Appointment Flexibilities

Upon hiring, AcqDemo employees are assigned to pay bands that are broader and therefore more flexible than those used in the GS system. AcqDemo also provides flexibility in options for appointments and movement of employees to different positions within a pay band. Appointments are based on competitive procedures and recognize veterans' preferences.

Criterion C: Explanation of Performance Appraisal Flexibilities

AcqDemo employees are annually rated against six factors: problem solving, teamwork and cooperation, customer relations, leadership and supervision, communication, and resource management. An employee's point total from these six factors is then compared with a benchmark derived from his or her base salary (with higher-paid employees being expected to attain higher point totals). Employees who perform at or above their expected point total are then eligible for pay increases and one-time payments.

Criterion D: Steps to Ensure Fairness and Transparency

The AcqDemo Program Office provides extensive training to both supervisors and employees in order to increase the program's transparency. There is a grievance process for employees who feel they have not been treated fairly. Given that there will always be employees new to AcqDemo, it is unlikely that AcqDemo will ever be fully transparent for all employees.

Criterion E: How the Project Helps Better Meet Mission Needs

Overall, evidence indicates that AcqDemo was carefully designed to facilitate meeting a variety of mission needs. Survey results suggest that AcqDemo employees were more likely than comparison-group employees to agree that their personnel system was flexible in terms of job assignments and classifications, but they also suggest that the respondents were no different in how well they understand their organization's mission or in their perceptions about group processes, such as cooperation and knowledge sharing. We could not determine the extent to which AcqDemo's features and procedures affected personnel-related outcomes, such as hiring or performance appraisal, nor did we evaluate whether AcqDemo actually helps or hinders an organization's ability to meet mission needs. One reason we could not make a more definitive assessment is that most employees and sites managed under AcqDemo have been in the project only a short time.

Criterion F: Application of Flexibilities and Barriers to Their Use

Most of the employees managed under AcqDemo are too new to the program to assess how flexibilities related to hiring, appointments, and performance have been used. For example, a notable proportion of survey respondents selected the “no basis to judge” option when asked for their opinions about AcqDemo’s flexibilities. Supervisors who did offer an opinion on their survey regarding AcqDemo’s hiring and appointment flexibilities tended to be positive about them. Supervisor views regarding performance appraisal flexibilities were more varied, however, and employees did not tend to believe that broad bands enhanced their career development or that AcqDemo enhanced their career opportunities more generally. Barriers to using AcqDemo flexibilities include a lack of familiarity with AcqDemo, budget constraints, pay band caps, and a perceived lack of fairness in AcqDemo’s performance appraisal system.

Criterion G: Process for Performance Appraisal Feedback

AcqDemo has formal processes for ensuring ongoing performance feedback and dialogue among supervisors, managers, and employees throughout the performance appraisal period. AcqDemo also has a formal process for setting timetables for performance appraisals. Survey data indicate no statistically significant difference between AcqDemo and GS employees in the likelihood of receiving feedback.

Criterion H: Impact on Career Progression

Data are not sufficient to evaluate thoroughly AcqDemo’s impact on career progression. Survey data on perceptions of effects on career progression are mixed. However, survey data provide leading indicators by allowing us to examine perceptions of career progression. AcqDemo employees were more likely than comparison-group employees to report being satisfied with opportunities for promotion and were more likely to report believing that their organization is retaining the highest-performing employees. AcqDemo employees were as likely as comparison-group employees to report being satisfied with pay.

Criterion I: Appropriateness in Light of Complexities of the Workforce

AcqDemo is believed to be appropriate because it is expected to increase the ability to compete with private-sector employers for high-quality workers and to enhance supervisors’ ability to make rapid adjustments in the fast-paced acquisition environment. In addition, AcqDemo civilian employees tend to have a higher level of education than typical DoD civilian employees, which can help to mitigate some of the complexity of the system. However, survey and interview data suggest that AcqDemo may not be fully appropriate for employees who fall at the top of the pay band or those who hold positions that are less visible or do not tie as tangibly to mission contribution.

Criterion J: Sufficient Protections for Diversity in Promotion and Retention

The federal government and DoD have a longstanding commitment to diversity in the workplace. Interview data and conference data suggest that sufficient protections have been put into place. However, the survey evidence is mixed. AcqDemo employee perceptions regarding promotion are more equitable by race and ethnicity than comparison-group GS employees, and plans to stay (retention) are more equitable across gender lines.

Criterion K: Adequacy of Training

There was a large-scale influx of employees into AcqDemo in 2011. There was a commensurate surge in training requirements. When questioned about training, interviewees reported that training was substantial and was perceived to be sufficient. However, a significant portion of survey respondents reported not being comfortable with the appraisal system, and Chapter Seven discusses barriers related to fairness and transparency. This suggests that additional training may be useful in certain areas.

Criterion L: Process for Ensuring Employee Involvement

There are mechanisms in place for ensuring employee involvement in the development and improvement of AcqDemo, including several oversight-oriented groups, methods to collect feedback directly from employees, and an annual conference for those responsible for implementing AcqDemo.

Conclusions

Although its calendar was legislatively prescribed, this is a notably poor time for an assessment of AcqDemo. After being sharply diminished in 2007–2010, the program was rejuvenated by an influx of employees in 2011 following the elimination of NSPS. Accommodating these new employees has been a major administrative challenge. It would have been more reasonable to evaluate AcqDemo using implementation-focused criteria or to employ the legislatively prescribed criteria in an assessment of a stable program in a steady state.

Conditional on the challenges inherent in evaluating such an unstable program, we find that AcqDemo rates well against many of the criteria specified in the FY 2011 NDAA. AcqDemo clearly adheres to DoD policies with respect to veterans' preferences. The AcqDemo Program Office has embarked on an extensive training program. Employee feedback has been solicited through multiple mechanisms. Interview and survey data suggest that many aspects of AcqDemo are perceived quite positively, including satisfaction with promotion opportunities among employees and positive feelings about hiring and appointment flexibilities among supervisors.

However, the perceived complexity of AcqDemo's personnel evaluation system has been a longstanding concern, though these concerns are partially mitigated by the fact that the AcqDemo workforce is generally well-educated and sophisticated. Survey data indicate that

some perceive AcqDemo's performance appraisal system as being administered unfairly, but, because not all respondents wrote comments in their survey, we do not know how widely that perception is held. Additionally, barriers that affect the ability for employees to be rewarded for their contributions, such as constrained budgets and pay band ceilings, present challenges.

The congressional mandate to reevaluate AcqDemo in 2016 offers an opportunity to address limitations encountered in this study. The longer persistence of the workforce in AcqDemo will allow for examination of longitudinal workforce data. We also offer considerations for the 2016 evaluation, including additional data that could be collected and analyzed, ways to improve the survey of the AcqDemo workforce and its comparison group, and quasi-experimental methods that can increase policymakers' confidence in the evaluation's results.

We are, on balance, sanguine about AcqDemo and how it is doing, most especially in light of the manifest challenges associated with nearly quintupling its population in one year. But that judgment is conditional and incomplete, awaiting more and better evidence.

Acknowledgments

We appreciate the research sponsorship of Garry Shafovaloff of Human Capital Initiatives, OUSD(AT&L), and AcqDemo program director James Irwin. We especially benefited from the role of deputy program director Darryl Burgan as our action officer.

We benefited from discussions with and assistance from our SMEs, whom we have not identified here in order to protect their confidentiality.

Project team members appreciated the opportunity to attend AcqDemo's "Strengthening the Acquisition Workforce" conference, which was held April 17–19, 2012.

Our RAND colleagues Lawrence M. Hanser and Harry J. Thie provided insightful and constructive reviews of an earlier version of this report.

Program director John D. Winkler and deputy program director Jennifer Lamping provided valuable feedback to the project team. Elizabeth Roth managed and analyzed DMDC civilian personnel files for the project. Laura Zakaras provided considerable assistance in organizing and improving the document. Marco Angrisani, Paco Martorell, Claude Messan Setodji, and Sinduja Srinivasan provided statistical assistance. We also appreciate assistance from our colleagues Susan Adler, Winfield A. Boerckel, Kurt Card, Christopher Dirks, Patrice Lester, Laura L. Miller, Anita Szafran, Donna White, and Benson Wong.

Of course, research findings, interpretations, and remaining errors are solely our responsibility.

Abbreviations

AcqDemo	Civilian Acquisition Workforce Personnel Demonstration Project
AW	acquisition workforce
CCAS	Contribution-based Compensation and Appraisal System
CIP	Contribution Improvement Plan
DAWIA	Defense Acquisition Workforce Improvement Act
DMDC	Defense Manpower Data Center
DoD	U.S. Department of Defense
EARC	Evaluation and Assessment Review Committee
FY	fiscal year
GS	General Schedule
LabDemo	Science and Technology Reinvention Laboratory
MBO	management by objectives
NDAA	National Defense Authorization Act
NH	business management and technical management professional
NJ	technical management support
NK	administrative support
NPR	Normal Pay Range
NSPS	National Security Personnel System
OCS	overall contribution score
OPM	Office of Personnel Management
OUSD(AT&L)	Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics
PRD	Position Requirements Document
RIF	reduction in force

SME	subject-matter expert
SPL	Standard Pay Line
TRAC	Training Review and Advisory Committee

Introduction

The vast majority of U.S. Department of Defense (DoD) and, indeed, federal civilian employees work on the General Schedule (GS) personnel system.¹ The GS system has 15 numbered grades and ten steps within each grade. Under the Classification Act of 1949 (Pub. L. 81-429), the GS system was developed with the goal of establishing internal equity for federal employees. James (2002) defines *internal equity* as a fairness and consistency criterion aimed at ensuring that each job is compensated according to its relative place in a single hierarchy of positions. The GS system's creators used work-level descriptions to extend a central job evaluation system to all white-collar positions and merged several schedules (James, 2002).

Some concerns have been raised about the GS system. For instance, the U.S. General Accounting Office (1990) examined challenges in dealing with poorly performing employees, finding that the government has had to tolerate less-than-fully-successful performance for extended periods of time. That study presented options, including legislation to link pay to performance more closely for GS employees. Although the public sector has been using pay-for-performance systems for decades (see, for example, Brady's 1973 exposition on the use of management by objectives, or MBO, in the U.S. Department of Health, Education, and Welfare²), the perception existed that additional opportunities to strengthen the link between performance and compensation remained.

The U.S. General Accounting Office (1993) argued that agencies need greater flexibility in designing their performance management systems. Monetary rewards were not believed to be directly linked to performance. The study noted that the Office of Personnel Management (OPM) was considering ways to strengthen the link between pay and performance for GS employees.

In response to such concerns about the GS system, Congress authorized some "demonstration" projects that provide additional flexibilities, with the goal of producing better outcomes than if the employees were in the GS system. These demonstrations, which are limited in size and require periodic reauthorizations, are inherently trials, i.e., Congress has not com-

¹ According to Defense Manpower Data Center (DMDC) civilian personnel data, 521,935 of 788,289 civilian employees (66 percent of DoD employees) on September 30, 2011, were covered by the GS system. Another 138,480 (18 percent) were covered by various blue-collar, e.g., wage-grade, systems. By contrast, the 15,250 employees in the Civilian Acquisition Workforce Personnel Demonstration Project (AcqDemo) represented fewer than 2 percent of DoD civilian employees on September 30, 2011.

² MBO is a goal-setting approach to employee motivation pioneered by Drucker (1954). MBO was one of the first widely used personnel management techniques in which the attainment of specific, long-term goals was recognized and rewarded. Gibson and Tesone (2001) and Miller and Hartwick (2002) suggest that MBO's popularity has waned and, as originally envisioned, may be less appropriate in today's more volatile work environment. Nevertheless, some elements of MBO are still applied in private and public sector management practices.

mitted to permanent implementation of these approaches but is instead testing the approaches to see whether they prove to be beneficial. One such demonstration project, AcqDemo, is the subject of this report.³

The National Defense Authorization Act (NDAA) for Fiscal Year (FY) 1996, as amended by §845 of the NDAA for FY 1998, allowed DoD, with approval of OPM, to conduct a personnel demonstration project within its civilian acquisition workforce (AW). AcqDemo was implemented on February 7, 1999, in accordance with 64 *Fed. Reg.* 1426 (OPM, 1999). AcqDemo was an opportunity to reengineer the civilian personnel system to meet the needs of the Acquisition, Technology, and Logistics workforce and to facilitate the fulfillment of the DoD acquisition mission.

It is not surprising that the acquisition workforce was granted such a personnel demonstration project. Since the enactment of the Defense Acquisition Workforce Improvement Act (DAWIA) of 1990 (Pub. L. 101-510), DoD has strived to professionalize a workforce the 1986 President's Blue Ribbon Commission on Defense Management (the Packard Commission) described as "undertrained, underpaid, and inexperienced" (p. 65). The U.S. General Accounting Office issued a series of reports on these efforts, e.g., U.S. General Accounting Office (1996).

The AcqDemo Program Office (2006) provided an evaluation of AcqDemo as of that year. The report suggested that AcqDemo succeeded in retaining high contributors and in increasing the separation rates of low contributors. The report's authors also noted increased customer and workforce satisfaction.

Section 872 of the NDAA for FY 2011 extended AcqDemo authority from FY 2012 to FY 2017. Section 872(a)(1)(e) of the FY 2011 NDAA also required the Secretary of Defense to designate an independent organization to conduct two assessments of AcqDemo, the first of which was to be completed not later than September 30, 2012, and the second not later than September 30, 2016. Human Capital Initiatives within the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics (OUSD[AT&L]), which administers AcqDemo, asked the RAND Corporation to be the independent organization to conduct the first assessment. RAND has undertaken previous research on the acquisition workforce, including Gates, Keating, Jewell, et al. (2008) and Gates, Keating, Tysinger, et al. (2009). RAND has also undertaken previous workforce demonstration program evaluations, including a series of evaluations of the PACER SHARE Productivity and Personnel Management Demonstration project at the Sacramento Air Logistics Center. See, for instance, Orvis, Hosek, Mattock, Haigazian, et al. (1990) and Orvis, Hosek, Mattock, Mazel, et al. (1993).

³ There are other personnel demonstration projects, such as the Science and Technology Reinvention Laboratories (known as STRLs, or LabDemo). These other demonstration projects tend to be similar to AcqDemo in that they delegate and streamline the position classification and assignment processes, give managers a wider range of applicants and flexibility in how they set pay, link compensation to employee contribution to the mission, and create processes to reward high contributors and facilitate improvement for low contributors. See, for instance, 76 *Fed. Reg.* 8530 and 75 *Fed. Reg.* 77380 (Office of the Deputy Under Secretary of Defense for Civilian Personnel Policy, 2011, 2010).

Purpose

This assessment is intended to provide a preliminary account of how well AcqDemo is performing relative to a legislatively prescribed set of criteria. The elements of the assessment mandated by Congress are listed in Table 1.1 (Pub. L. 111-383, §872[a][1][e]).

Research Approach

Analytic Challenges

Our research approach was heavily influenced by three factors:

- RAND had a 3.5-month time frame during which to conduct its independent assessment.
- The workforce managed under the AcqDemo project almost quintupled in 2011, growing from 3,069 employees at the end of 2010 to 15,250 employees at the end of 2011.
- The employees managed under the AcqDemo project across multiple rating cycles constitute a relatively small and somewhat unique group.

Table 1.1
Legislatively Prescribed Assessment Criteria

Criterion	Description
A	A description of the workforce included in the project.
B	An explanation of the flexibilities used in the project to appoint individuals to the acquisition workforce and whether those appointments are based on competitive procedures and recognize [veterans'] preferences.
C	An explanation of the flexibilities used in the project to develop a performance appraisal system that recognizes excellence in performance and offers opportunities for improvement.
D	The steps taken to ensure that such system is fair and transparent for all employees in the project.
E	How the project allows the organization to better meet mission needs.
F	An analysis of how the flexibilities in subparagraphs (B) and (C) are used, and what barriers have been encountered that inhibit their use.
G	Whether there is a process for—(i) Ensuring ongoing performance feedback and dialogue among supervisors, managers, and employees throughout the performance appraisal period; and (ii) Setting timetables for performance appraisals.
H	The project's impact on career progression.
I	The project's appropriateness or inappropriateness in light of the complexities of the workforce affected.
J	The project's sufficiency in terms of providing protections for diversity in promotion and retention of personnel.
K	The adequacy of the training, policy guidelines, and other preparations afforded in connection with using the project.
L	Whether there is a process for ensuring employee involvement in the development and improvement of the project.

SOURCE: Pub. L. 111-383, 2010, §872(a)(1)(e).

With respect to the first factor, RAND's research contract with OUSD(AT&L) commenced on February 16, 2012. The first draft report was required to be delivered by June 1, 2012, with a revised, peer-reviewed version due by July 13, 2012. This compressed time frame limited our ability to engage in the primary data collection we normally would have conducted for such an assessment and to issue requests for administrative data. With more time, we would have conducted interviews with a sample of supervisors, pay pool managers, data maintainers, and human resource professionals representing different components and sites; interviews or focus groups with demographically diverse employees managed under AcqDemo, again from different components and sites; and a survey of employees and supervisors. These efforts would have yielded information about attitudes and perceptions that would inform the AcqDemo assessment for several criteria (e.g., criterion F on barriers, criterion K on the adequacy of preparations intended to inform AcqDemo use). We could not engage in these efforts in large part because of the approval processes required for large-scale data collection efforts, including human subject protection and DoD licensing. Obtaining these approvals alone could take more than the full time frame allotted for our analysis. Fortunately, as we discuss later, other data sources were available that did provide us with some information about attitudes and perceptions, and we did engage in a limited number of interviews.

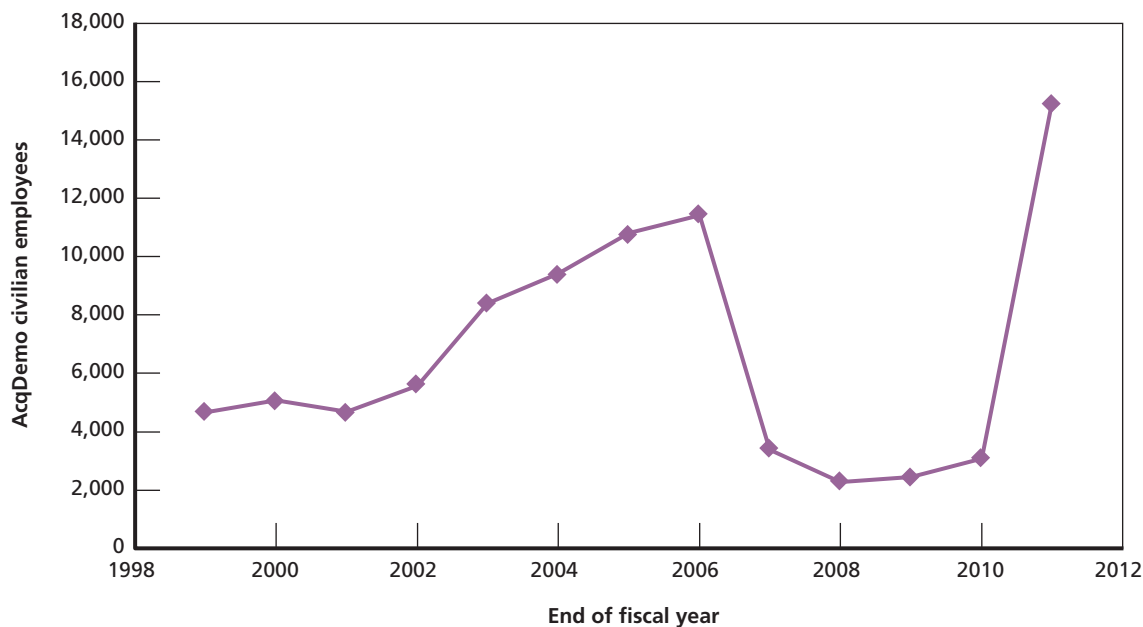
We also had access to civilian personnel inventory snapshots from DMDC. These end-of-fiscal-year files tabulated who was employed by DoD, whether they were in AcqDemo, their organizations, their pay levels, and other demographic information. One can infer accession into and attrition out of AcqDemo and DoD employment by comparing different years' snapshots.

We did not, however, have access to other data that might have assisted us, such as Equal Employment Opportunity grievances and individual employees' performance ratings.

Our research approach was also influenced by two interrelated factors, both of which stem from AcqDemo's history. Launched in 1999, AcqDemo increased its population to 11,416 in September 2006. But, in 2007, the vast majority of AcqDemo's employees were transferred into the National Security Personnel System (NSPS). AcqDemo then persisted for four years with roughly 2,000 to 3,000 employees, most of whom were unionized and employed by the Army. However, in 2011, NSPS was eliminated, and those organizations that had transferred out of AcqDemo into NSPS transferred back into AcqDemo. This meant that the AcqDemo workforce almost quintupled in 2011, growing from 3,069 employees to 15,250 employees, its largest size ever (see Figure 1.1). The timing immediately before our assessment was a period of great transition during which AcqDemo, a multifaceted personnel system, was implemented across many locations, and organizations were guided through their first performance appraisal cycle under the new system. Thus, we were unable to conduct an assessment of AcqDemo under "steady-state" conditions, which would be the true test of how AcqDemo's flexibilities have been used and what influence they have had on personnel outcomes and organizations' ability to better meet mission needs. As Stecher and his colleagues noted in their analysis of performance-based systems in the public sector, "[a]n evaluation should focus on outputs only after performance measures and incentives have been in place long enough to influence behavior" (Stecher et al., 2010, p. xxviii).

This irregular history posed an additional limitation on our analysis: The employees managed under the AcqDemo project across multiple performance appraisal cycles constitute a relatively small and somewhat unusual group. The vast majority of AcqDemo's current employees have been in AcqDemo continuously for only a year or less (though many have past experience

Figure 1.1
AcqDemo End-of-Fiscal-Year Civilian Populations



SOURCES: DMDC civilian data files, end-of-fiscal-year snapshots.

RAND TR1286-1.1

in AcqDemo before they joined NSPS). Hence, it is very hard to identify an “AcqDemo effect” (i.e., how outcomes would have been different if the employees had not been in AcqDemo) because relatively few employees have been continuously “treated” for a long period.

Also, those employees who stayed in AcqDemo and did not leave for NSPS are different from those who left. In particular, as we discuss in Chapter Nine, employees who stayed were disproportionately likely to be unionized and Army employees. Hence, although these individuals have a longer history of “treatment” in AcqDemo, their experiences are not likely to be representative of a “typical” AcqDemo employee.

In light of these factors, more definitive calibration of the effects of AcqDemo will need to await a future assessment based on a longer history of stability in the program. The demise of NSPS has “reset” AcqDemo, i.e., brought in an influx of new employees. So, although we provide insights as to how AcqDemo is doing, our findings should be viewed as preliminary in light of the program’s history.

Data Sources and Analysis

Within the constraints noted in the previous section, we tried to obtain all data available as of the spring of 2012, both subjective and objective, to inform our analysis. Ultimately, we used four types of data sources in our assessment, described in more detail in this section:

- program-related materials
- 2012 AcqDemo survey conducted by SRA International
- interviews with AcqDemo program experts
- DMDC civilian personnel data files.

Some information was available through publicly available sources, such as *Federal Register* notices; others, such as the DMDC civilian personnel data file, were already available at RAND and simply required data-use agreements; and a third set of sources were acquired in close coordination with the AcqDemo Program Office, which promptly responded to all of our data requests and identified additional data sources of potential value to our assessment.

Program-Related Materials

The first data source on which we relied for our analysis was a series of program-related materials: AcqDemo operating guidance, AcqDemo training materials, archival materials, and materials from the April 2012 AcqDemo 2.0 conference. AcqDemo operating guidance included 64 *Fed. Reg.* 1426 (OPM, 1999); the AcqDemo operating procedures (AcqDemo Program Office, 2003) in use at the time of our assessment; the Evaluation and Assessment Review Committee (EARC) charter; and the Training Review and Advisory Committee (TRAC) charter. AcqDemo training materials consisted of training briefings for different target audiences (e.g., senior leadership, employees, supervisors) and usage manuals. Archival materials included those related to the 2006 AcqDemo summative evaluation report (AcqDemo Program Office, 2006), and the minutes from 13 AcqDemo Executive Council meetings (spanning March 2011 through January 2012) and five EARC meetings (spanning April 2011 through March 2012), as well as seven site historian reports submitted to the AcqDemo Program Office in the 2011–2012 time frame. Finally, we attended the April 2012 AcqDemo 2.0 conference and obtained copies of all the presentations, which included program overview information presented by the AcqDemo Program Office and its lead contractor, SRA International; seven organization-specific lessons-learned briefings that covered successes and challenges experienced during the transition period, the first performance appraisal cycle, and current operations; and presentations of recommended design modifications.

The RAND project team reviewed all these materials, synthesized meeting minutes and site historian reports into summary documents, and engaged in a series of discussions to determine which documents informed each assessment criterion and how.

2012 AcqDemo Survey

Although we did not have time to develop, field, and analyze a survey of the AcqDemo workforce, before RAND was contracted to conduct its assessment, efforts were already under way to administer such a survey. Under the leadership of the program director and in consultation with the Executive Council, the EARC, and SRA International, a survey design was developed that included plans to survey the entire AcqDemo workforce, as well as a set of organizations not under AcqDemo that would serve as a comparison group.⁴ The survey instruments included general questions about demographics, group dynamics, and career development that were presented to both groups, as well as a series of AcqDemo-specific questions that were included only in the survey intended for the AcqDemo workforce. Questions tended to be multiple-choice, making use of Likert scales with a neutral midpoint and frequently a “no basis

⁴ The comparison-group respondents came from the Air Force Air Armament Center and from four Army Test and Evaluation Command locations: the Aberdeen Test Center, Dugway Proving Ground, Yuma Proving Ground, and White Sands Missile Range.

to judge” option,⁵ but they also included a small number of open-ended questions for write-in responses.

The web-based survey was fielded during January through April 2012. The survey was initially intended to close in mid-February 2012 but was left open longer in order to increase the survey response rate. Ultimately, 5,256 AcqDemo employees and 700 employees from comparison-group organizations submitted a survey, corresponding to overall response rates of 34 percent and 16 percent, respectively. SRA International provided us with survey instruments, as well as the data, for each survey. We received the full data files, including write-in text responses to open-ended questions.

Upon receipt of the survey data files, we first assessed how representative the survey was of the AcqDemo workforce. In many ways, we found that the survey sample was quite a close match to the AcqDemo population. The notable exceptions were that the survey sample tended to have a higher level of education than that of the full AcqDemo workforce, the Marine Corps was underrepresented in the survey and DoD agencies overrepresented, and the proportion of supervisors taking the survey was slightly greater than that in the overall AcqDemo workforce. To account for these differences between respondents and the AcqDemo population, we applied weights to survey responses that essentially leveled out the skewed responses in terms of education, organization, and supervisor status. Ultimately, we analyzed both the quantitative and the qualitative data from the survey. We regarded findings as significant if they were statistically significant at the 5-percent level ($p < 0.05$). For details about how we conducted these steps of the analysis, see Appendix A.

Interviews

We conducted interviews with AcqDemo Program Office staff, the contractors tasked with program support and training development (SRA International and Rouse Consulting, respectively), members of the Executive Council, members of the EARC, and human resource professionals from an additional AcqDemo location not represented in other interviews. In this report, we often refer to these interviewees as subject-matter experts (SMEs). In total, from February to May 2012, we conducted six interviews with 15 people. Topics varied depending on the expertise and backgrounds of the interviewees but frequently included questions that mapped to the 12 criteria (e.g., “how have AcqDemo’s hiring flexibilities been used?”) and more general questions (e.g., “what are AcqDemo’s strengths and weaknesses?”). Detailed notes were taken during each interview, and the notes were incorporated into our analysis of different criteria.

Defense Manpower Data Center Civilian Personnel Data

We analyzed annual end-of-fiscal-year snapshots of the DoD civilian workforce provided by DMDC. These annual snapshots include information about each employee’s demographics, location, job description, income, and other descriptive variables. Of particular interest, we can identify those employees in the three pay plans (business management and technical management professional [NH], technical management support [NJ], and administrative support

⁵ Several different five-point Likert scales were used in the survey: one ranging from “strongly satisfied” to “strongly dissatisfied,” one ranging from “very positive” to “very negative,” and a third ranging from “strongly agree” to “strongly disagree.” The satisfaction and agreement scales also included a “no basis to judge” alternative.

[NK]) associated with AcqDemo.⁶ We can also trace individual employees over time, e.g., as an employee enters and exits AcqDemo.

Taken together, these varied data sources, qualitative and quantitative, objective and subjective, provide the foundation for our analysis. Table 1.2 identifies the sources we used to address the different criteria.

Organization

The report is organized around the 12 criteria listed in Tables 1.1 and 1.2, with one chapter for each criterion. We conclude with a set of overarching observations about AcqDemo and a dis-

Table 1.2
Legislatively Prescribed Assessment Criteria and the Data Sources We Used to Address Them

Criterion	Label	Program-Related Materials	AcqDemo Conference	AcqDemo Survey Multiple-Choice Questions	AcqDemo Survey Written Responses	RAND Interviews	DMDC Civilian Personnel Data
A	Workforce description						x
B	Explanation of appointment flexibilities	x				x	
C	Explanation of performance appraisal flexibilities	x				x	
D	Steps to ensure fairness and transparency	x			x	x	
E	How the project helps organizations better meet mission needs	x	x	x		x	
F	Application of flexibilities and barriers to their use		x	x	x	x	
G	Process for performance appraisal feedback	x	x	x	x	x	
H	Impact on career progression		x	x	x	x	x
I	Appropriateness in light of complexities of the workforce			x	x	x	x
J	Sufficient protections for diversity in promotion and retention		x	x		x	x
K	Adequacy of training	x	x	x		x	
L	Process for ensuring employee involvement	x	x	x		x	

⁶ The NH pay plan is for business management and technical professional personnel. The NJ pay plan is for technical management support personnel, i.e., “techs.” The NK pay plan is for administrative support personnel. See AcqDemo Program Office (Fall 2011 senior leader briefing, slide 8).

cussion of the assessment of the program scheduled for 2016. Appendix A provides additional detail about our research approach, and Appendix B features an exploratory analysis of career outcomes of the unionized employees managed under AcqDemo at the end of FY 2008.

Assessment Criterion A: Workforce Description

A. A description of the workforce included in the project.

As pointed out in Chapter One, AcqDemo had 15,250 DoD civilian employees on September 30, 2011, far more than it had ever had before. In this chapter, we utilize the DMDC civilian personnel data to describe the characteristics of that workforce and draw comparisons with the overall DoD civilian workforce.

Table 2.1 lists some key characteristics of the 2011 AcqDemo workforce:

- It has considerably more men than women.
- It consists largely of business management and technical management professional personnel, i.e., in the NH pay plan.
- It is 11 percent unionized.
- It consists of a mix of DoD and military service civilian employees, although the Army predominates, with about 50 percent of the workforce. (AcqDemo does not cover uniformed military personnel.)
- One-quarter of employees are not in the acquisition workforce.

Organizations enter AcqDemo, bringing along both AW employees and their associated support employees who are typically not in the acquisition workforce. The phrasing of criterion B (an explanation of the flexibilities used in the project to appoint individuals to the acquisition workforce) would seem to indicate that being in the AcqDemo implies being in the acquisition workforce. In fact, being in the acquisition workforce is neither a necessary nor a sufficient condition for being in AcqDemo.¹

Figure 2.1 provides detail on how employees managed under AcqDemo compare in terms of age with both DoD civilian employees as a whole and with the acquisition workforce. In Figure 2.1 and the figures that follow in this chapter, the DoD civilian employee and AW comparison groups include the full population for each workforce. This means that not only are GS employees and full-time employees included but also Wage Grade, Senior Executive Service, and part-time employees.

As the figure shows, AcqDemo employees tend to be somewhat older than typical DoD civilian employees. AcqDemo has fewer employees in their 20s, 30s, and early 40s than seen in the DoD civilian labor force but more employees between 45 and 60. The AcqDemo workforce is also somewhat older than the acquisition workforce.

¹ Indeed, the 11,262 AW civilians in AcqDemo represented only about 8.3 percent of the 136,066 civilians in the acquisition workforce on September 30, 2011.

Table 2.1
Characteristics of AcqDemo's Workforce as of September 30, 2011

Category	Characteristic	Number of Employees	Percentage of Employees
Gender	Male	9,517	62.4
	Female	5,733	37.6
Pay plan	NH	14,186	93.0
	NK	682	4.5
	NJ	382	2.5
Bargaining-unit status	Eligible but not in	7,445	48.8
	Ineligible	5,995	39.3
	In a bargaining unit	1,687	11.1
	Status in transition	123	0.8
Military service	Army	7,621	50.0
	Air Force	2,892	19.0
	DoD agency	2,504	16.4
	Marine Corps	2,021	13.3
	Navy	212	1.4
Workforce	Acquisition	11,262	73.8
	Nonacquisition	3,988	26.2
Total		15,250	

SOURCE: DMDC civilian data file.

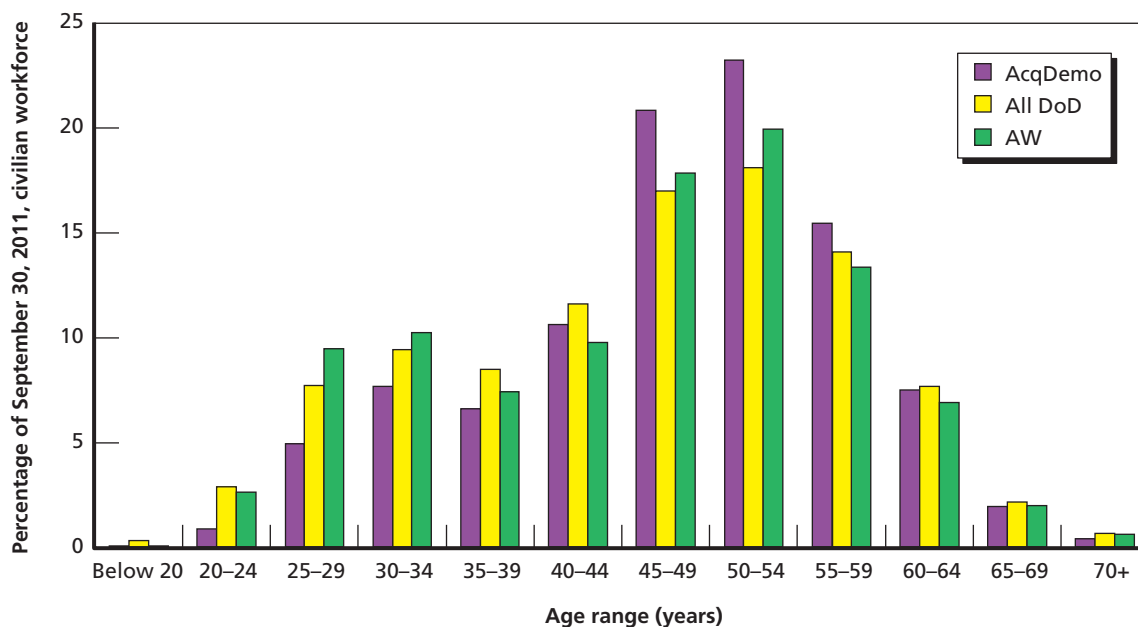
Likely related to this age distribution is the fact that AcqDemo employees tend to have more years of federal service than the average for the DoD civilian workforce (see Figure 2.2). The AcqDemo and AW experience profiles are similar to one another.

As shown in Figure 2.3, AcqDemo civilian employees have higher education levels than the DoD civilian workforce overall.² However, the AcqDemo workforce has a higher percentage of its employees lacking a bachelor's degree than observed in the acquisition workforce, perhaps because of inclusion of some non-AW employees in AcqDemo.

AcqDemo civilian employees earn higher salaries than typical DoD civilian employees (see Figure 2.4). They are also more highly paid than typical AW employees. Likely related to this compensation distribution is the fact that AcqDemo employees tend to have more years of federal service and higher education levels than the average for the DoD civilian workforce. In addition, the AcqDemo workforce includes a greater proportion of supervisors and a lower proportion of bargaining-unit employees than the DoD civilian workforce. Figure 2.4 is based

² As mentioned by Keating et al. (2010) (in the context of Air Force optometrists alleged to have only undergraduate degrees), education variables have a reputation for being underreported in DoD personnel-data systems. Hence, these recorded educational attainment levels should be viewed as lower bounds. However, the general finding that AcqDemo civilians are more highly educated than typical DoD civilians still holds true; that observation, for example, was repeatedly noted in our SME interviews.

Figure 2.1
Age Distribution in AcqDemo Compared with Those in DoD and the Acquisition Workforce



SOURCE: DMDC civilian data file.

RAND TR1286-2.1

on the annualized basic pay amount variable in the DMDC civilian data file, and it excludes AcqDemo, DoD, and AW employees who were receiving retained pay as of September 30, 2011.³ U.S. Office of Personnel Management (undated [a]) discusses pay retention for employees formerly covered by NSPS.

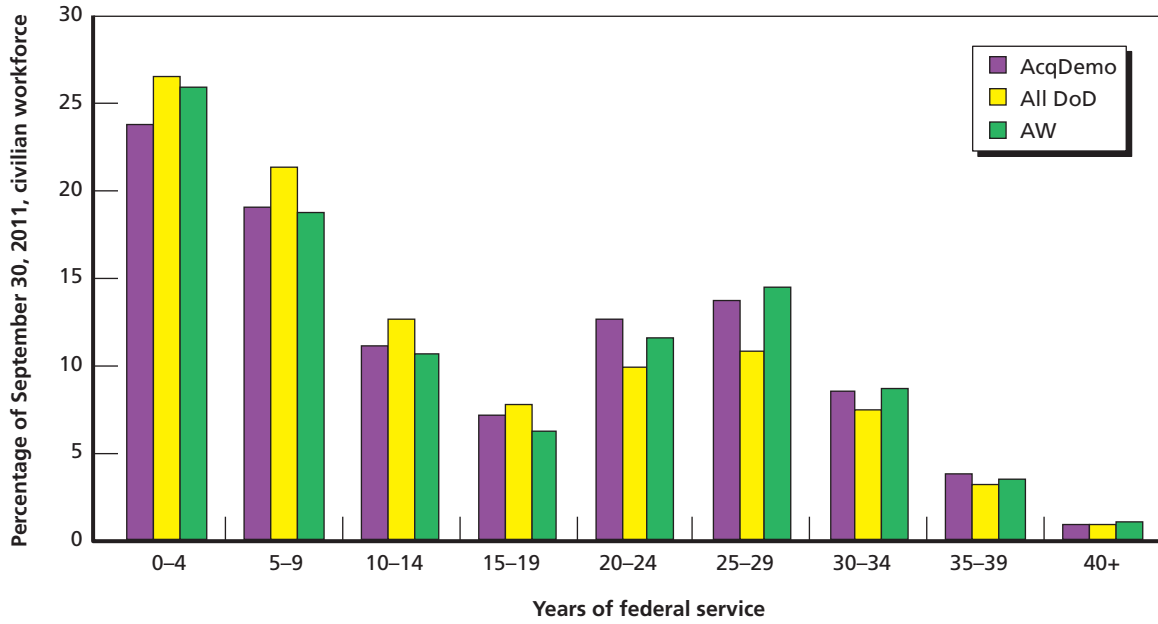
Summary

According to DMDC data, there were 15,250 DoD civilian employees in AcqDemo on September 30, 2011. Most were in the NH, business management and technical management professional, pay plan. Eleven percent were in bargaining units, i.e., unionized. About half of AcqDemo's employees were employed by the Army, with most of the rest in the Air Force, DoD agencies, and the Marine Corps. Only about 75 percent of employees in AcqDemo were in the acquisition workforce. Organizations enter AcqDemo, bringing along both their AW employees and associated, typically support, employees, who need not be in the acquisition workforce.

AcqDemo employees tend to be older, more experienced, more highly educated, and more highly paid than typical DoD civilian employees. In comparison to the acquisition workforce, AcqDemo employees are older and more highly paid but have similar experience in

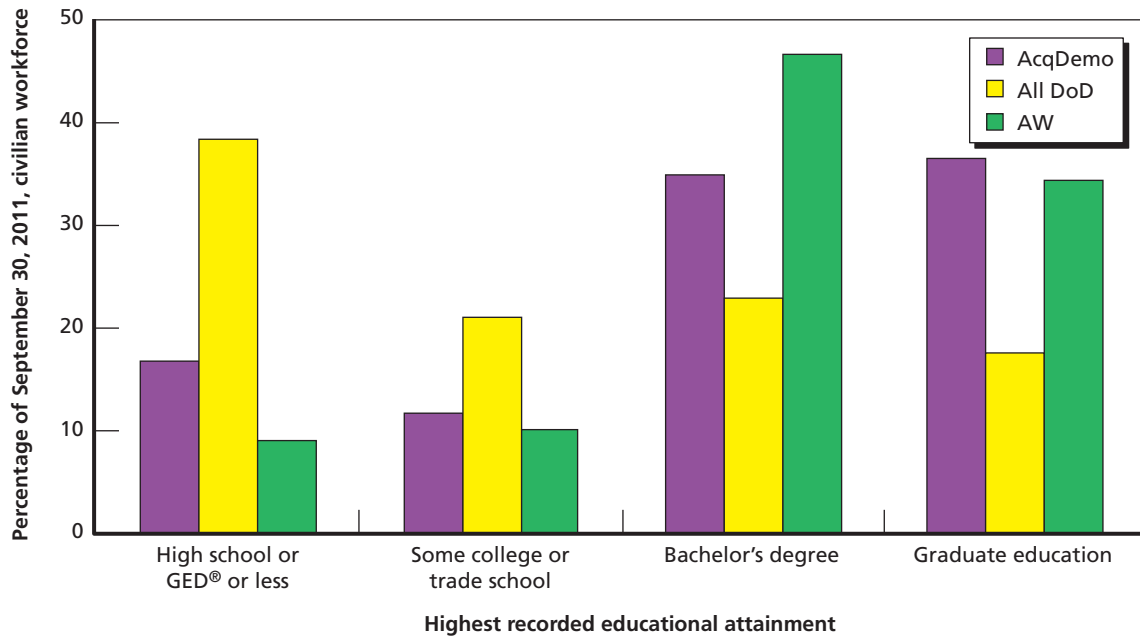
³ Experts at SRA International informed RAND that the DMDC-provided annualized basic pay amount for employees receiving retained pay also includes locality pay, whereas locality pay is not included for employees not receiving retained pay. We therefore exclude from Figure 2.4 the 1,806 AcqDemo, 38,882 DoD, and 8,094 AW employees who were receiving retained pay.

Figure 2.2
Years in Federal Service in AcqDemo Compared with Those in DoD and the Acquisition Workforce



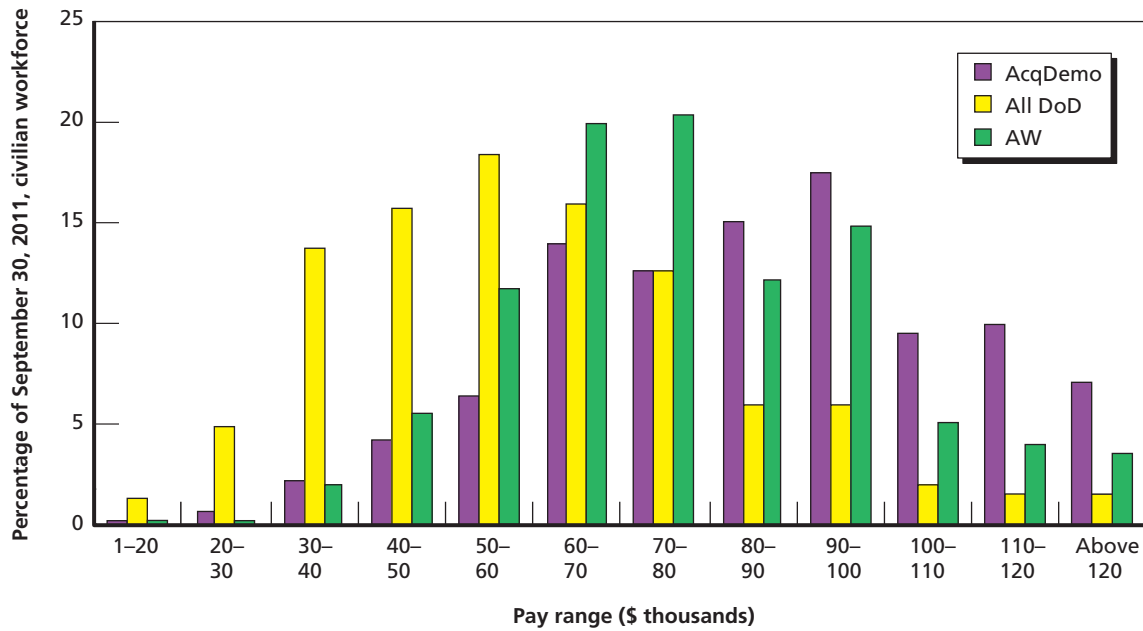
SOURCE: DMDC civilian data file.
 RAND TR1286-2.2

Figure 2.3
Educational Attainment in AcqDemo Compared with That in DoD and the Acquisition Workforce



SOURCE: DMDC civilian data file.
 RAND TR1286-2.3

Figure 2.4
Annualized Basic Pay in AcqDemo Compared with That in DoD and the Acquisition Workforce



SOURCE: DMDC civilian data pay file.
 NOTE: Excludes employees receiving retained pay.
 RAND TR1286-2.4

federal service. The proportion of AcqDemo employees holding a bachelor’s degree is notably lower than that for the acquisition workforce, likely because of the inclusion of nonacquisition support staff in AcqDemo.

Assessment Criterion B: Explanation of Appointment Flexibilities

B. An explanation of the flexibilities used in the project to appoint individuals to the acquisition workforce and whether those appointments are based on competitive procedures and recognize [veterans'] preferences.

The AcqDemo program includes some recruitment and appointment flexibilities designed to improve managers' ability to address dynamic mission needs.¹ These flexibilities also ensure that positions remain competitive with private industry to allow for recruitment of the best possible candidates. Although the expansion of expedited hiring has improved the appointment process across the federal government, AcqDemo continues to provide features that facilitate the appointment process.

All employees covered by AcqDemo are classified into one of three career paths: business management and technical management professional (NH), technical management support (NJ), and administrative support (NK). The NH and NJ career paths have four pay bands, while the NK career path has three pay bands. These bands are pegged to GS salaries and provide employees with the opportunity to earn a salary anywhere within the band into which they fall. This broad band structure for pay allows high-contributing employees the potential for faster growth in compensation than the standardized GS step model. As with employees in the GS system who have attained step 10, for AcqDemo employees who reach the top of a pay band, promotion to an open position in the next pay band is necessary to achieve additional salary increases. Although these pay band–constrained employees do not qualify for permanent salary increases, they do remain eligible for performance awards.

In hiring new employees from outside AcqDemo, the delegated examining process eliminates the rule of three² and allows more candidates to be examined for each position. Candidates are rated from 70 to 100 according to benchmarks specific to the position requirements and placed in one of three groups: basically qualified (70 to 79), highly qualified (80 to 89), and superior (90 and above). All candidates in the highest group will be certified; if the number of candidates in the highest group is insufficient, then subsequent groups of candidates will be considered. Veterans receive an additional five to ten points in the rating process. A separate Scholastic Achievement Authority process allows candidates with special academic achievements to be considered, with veterans receiving preference in ordering among scholastic achievement candidates.

¹ This chapter draws on information from *DoD Civilian Acquisition Workforce Personnel Demonstration Project Operating Procedures* (2003), AcqDemo training materials (AcqDemo Program Office, fall 2011), and 64 *Fed. Reg.* 1426 (OPM, 1999).

² Under the so-called rule of three, hiring selection must be made from the three highest-rated eligible candidates who are available for the job. See OPM, undated (b).

AcqDemo provides three appointment options. *Permanent appointments* are career and career-conditional appointments. *Temporary limited positions* are one-year positions, and *modified terms* allow for five-year positions based on locally approved extensions plus one year. Every new hire undergoes a one-year probationary period, during which the employee must demonstrate adequate contribution. An employer can extend this probationary period for an employee in the NH career path beyond a year (equal to the length of any educational or training assignment that places the employee outside normal supervisor review) to allow the supervisor time to sufficiently and objectively evaluate an employee's contribution. Finally, AcqDemo provides the option via its Voluntary Emeritus Program to offer retired or separated individuals the opportunity to continue working after accepting retirement or buy-out opportunities.

For employees converted into AcqDemo from other government pay plans, first-level supervisors are responsible for determining position requirements, developing a Position Requirements Document (PRD), and providing classification recommendations. The career paths and broad band descriptors are the sole criteria for classifying positions within the various pay bands. An employee who is not satisfied with his or her classification can file a formal classification appeal. An employee who is involuntarily placed, not because of performance or conduct, in a pay band with a range that falls below his or her previous salary is placed onto retained pay status. These employees continue to receive their pre-AcqDemo salary but are unable to qualify for additional salary increases based on contribution or performance.

The broad bands provide significant flexibility in allowing management to reassign employees to new positions within the AcqDemo system. In many cases, employees can be reassigned within the same broad band level without changes in pay or job description. However, changes to employee broad band or career path typically require the employee to apply for a competitive position. Salary movement within a broad band is determined solely by the contribution of the employee.

In Chapter Four, we describe the process for determining how contributions translate to salary changes.

Summary

AcqDemo uses a pay banding system in which an employee is hired into a band with considerable flexibility for pay increases to the top of his or her band. Appointments are based on competitive procedures and recognize veterans' preferences. AcqDemo provides three appointment options: permanent appointments, temporary limited (one-year) positions, and modified terms that allow for five-year positions based on locally approved extension plus one year.

Assessment Criterion C: Explanation of Performance Appraisal Flexibilities

C. An explanation of the flexibilities used in the project to develop a performance appraisal system that recognizes excellence in performance and offers opportunities for improvement.

AcqDemo's Contribution-based Compensation and Appraisal System (CCAS) is intended to provide an equitable and flexible method for evaluating and compensating the workforce.¹ By linking compensation to an individual's contribution to the mission, CCAS provides incentives for employees to improve performance and contributions and allows supervisors to work closely with employees to develop a clear line of accountability for the work being performed and its contribution to mission and goals of the organization. By rewarding high contributors and withholding incentives from low contributors, CCAS is expected to generate a high-contributing workforce with employees motivated to maximize productivity in support of the mission.

AcqDemo employees are annually rated against six factors under CCAS: problem solving, teamwork and cooperation, customer relations, leadership and supervision, communication, and resource management. Descriptors and discriminators specific to the three career paths and broad band levels serve as the rubric by which ratings are determined. An employee's total compensation level is based on a comparison of his or her overall contribution score (OCS), i.e., his or her realized point total, against an expected point total for an employee with that level of base compensation according to the Standard Pay Line (SPL). Employees with higher base salaries have a higher expected point goal. Upper and lower rails designate the expected range of contribution, or the Normal Pay Range (NPR), for an employee earning a particular salary. The employee cannot receive less than a stipulated base level of compensation, but any additional pay is dependent on the realized point total relative to the NPR.

At the beginning of the CCAS appraisal period, the supervisor must communicate expectations to his or her employees regarding the contributions for the year. Informal communication throughout the year is considered to be essential, providing an opportunity for the supervisor to provide his or her employees with feedback on strengths and weaknesses and to discuss professional development. At the end of the rating period, employees are given the opportunity to provide their supervisors with input on their contributions in the six factors. The supervisor uses this input and his or her own observations to generate recommended ratings for employees.

¹ This chapter draws on information found in AcqDemo training materials (AcqDemo Program Office, 2011a, 2011b, 2011c).

Pay pool panels and pay pool managers then meet to review employee ratings for equity and consistency. These pay pool panels have the authority to adjust ratings to ensure that ratings accurately and consistently reflect contribution to the mission. Rating changes are discussed with the supervisors, and the pay pool panel meets a final time to address any remaining inconsistencies. After completing the pay pool review process and obtaining approval from the pay pool manager, the resulting OCS becomes the employee's rating of record.

Depending on whether the OCS falls above, below, or inside the NPR, the employee has opportunities to receive varying levels of general pay increases, contribution rating increases (permanent increases in pay), and contribution awards (one-time payments). These payments are based on the difference between the employee's OCS and his or her expected score on the SPL, as well as the total size of the pay pool (which must be at least 2 percent of the organization's total salary budget for salary increases and at least 1 percent for awards and bonuses). For an employee with an OCS rating that is sufficiently below his or her expected contribution, a Contribution Improvement Plan (CIP) is initiated. Failure to improve levels of contribution under the CIP during the specified period or any subsequent failure within two years can result in reduction in pay or removal of the employee.

Summary

AcqDemo uses CCAS. Employees are annually rated against six factors: problem solving, teamwork and cooperation, customer relations, leadership and supervision, communication, and resource management. An employee's realized point total is then compared with a benchmark derived from his or her base salary. An employee who performs within his or her expected contribution range (NPR) is then eligible for pay increases and one-time payments.

Assessment Criterion D: Steps to Ensure Fairness and Transparency

D. The steps taken to ensure that such system is fair and transparent for all employees in the project.

The AcqDemo Program Office provides extensive training to both supervisors and employees on how the system works. Several of the SMEs whom we interviewed acknowledged, however, that employees struggle to understand the system prior to going through a rating cycle or two. Given that there will always be employees who are new to AcqDemo, it is unlikely that it will ever be transparent for all employees. In particular, the perceived complexity of CCAS is a longtime concern.¹ Chapter Seven addresses issues related to the newness of AcqDemo for most participants and the impact this may have on perceptions of transparency. Chapter Seven also covers issues with transparency that are not related to the newness of the program.

CCAS contains some features designed to increase transparency and fairness. First, the use of common factors across career fields and broad band levels with established descriptors for each career field helps ensure that employees are familiar with the general expectations of the position upon entering the workforce, and it allows employees to be rated across common factors.

Second, a supervisor is expected to meet with his or her employees at the beginning of the rating period to communicate these expectations and how they tie into the individual's duties and the greater organizational mission. This ensures that employees are fully aware of what factors will be used to measure their contributions from the beginning of the cycle. Informal communication between supervisors and employees is considered to be essential throughout the rating cycle to ensure that the process is transparent and employees are quickly informed if they are not meeting expectations.

Third, employees are given the opportunity to provide input before the supervisor's rating process begins. This input helps ensure that employees are fairly rated based on actual contributions to the mission, particularly if they seldom interact with the supervisor who is rating them. Subsequent to the supervisor appraisal, the pay pool panels and pay pool managers act as an additional lever to ensure fairness and consistency across employee ratings.

Finally, employees who believe that their ratings do not accurately reflect their levels of contribution have access to an established grievance process to contest rating decisions.

In Chapter Seven, we discuss employee perceptions of AcqDemo fairness, specifically how a perceived lack of fairness may serve as a barrier to effective use of AcqDemo's flexibilities.

¹ See, for instance, 64 *Fed. Reg.* 1426 (OPM, 1999).

Summary

Steps have been taken to increase the fairness and transparency of the system. There is extensive training to increase system transparency. All employees are rated against the same factors. Each supervisor is expected to meet with his or her employees at the beginning of a rating period to communicate expectations. Employees are given the opportunity to provide input to the rating process. There is a grievance process to contest rating decisions.

SMEs acknowledge, however, that employees struggle to understand the system prior to going through a rating cycle or two.

Assessment Criterion E: How the Project Helps Organizations Better Meet Mission Needs

E. How the project allows the organization to better meet mission needs.

AcqDemo was developed to support a key goal of DAWIA: namely, creating and sustaining a workforce consisting of well-qualified, multitalented professionals capable of supporting the acquisition mission. It was envisioned as a way to address hiring restrictions that stymied the federal government's ability to vie for the best talent, policies perceived to make motivating and rewarding employees more difficult, and highly complex job classifications that limited movement of employees within their organization. The complex job classification system was particularly problematic given the dynamic acquisition environment and the move toward more fluid, team-based work (64 *Fed. Reg.* 1426 [OPM, 1999]).

In this assessment, we considered the extent to which AcqDemo enables organizations to better meet mission needs by focusing on flexibilities related to hiring, performance appraisal, and job assignments. We should note that "meeting mission needs" is a somewhat amorphous concept that AcqDemo supervisors and employees likely view in different ways. Further, there are myriad factors (e.g., budget levels, military requirements) that affect an organization's ability to realize its mission and render it challenging to isolate the mission impact of AcqDemo or other personnel systems. So we are intentionally guarded in our assessment of how AcqDemo allows a participating organization to better meet mission needs, opting to focus on the flexibilities and other mission-related advantages afforded by AcqDemo rather than how they relate to or ultimately influence different types of missions. Our analysis drew primarily on program documentation from the *Federal Register*, the AcqDemo operating manual in use at the time of our assessment (*DoD Civilian Acquisition Workforce Personnel Demonstration Project Operating Procedures*, 2003), and program materials developed by AcqDemo Program Office staff to familiarize senior leadership with the project's main features. We also considered perceptions of the AcqDemo workforce that we gained via our interviews and analysis of survey data.

AcqDemo's Flexibilities

Hiring

AcqDemo's hiring flexibilities were described in Chapter Three. The procedures that simplify and accelerate hiring, such as the new PRD, Delegated Examining Authority, and Scholastic Achievement Authority appointments, are intended to promote expeditious hiring at a pace

similar to or faster than what a prospective employee might experience in the private sector.¹ The PRD, which requires a simpler, short description of job requirements than the documentation it replaces, was created to save time and reduce the administrative burden on managers. Once job candidates have been identified, the Delegated Examining Authority and Scholastic Achievement Authority facilitate appointing candidates who meet minimum eligibility requirements. In addition, the project's three appointment options—permanent, temporary limited, and modified term—provide managers with several ways to expand (and later, to potentially contract) their workforce as mission needs change. A similar flexibility is afforded by the project's Voluntary Emeritus Program, which enables managers to accept the volunteer (unpaid) services of retirees and other former employees. Lastly, AcqDemo's procedures for pay setting permit managers and hiring officials to offer a starting salary that is not only commensurate with the candidate's experience, expertise, and anticipated contribution but also takes into consideration external labor market conditions. As we discuss further in Chapter Ten, the knowledge, skills, and abilities desired for the federal acquisition workforce are often highly sought in the private sector as well.

Performance Appraisal

AcqDemo's flexibilities related to recognizing performance and offering opportunities for improvement are described in Chapter Four. AcqDemo's performance appraisal system focuses on employees' contribution to their organization's mission so that high contributors are rewarded via different types of financial compensation and low contributors are not only identified as such but also are given feedback on how to improve their contribution. Ultimately, AcqDemo is intended to consistently recognize and reward high contributors and to improve low contributors' performance and, if they fail to improve, to take action to reduce pay or remove the employees from federal service. Because the system involves setting mission-related objectives on an annual basis, an employee's desired contribution to the organizational mission can change over time. Feedback over the course of the rating year provides additional opportunities to refine an employee's expected contribution in response to evolving mission needs.

Job Assignments

The third element of AcqDemo that was meant to help organizations meet mission needs is flexibility in job assignments. This flexibility is primarily afforded via broad banding, a personnel practice in which occupations with similar attributes are organized into three broad career paths: one for business management and technical management professionals (NH), one for technical management support (NJ), and one for administrative support (NK). With broad bands, organizations have a great deal of flexibility to assign employees to fill different roles as organizational needs and employee qualifications dictate. Moving employees—be they managers, technical experts, or administrative professionals—can be accomplished as reassignments to other duties within a PRD, which is an easier, more streamlined process.

Other features of AcqDemo that facilitate flexibility in job assignments and, in turn, greater responsiveness to mission needs include the PRD and pay-related flexibility. Information conveyed in the PRD makes it easier to move qualified employees across positions within

¹ As we discuss further in Chapter Seven, in our discussion of how AcqDemo's flexibilities are used, some of our SME interviewees indicated that the hiring flexibilities offered by AcqDemo have been superseded by DoD's Expedited Hiring Authority for acquisition positions.

a broad band. For example, the PRD includes the position's broad band level; knowledge, skills, and abilities required; and items from CCAS related to the position's classification. With respect to pay, the use of broad bands means that an employee can be assigned without a change in pay to a position that falls within the same broad description as his or her current position. The project does provide for salary adjustments for temporarily promoted employees and has other policies in place to help managers understand when changes in pay may be warranted and when they are not. Lastly, because employees are rewarded based on their contribution to their organization's mission, managers can reward high performers with higher pay even when an employee does not have supervisor duties. Such a system recognizes that some mission needs are more readily addressed by technical experts, for example.

Perceptions of AcqDemo's Ability to Help Organizations Better Meet Mission Needs

Interview and survey data reveal a range of perspectives on AcqDemo's ability to help organizations meet mission needs, from optimism to uncertainty. During SME interviews, we heard largely favorable views of the potential flexibilities with respect to hiring, performance appraisals, and job assignments. For example, during one session, AcqDemo was presented as a boon to recruiting talented employees because hiring officials can set pay for new hires and attract them with the prospect of payment for performance and bonuses based on contribution. Another interviewee noted that AcqDemo's wide pay bands give the organization more flexibility to hire new graduates because it is more competitive with private industry, and to compete with contractors on-site for more experienced employees. Finally, in several presentations made during the April 2012 AcqDemo 2.0 conference, component representatives noted that recruitment was one of the areas that was "working well" in current operations.

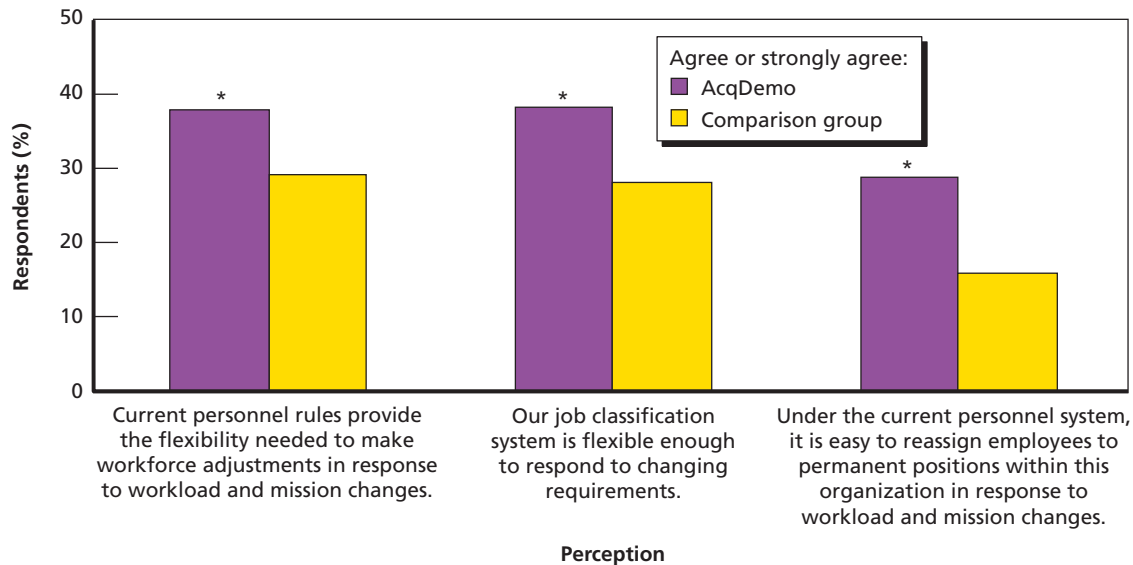
Turning our attention to the survey data, views expressed therein with respect to one type of personnel system flexibilities, job assignments, were largely favorable. As shown in Figure 6.1, AcqDemo survey respondents were more likely than respondents from comparison-group organizations to agree that their personnel rules and job classification system facilitated job- and position-related changes in response to evolving mission needs.² However, other survey results are more ambiguous. For example, the survey also included a related item presented only to supervisors operating under AcqDemo, one in which respondents were asked whether they agreed or disagreed with the following statement: "The AcqDemo broad bands give me the flexibility to reassign duties to my workforce to meet changing needs with less administrative overhead than the GS system." The results showed that 31 percent of respondents agreed or strongly agreed with the statement, and 27 percent of respondents indicated no basis to judge. Perhaps this was due to their limited time working under AcqDemo.

Other findings suggest that the extent to which AcqDemo's flexibilities help organizations meet mission needs is unclear at this juncture in AcqDemo's history. As Figure 6.2 illus-

² Figures in this chapter feature the results of our analysis of Likert-scale survey items that ranged from "strongly agree" to "strongly disagree" and included both a neutral midpoint and a "no basis to judge" option. We report findings as significant if they were statistically significant at the 5-percent level ($p < 0.05$).

More than 95 percent of comparison-group respondents who indicated their pay plan said they were covered by GS. However, 14 percent of comparison-group respondents left the pay-plan demographic question unanswered. Nevertheless, we treat the comparison population as, de facto, representing employees covered by the GS system.

Figure 6.1
Perceptions of Personnel System Flexibilities in Job Assignments



SOURCE: 2012 AcqDemo survey data.

NOTE: An asterisk denotes a statistically significant difference between survey respondents from AcqDemo and those from comparison-group organizations.

RAND TR1286-6.1

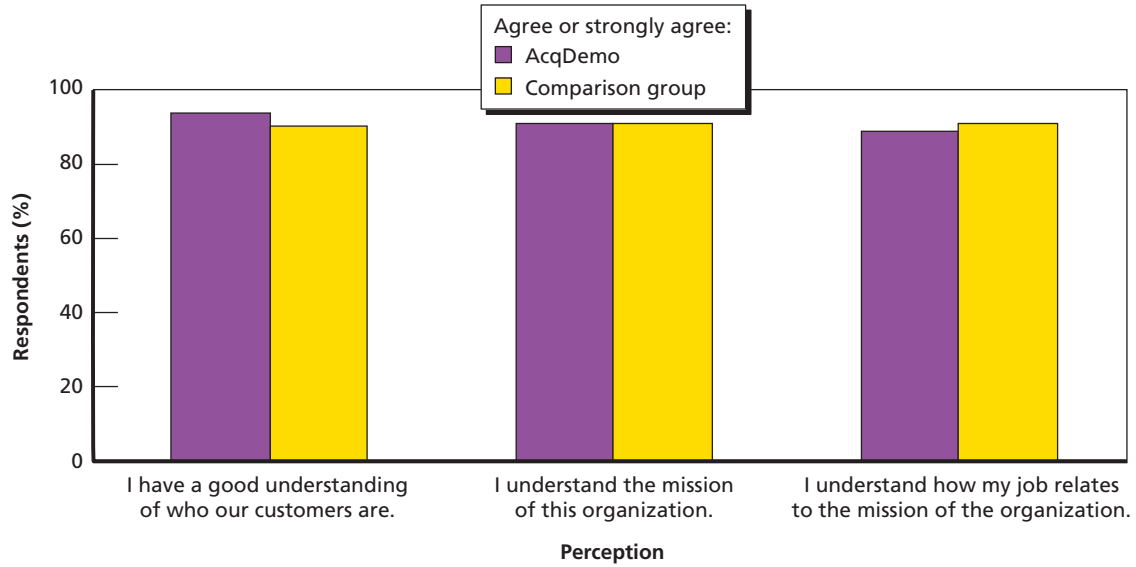
trates, employees managed under AcqDemo were neither more nor less likely than employees under other personnel systems to agree that they had a good understanding of their organization's customers, the organization's mission, or how their job came to bear upon the mission. In other words, both groups had similar, very high levels of agreement with these statements.

Although it is not an explicit AcqDemo flexibility, another aspect of AcqDemo that we believe may have an effect on an organization's ability to meet its mission needs is its impact on teamwork. As noted at the start of this chapter, AcqDemo was developed in part to support a more dynamic work environment and team-based work. However, some research indicates that pay-for-performance systems can breed competition for promotions and financial rewards that undermines collaborative group processes. For example, Drago and Garvey's (1998) research suggested that employees are less likely to share knowledge and help their peers when they are vying for limited funds.

Accordingly, we reviewed our data sources for evidence about AcqDemo's influence (or lack thereof) on teamwork. Three survey items speak to this concern and are depicted in Figure 6.3. As the figure shows, again there was no difference between the responses of AcqDemo employees and the comparison group with respect to knowledge sharing, cooperation, or general group dynamics. Whether AcqDemo supports teamwork in the future or hinders it by triggering unhealthy competition for a finite set of rewards is something those tasked with AcqDemo oversight can monitor as part of ongoing efforts to measure the project's ability to help organizations better meet mission needs.

Chapter Seven, which considers how AcqDemo flexibilities are currently used and potential barriers to their use (criterion F), provides additional evidence regarding how AcqDemo facilitates or hinders organizations in their efforts to meet mission needs.

Figure 6.2
AcqDemo and Comparison-Group Survey Respondents Have Similar Responses to Mission-Related Survey Items

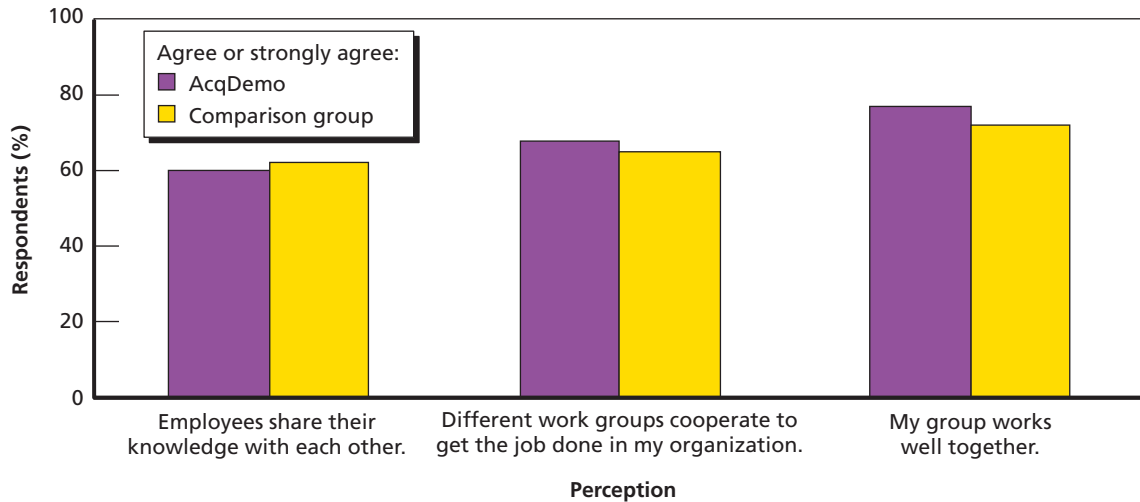


SOURCE: 2012 AcqDemo survey data.

NOTE: An asterisk denotes a statistically significant difference between survey respondents from AcqDemo and those from comparison-group organizations.

RAND TR1286-6.2

Figure 6.3
AcqDemo and Comparison-Group Survey Respondents Have Similar Views Related to Teamwork



SOURCE: 2012 AcqDemo survey data.

NOTE: An asterisk denotes a statistically significant difference between survey respondents from AcqDemo and those from comparison-group organizations.

RAND TR1286-6.3

Summary

Overall, the data we reviewed suggest that AcqDemo features and procedures are intended to help organizations meet mission needs more nimbly, but we were limited in our assessment of AcqDemo's impact on personnel-related outcomes, such as hiring, performance appraisal, and job assignments. Survey evidence is most positive about AcqDemo's flexibilities related to job assignments and reclassifications. AcqDemo employees were no different from comparison-group employees in their understanding of mission-related concepts or their views about group processes, such as cooperation and knowledge sharing. We could not assess the extent to which AcqDemo actually helps or hinders an organization's ability to meet mission needs. Such an endeavor would require more specificity about mission needs and would be more appropriate in the years following AcqDemo's implementation phase than immediately thereafter.

Assessment Criterion F: Application of Flexibilities and Barriers to Their Use

F. An analysis of how the flexibilities in subparagraphs (B) and (C) [Chapters Three and Four] are used, and what barriers have been encountered that inhibit their use.

Our assessment of this criterion was informed by two main sources: (1) SME interviews and (2) quantitative and qualitative data from the AcqDemo workforce survey fielded in early 2012. In other words, we relied on perceptions of how AcqDemo's hiring, appointment, and performance-related appraisals have been used and what barriers exist that may impede their use. Because the vast majority of employees managed under AcqDemo had been part of the system for one year or less at the time of this assessment (spring 2012), such data sources as personnel data (e.g., offer/accept ratios, the number of PRDs) and workforce data (e.g., starting salaries, changes to the contract workforce, and career progression by broad band and career path) were not available for us to analyze.

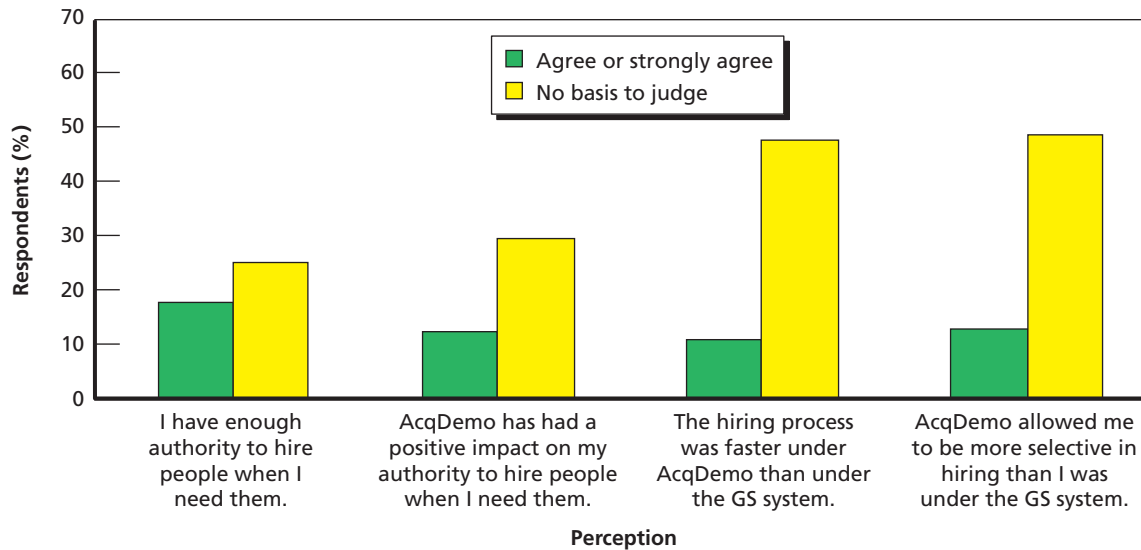
We begin by presenting what we learned about how AcqDemo's flexibilities are being used. We then turn to the barriers to their use that became apparent through our analysis of interview data, survey data, and conference materials. They include a lack of familiarity with AcqDemo, budget constraints that limit hiring and pay raises, limits within pay bands, and a perceived lack of fairness.

Hiring Flexibilities

During our interviews, we heard that, although, in some ways, the hiring flexibilities offered by AcqDemo have been superseded by DoD's Expedited Hiring Authority for acquisition positions, they still are regarded as helping organizations be as responsive as possible to recruiting demands that emerge in response to mission requirements. The SMEs we interviewed emphasized two features in particular: the shorter timeline for hiring, and hiring officials' ability to set pay for new hires. Interviewees also suggested that the ability to reward employees for their contributions is a recruiting tool that helps attract strong candidates.

Evidence from the survey suggests that AcqDemo's impact in terms of hiring flexibilities is promising but that the personnel system has not yet realized its potential. In the survey, supervisors were asked several questions about their hiring authority and the hiring process more generally, and their responses indicate that a relatively small number of personnel have used these flexibilities. Figure 7.1 provides a breakdown of responses to these questions, includ-

Figure 7.1
Supervisors Tend to Indicate No Basis to Judge AcqDemo Hiring Flexibilities



SOURCE: 2012 AcqDemo survey data.

NOTE: The two items comparing AcqDemo with the GS system were presented only to supervisors who indicated they had hired employees under both systems.

RAND TR1286-7.1

ing two that compared AcqDemo with the GS system.¹ (These questions were presented only to supervisors who indicated they had hired employees under both personnel systems.) The proportion of respondents who agreed or strongly agreed with these statements was, at most, 18 percent.

Perhaps more strikingly, in all cases, the proportion of respondents who indicated they had no basis to judge was higher. For the two questions comparing AcqDemo with the GS system, almost one-half of respondents felt that they had no basis to judge.

The leftmost item shown in the figure, “I have enough authority to hire people when I need them,” was also included in the comparison-group survey. Although a relatively small proportion (18 percent) of AcqDemo respondents agreed or strongly agreed with this statement, only 5 percent of respondents from the comparison group expressed similar views. This statistically significant difference so soon after AcqDemo almost quintupled in size suggests that AcqDemo is already making a difference with respect to hiring flexibilities, one that might grow over time as respondents who had no basis to judge at the time of the survey gain experience utilizing AcqDemo’s hiring-related features.

Although the survey’s multiple-choice questions focused on the supervisor perspective of hiring practices, the survey also offered a few insights from employees regarding hiring flexibilities. Specifically, as the following comments illustrate, several employees noted that AcqDemo had a positive influence on their decision to join their current organization:

¹ Figures in this chapter feature the results of our analysis of Likert-scale survey items that ranged from “strongly agree” to “strongly disagree” and included both a neutral midpoint and a “no basis to judge” option.

It [AcqDemo] allowed me to leverage my previous experience moving up more quickly than would have been possible in the GS system. It also allowed me to negotiate a higher salary at hiring than would have been possible otherwise. (respondent 401; Air Force; employee)²

I have only been in an AcqDemo org for a couple of months—too early to know how positive or negatively its influence is right now; but it was an incentive for joining an AcqDemo org. (respondent 5193; Army; employee)

The second remark shows that even employees who have a favorable view of AcqDemo resemble supervisors in their belief that it is too early to judge AcqDemo's effect.

Appointment Flexibilities

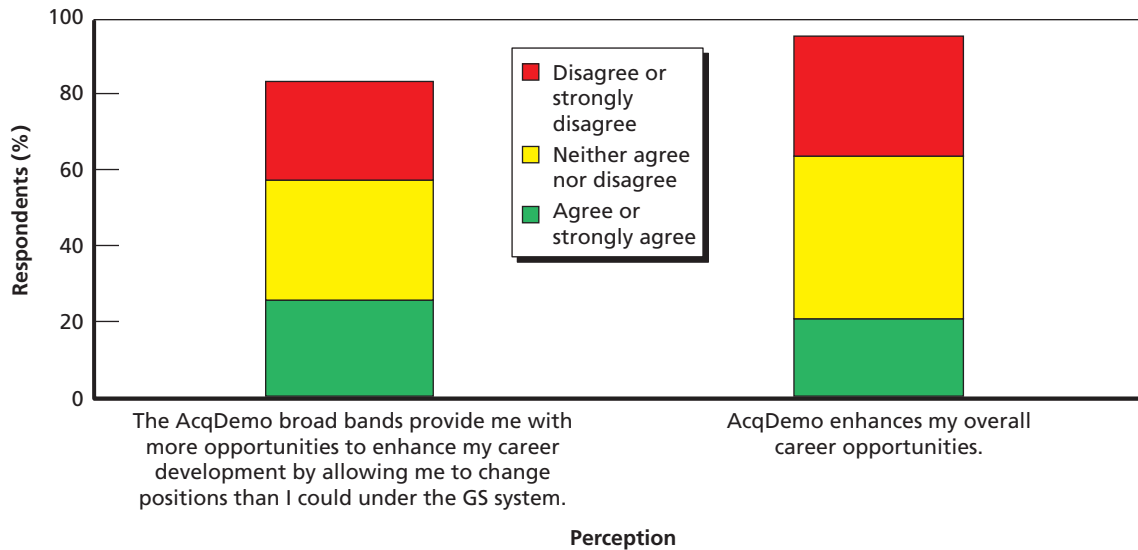
AcqDemo is intended to provide greater flexibility in appointments, largely through the use of pay bands and discretion on how employees are classified to them. Again, findings from our SME interviews were favorable in this regard. For example, one interviewee suggested that AcqDemo's greatest strengths were the ability to hire within broad pay bands and the ability to set pay within the system. In another interview, AcqDemo's pay bands were discussed as better matching workflow.

Survey data offer additional insights, from both supervisors and employees, on how these flexibilities are being used. Fourteen percent of AcqDemo supervisors agreed that AcqDemo has had a positive impact on their ability to influence classification decisions. Although this is a modest percentage, AcqDemo's flexibilities in this regard seem to be an improvement over other personnel systems. Supervisors from both AcqDemo organizations and comparison-group organizations were asked to indicate the extent to which they agreed with the statement, "I have enough authority to influence classification decisions." Twenty-three percent of AcqDemo supervisors either agreed or strongly agreed, a statistically significantly higher figure than 17 percent of supervisors from the comparison group. A few write-in responses from supervisors provide further support that this flexibility is useful. As one supervisor simply stated, "[t]he flexibility offered for workforce structure has been beneficial" (respondent 1108; Army; supervisor).

The employee view on the use of these flexibilities is different, however. As shown in Figure 7.2, employees did not tend to believe that broad bands enhanced their career development or that AcqDemo enhanced their career opportunities more generally. Survey respondents were split evenly in terms of agreeing or disagreeing (26 percent for each opinion) when presented with a statement that AcqDemo broad bands provides more career opportunities via position changes, and slightly more respondents (32 percent) had a neutral viewpoint. In addition, when asked a more general question, more employees disagreed than agreed that AcqDemo enhances their career opportunities, although, once again, respondents indicating

² After each quotation, the unique identifier indicates the survey in which the comment was written. Each respondent was given a unique identifier, but the identifier does not have significance, nor can it be used to identify the participants. We have purposely limited each respondent to one quotation in this report, i.e., we are not serially quoting any single individual. We also include relevant demographic information; for example, we note whether the respondent is a supervisor or employee. We have also edited the comments to correct spelling mistakes and punctuation but did not revise the words used by the comments' authors.

Figure 7.2
Employees Have Mixed Views of AcqDemo Appointment Flexibilities



SOURCE: 2012 AcqDemo survey data.

NOTE: Numbers do not sum to 100 percent because some employees selected “no basis to judge” in response to the question (16 percent and 5 percent, respectively).

RAND TR1286-7.2

“neither agree nor disagree” constituted the largest proportion. The impact of AcqDemo on career progression is discussed in more detail in Chapter Eleven; our point here is to emphasize the difference in perspective between supervisors or SMEs on the one hand and employees on the other.

Performance Appraisal Flexibilities

SME interviews consistently included comments about AcqDemo’s strong abilities to link job responsibilities and performance to mission contributions and to ensure that pay is commensurate with employees’ contributions. However, survey respondents were not always as favorable in their view of AcqDemo on these fronts; some features or flexibilities were clearly seen as more useful or effective than others. First, with respect to performance appraisal, supervisors tended to believe that AcqDemo provided a satisfactory way to measure employee contribution. This conclusion is largely based on their high level of agreement with the statement, “AcqDemo’s six factors are adequate for me to rate the contribution of the employees I supervise.” Specifically, 55 percent of supervisors agreed or strongly agreed with this statement, while only 10 percent of them disagreed or strongly disagreed. In addition, during our interviews with AcqDemo experts, we were advised that the six factors were meaningful for all employees managed under AcqDemo, and they provide a useful baseline for gauging contribution.

On the other hand, a few divergent views about the performance appraisal factors were aired as well. As one supervisor explained on his survey,

It is hard to relate rating factors to job objectives. Job objectives should be designed to allow employees to score or be measured against each factor. (respondent 3834; Army; supervisor)

During the AcqDemo 2.0 conference, we also heard some concerns about using the six factors to rate contribution. Specifically, there was discussion about potential redundancy among them. Ultimately, however, conference participants recommended keeping the six-factor rating system, at least for the next cycle.

Although the evidence was mixed on the six-factor form of performance appraisal, supervisors frequently agreed that AcqDemo effectively tied employee contribution to pay: Forty-nine percent of them agreed or strongly agreed with the statement, “AcqDemo established a link between Overall Contribution Score and pay,” and only 13 percent expressed their disagreement with it. The remarks that follow convey some of the views supervisors expressed about AcqDemo’s flexibilities with respect to contribution and pay:

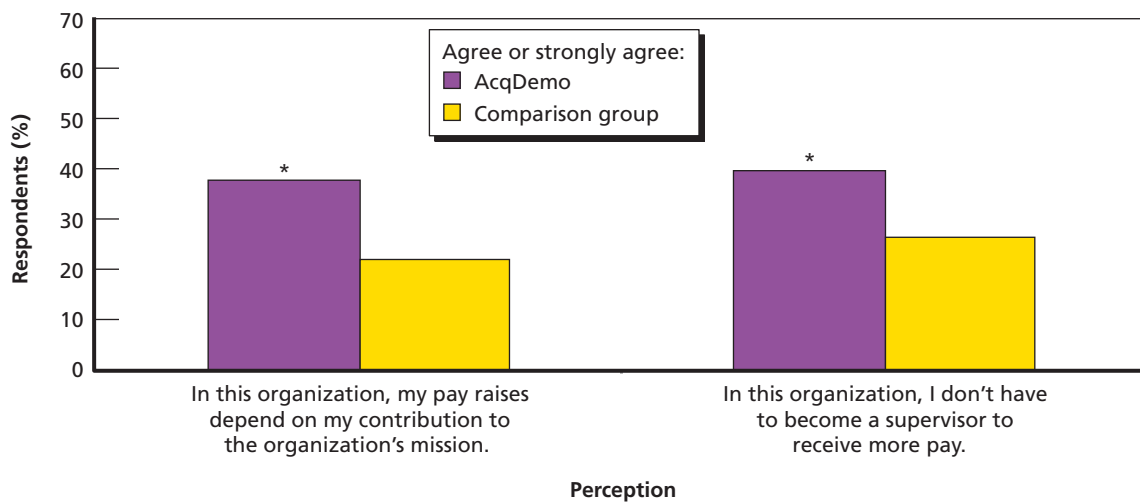
Allows me the flexibility to better stratify employees at all levels—reward the high performers, encourage the “good” employees, motivate the marginal, and get serious with the underperformers. The flexibility built into the system results in more thoughtful self-assessments. (respondent 662; DoD agency; supervisor)

As a manager in an AcqDemo org, I love the flexibilities of AcqDemo and the ability to reward the highest performers while fairly compensating others. (respondent 5471; Air Force; supervisor)

A similar view was shared by AcqDemo survey respondents as a whole. As shown in Figure 7.3, AcqDemo employees were more likely than employees from comparison-group organizations to perceive a link between their pay and their contribution to mission. Moreover, their contribution did not have to involve a supervisory role in order to receive more pay.

Although these results convey an overall appreciation for AcqDemo’s ability to measure and reward contributions, we found that supervisors’ perceptions of their ability to set pay

Figure 7.3
AcqDemo Survey Respondents Are More Likely Than Those in the Comparison Group to Perceive a Link Between Contribution and Performance



SOURCE: 2012 AcqDemo survey data.

NOTE: An asterisk denotes a statistically significant difference between survey respondents from AcqDemo and those from comparison-group organizations.

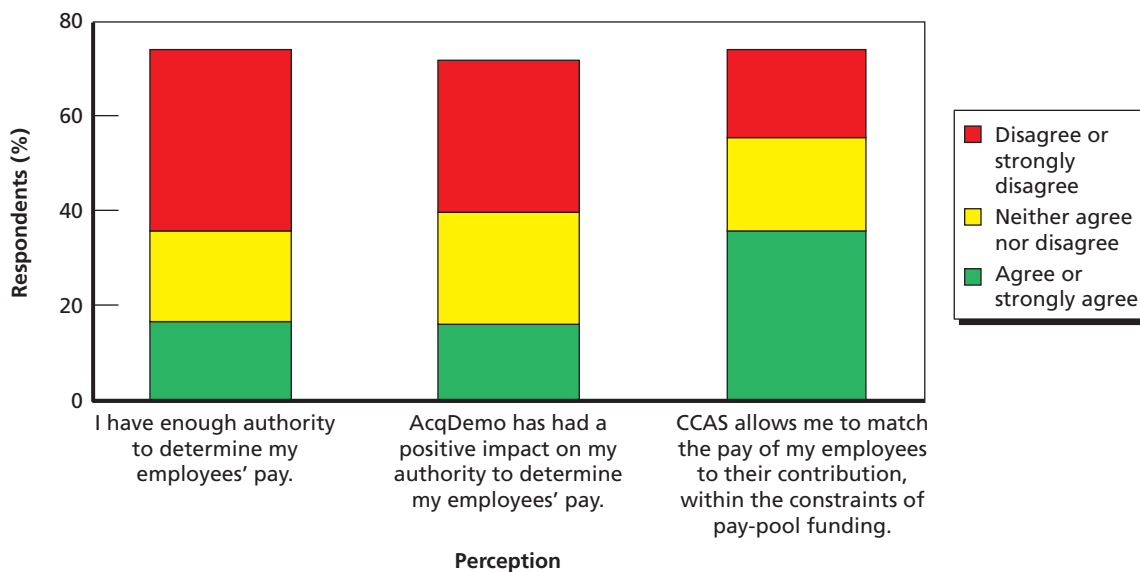
varied across survey items. As Figure 7.4 shows, the majority of supervisors surveyed did not agree that they had enough authority to determine their employees’ pay or that AcqDemo positively affected their ability to determine pay. Although they were much more likely to agree that AcqDemo allowed them to match pay to employee contributions, even for this item, there was a wide divergence of views.

Further complicating our assessment, there was a statistically significant difference between AcqDemo supervisors and the comparison-group supervisors in their responses to the leftmost item shown in the figure, “I have enough authority to determine my employees’ pay.” Seventeen percent of AcqDemo respondents agreed or strongly agreed with this statement, and only 4 percent of respondents from the comparison group expressed similar views. It may be that supervisors often feel that their ability to determine pay is lacking, regardless of the personnel system under which they manage others. However, when asked explicitly about AcqDemo, majority views were not favorable with regarding to pay-setting flexibilities.

Write-in responses to the survey shed light on why supervisors were somewhat less positive about how this AcqDemo flexibility was used than about others. The main concern was perceived overinvolvement of the pay pool in dictating how supervisor performance ratings should be altered:

[U]pper management does not appear to trust their first line supervisors’ judgment in evaluating their direct reports. Rather, upper management, i.e., higher level reviewer or two letter director, feel that they must decide if an individual meets, exceeds, or fails to meet the employees’ contribution objectives. This decision is accomplished without direct interaction with the employees being evaluated. The process is for upper management to dictate the employee’s assessment. (respondent 2359; DoD agency; supervisor)

Figure 7.4
Supervisors Had Divergent Views About AcqDemo’s Effect on Their Ability to Set Pay



SOURCE: 2012 AcqDemo survey data.

NOTE: Numbers do not sum to 100 percent because some employees selected “no basis to judge” in response to the question (26 percent, 28 percent, and 26 percent, respectively).

There is a *lot* of work on the supervisor to address all six factors, but the pay pools spend little time addressing the write-ups, but arbitrarily tell you to change them, lower the score, or try to make everyone fit between the rails. It very much muddles the top performers and the bottom performers into too close of a band. (respondent 2330; DoD agency; supervisor)

Barriers to Using Flexibilities Related to Hiring, Appointments, and Performance Appraisal

Our analysis of interview data, survey data, and conference materials points to several barriers that limit the use of AcqDemo’s flexibilities. Some of the barriers likely are temporary, while others are potential areas of concern that could become greater impediments if not addressed in a timely manner by AcqDemo program and organizational leadership. They include a lack of familiarity with AcqDemo, budget constraints that limit hiring and pay raises, limits within pay bands, and a perceived lack of fairness.

Because of the timing of our assessment, we had to rely on subjective data to identify the presence of barriers—namely, the perceptions of AcqDemo experts, supervisors, and employees. Most of the barriers we identified were suggested by multiple data sources. Perceptions of fairness, however, emerged only in the AcqDemo survey, both the multiple-choice responses and write-in responses. The issue of fairness was not mentioned in our interviews with SMEs, who tended to be at high levels within the organizational hierarchy. Nor was it raised during general discussion at the AcqDemo 2.0 conference. Future efforts to verify the prevalence of these views are warranted. More generally, objective data are required to estimate the magnitude of these barriers, as well as to track their growth or decline over time.

Lack of Familiarity with AcqDemo

Even proponents of AcqDemo acknowledge that it is a complex system with a steep learning curve. As we describe in detail in Chapter Twelve, the AcqDemo Program Office and components offer extensive training in the range of topics covered, methods of delivery, and target audiences. Despite this training, which was supposed to reach at least 70 percent of employees in organizations transitioning to AcqDemo, some offered examples of how a lack of familiarity with the program—in a supervisor, for example—presented problems. This issue can make it difficult to implement AcqDemo correctly and to achieve the full potential of its additional flexibilities. As one employee noted in his survey,

While we did receive extensive training it was still a very difficult process to accept and work through. I am sure, like other programs, it will all come together as we go through a few cycles together. (respondent 179; Air Force; employee)

Similarly, during our interviews, SMEs often told us that someone new to AcqDemo, and to CCAS in particular, would perceive it as confusing and that acceptance of and satisfaction with the system tend to grow with each rating cycle. The 2012 AcqDemo survey offers some evidence in support of this premise. Although, as noted earlier, the vast majority of individuals managed under AcqDemo are new to the system, the survey included responses from some employees who had been managed under AcqDemo for longer, including 665 individuals who had five or more ratings under AcqDemo. Although they are not typical AcqDemo employees,

we opted to look closely at their survey responses in an attempt to corroborate the assertions of SMEs noted above. As shown in Table 7.1, as the number of rating cycles goes up, the proportion of respondents who indicated they were in favor of AcqDemo for their organization steadily increased, and the proportion that has a neutral view or no basis to judge declined.

In the meantime, a lack of familiarity with the system means, for example, that some employees are having difficulty writing self-assessments, supervisors are not providing adequate feedback during the appraisal cycle, pay pool panels are committing errors (e.g., still assessing employees using NSPS terms), and personnel are having problems navigating CAS2Net, the CCAS performance management system. Indeed, during lessons-learned presentations at the AcqDemo 2.0 conference, component representatives discussed the need for and plans to offer specific types of training targeted to alleviate such problems. Familiarity with the system should increase as employees, supervisors, data maintainers, and other professionals go through multiple rating cycles, but, given plans to expand the program to other organizations across DoD, this barrier could remain an enduring concern for those tasked with AcqDemo oversight.

Table 7.1
Survey Evidence of Changing Perceptions of AcqDemo Across Rating Cycles

Number of Cycles	N	In Favor of AcqDemo for My Organization (%)	Neutral or No Basis to Judge (%)
0 to 1	2,180	34	40
2 to 4	889	37	34
5 or more	665	52	27

SOURCE: 2012 AcqDemo survey data.

NOTE: The number of AcqDemo rating cycles remains a strong predictor when controlling for race and ethnicity, gender, age, years of service, component, career path, supervisory status, and union status.

Budget Constraints

Interview data, write-in survey responses, and conference presentations included references to hiring and pay-related freezes that limited the use of AcqDemo's hiring and pay flexibilities. For instance, in its assessment of current operations, at the AcqDemo 2.0 conference, the Marine Corps noted that the hiring freeze prevented use of hiring flexibilities, with a few exceptions. Similarly, some write-in survey responses noted the external constraints imposed by budget limitations. As one manager bluntly noted, "With pay freezes and hiring freezes . . . what's the difference?" (respondent 542; Air Force; supervisor). These budget constraints are out of AcqDemo program management's control, however, and, as one interviewee noted, when people consider where they would be under the GS system, which is also subject to the same budget constraints, and take note of the high unemployment rate in the private sector, the pay freeze is less frustrating. However, long-term freezes could eventually contribute to reduced confidence in AcqDemo's ability to help organizations meet mission needs and, if the perceived link between contribution and pay is weakened, to decreased motivation as well.

Pay or Broad Band Limits

The level of funding in pay pools and pay caps within them pose a similar barrier to using AcqDemo's flexibilities and is another barrier that appears to diminish employee motivation. Budget constraints limited the amount of money for raises, bonuses, and awards and, as comments from the survey suggest, at times, employees and supervisors alike were frustrated and demoralized that high performers could not be rewarded for their contributions. The following comments help convey such sentiments:

I thought that I would be rewarded for my performance, but I was mistaken. I have been a top performer and I received no salary increase, and although I do appreciate the bonus I received, I believe that it was too small considering I did not get any increase in salary. Why am I performing at a high level when I am not being recognized or rewarded for it? (respondent 405; Air Force; employee)

I feel that no matter what outstanding work I accomplish, it will not be rewarded because there is a limit to what can be "paid out" across the pay pool; why should I continue to go above and beyond when there's no benefit to me personally (other than being told I'm doing a good job)? (respondent 320; Army; supervisor)

In a related vein, some employees do not receive additional financial recognition for performance because they are on retained pay or have hit the pay cap for their pay band. Data presented by SRA International at the AcqDemo 2.0 conference indicated that, in 2011, 6,380 of 15,250 employees (42 percent) under AcqDemo hit some sort of pay cap, and approximately 29 percent of AcqDemo employees reported in the survey that they are currently at the top of their pay band. Pay caps were mentioned as an issue by component representatives at the AcqDemo conference, interviewees, and survey respondents, with the Executive Schedule level IV pay cap cited as a unique example. This was a particular concern in high-cost regions, most notably Washington, D.C.

Until employees under a pay cap are promoted to a higher pay band, they are not eligible for performance-based pay increases, so the link between performance and compensation is essentially eliminated. Employees at the top of the Executive Schedule level IV band in particular lack meaningful targets for performance; they have few ways of obtaining compensation for additional effort (e.g., bonuses). Some survey respondents not only expressed frustration with pay caps but also expressly noted their effect on motivation and retention:

[AcqDemo] has had a negative effect on me since I am at the end of the pay band. Despite having many achievements, this rating period I received less recognition than my subordinates, and this system has really deflated any incentive to do better. There is little room for professional growth, and it is very disappointing to know that you have given [omitted] years to the AF [Air Force] and know that you just need to hold on until retirement in [omitted] years. That does not provide for the incentive to do better and improve your workforce. (respondent 564; Air Force; supervisor)

I'm at the top of my pay band, so I have little place to go but down. Even if I accomplish a lot, it's unlikely I will move into the next higher pay band, especially with the recent management push to award lower appraisal scores than in the past. If I don't hit it out of the park each year, I risk falling below my assigned objective score and potentially below the lower rail of the pay band. This would result in a likely perception by management that

I'm not doing a good job, and it would likely result in little to no monetary award. So far, AcqDemo seems very demotivating to me. (respondent 754; Army; supervisor)

Moreover, some employees cited control points within pay bands as diminishing linkages between pay and performance. Examples of these comments include the following:

Local control points within the pay band keep personnel from being paid for performance. If your upper control point is [at the] max, you receive no sustainment raise for your performance. (respondent 5344; Air Force; employee)

With control points that have been placed on us, I do not see the rationale for AcqDemo. [Being] basically locked in at the same pay with control points does not make sense. (respondent 2557; Army; supervisor)

Although some SMEs and survey respondents noted that these problems affected all government personnel systems to some extent, others did not appear to recognize that fact. However, even if other government personnel systems, such as the GS system, have pay caps and control points within pay bands, most are not predicated on a link between pay and performance. If the limits on AcqDemo's pay bands are not addressed in the future, they could undermine one of its main tenets: rewarding high contributors.

Perceived Lack of Fairness

Survey results revealed a range of concerns about AcqDemo's fairness: Employees identified the reliance on written performance assessment, perceived subjectivity or favoritism in the performance ratings, and politics or favoritism within pay pools as examples of unfairness.

Four items in the quantitative portion of the survey addressed the issue of fairness. Figure 7.5 displays those results for AcqDemo respondents and those from comparison-group organizations. For all four items, the proportion of AcqDemo respondents who agreed or strongly agreed with the statement was less than a majority. In the one instance in which the two groups showed a statistical difference (the second set of bars from the left), respondents from the comparison group had more positive perceptions than did the AcqDemo sample.

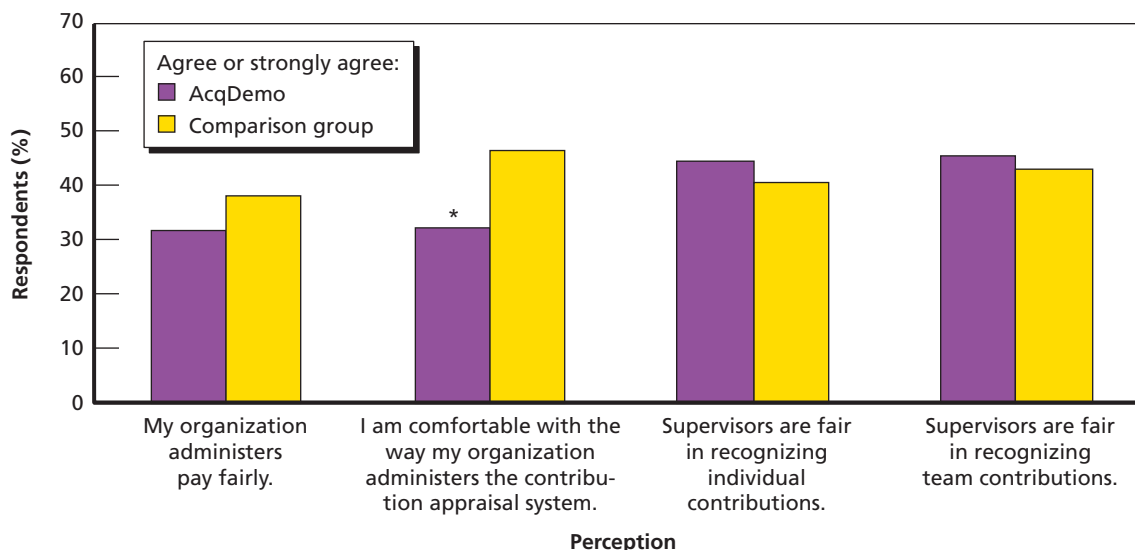
Write-in responses revealed other concerns related to fairness. Although some survey respondents wrote positive comments about AcqDemo's fairness, the majority of comments relating to fairness were critical. Moreover, general comments that claimed AcqDemo was having a negative effect on the respondent often offered an explanation that touched on fairness, subjectivity, or favoritism.

Some respondents, for example, felt that reliance on writing in the assessment process was neither fair nor appropriate as a way to rate performance:

AcqDemo is nothing more than another creative writing opportunity. I know folks that cannot spell the system they support, but can write like a whiz and they get over [are over-rewarded given their contributions]. On the other hand, I have employees that can't write like an English lit major, but know their jobs tenfold better than the exquisite writers. (respondent 1686; Army; supervisor)

AcqDemo places an undue burden on the employee to exert literary finesse and imagination to magically come up with objectives that typically fall prey to the whims of a dynamic and ever-changing political and economic climate beyond an employee's control.

Figure 7.5
Employee Perceptions of Personnel System Fairness



SOURCE: 2012 AcqDemo survey data.

NOTE: An asterisk denotes a statistically significant difference between survey respondents from AcqDemo and those from comparison-group organizations.

RAND TR1286-7.5

The obscure process forces proclaimed contributions to adhere to certain mandated “key words” whether appropriate or not for the employee’s job description. . . . While seeking [to] quantify values to highlight contributions, it is also virtually impossible to numerically document accomplishments as it pertains with many functions. The result is subjective qualitative narratives that need to be defended and championed by immediate supervisors who have to bargain for very fiscally limited financial incentives. (respondent 5828; Army; supervisor)

AcqDemo is a disaster. It, like NSPS, is very subjective. Your evaluation depends on how well you write, how well your supervisor writes, how well your supervisor or their supervisor fights for their people, but most importantly, how well your supervisor likes you, how well their supervisor likes you, and/or your supervisor, and it continues up the chain-of-command. (respondent 2172; Air Force; employee)

Other respondents criticized pay pools as unfair and often influenced by favoritism:

Pay pools are secretive and arbitrary and unfair. Employees have no way to know what affected their ratings and sometimes it’s irrelevant or incorrect information. (respondent 183; Air Force; employee)

[It a]ppears [that the] AcqDemo process in my organization is more concerned with who knows you on the pay pool panel rather than accomplishments listed. This defeats the purpose of pay for performance and undermines employees that have been placed in a new position at the time of rating. (respondent 525; Army; employee)

I can only assume the pay pool was biased and gave the larger bonuses to those they knew firsthand. I will not waste my time again writing an assessment only to have it all ignored. My immediate supervisor was very impressed with my performance but was trumped by the “good old boys.” Some things never change no matter what format you use. (respondent 1064; Air Force; employee)

As explained earlier, additional research is required to determine the extent to which these views are shared by the larger AcqDemo population. However, even if held by only a small proportion of the workforce, perceptions of a lack of fairness can have negative effects on the workforce as a whole. Research has found, for example, that perceptions of unfairness in a performance evaluation system contributed to the failure of pay-for-performance programs (Cornett and Gaines, 1994). Studies have also shown that, if employees perceive no connection between performance and rewards, they become passive and apathetic, a state referred to as *learned helplessness*. Consequences of learned helplessness include low job satisfaction, absenteeism, and diminished motivation, all of which could have a negative influence on an organization’s ability to meet mission needs (Martinko and Gardner, 1982). Other theories of motivation, such as expectancy theory, as well as literature about procedural and distributive justice, offer support for the premise that perceptions of unfairness could not only limit the use of AcqDemo’s carefully designed flexibilities but also hinder organizational effectiveness in other ways (Beer and Cannon, 2004; Colquitt et al., 2001; Konovsky, 2000; Van Eerde and Thierry, 1996).

It should also be noted, however, that survey respondents recognized that AcqDemo was in an early stage of its implementation for many organizations. In addition, as we have already stated, AcqDemo’s early stage of implementation also hampers our analysis. Although these results are suggestive, it will take a more systematic assessment conducted when AcqDemo is in a steady state to verify the existence of barriers and develop interventions to reduce them.

Summary

AcqDemo has some increased hiring flexibilities relative to the GS system. These flexibilities include a shorter timeline for hiring and hiring officials’ ability to set pay for new hires. Also, pay bands provide greater flexibility in appointments. The performance appraisal system links job responsibilities and performance to mission contributions. But survey results suggest that many are too new to the system to feel they have a basis on which to judge the magnitude of this advantage. When supervisors *did* offer an opinion, they were generally, but not unanimously, favorable to flexibilities provided by AcqDemo’s performance appraisal system.

Barriers to using AcqDemo flexibilities include a lack of familiarity with AcqDemo, budget constraints that limit hiring and pay raises, limits within pay bands, and a perceived lack of fairness in AcqDemo’s performance appraisal system. Although we could not measure these barriers’ magnitude, even if perceptions of a lack of fairness are held by only a small proportion of the workforce, they can have negative effects on it as whole. The lack of familiarity barrier is likely to lessen over time with training and experience. But the other three barriers may be more difficult to mitigate.

Assessment Criterion G: Process for Performance Appraisal Feedback

G. Whether there is a process for—(i) Ensuring ongoing performance feedback and dialogue among supervisors, managers, and employees throughout the performance appraisal period; and (ii) Setting timetables for performance appraisals.

It is important for evaluation systems to facilitate dialogue between supervisors and employees and ensure continuous means of feedback. These feedback mechanisms allow employees to make continuous and meaningful improvements to performance while ensuring that employees feel they have a stake in the system under which they are evaluated. Structured feedback processes and continuous employee involvement can also help address concerns about transparency and fairness in performance appraisal systems. This chapter describes AcqDemo's performance appraisal process, with a specific focus on elements designed to facilitate dialogue and feedback. First, we describe the timeline of the appraisal process, and then we describe how this process is being implemented to ensure communication and feedback.

Timetables for Performance Appraisals

Under AcqDemo, a specific timeline has been set for the performance appraisal process. The annual appraisal cycle begins on October 1 and ends on September 30. Pay pools, pay pool panels, and pay pool managers are identified at the beginning of the assessment period. Within 45 days of the start of the appraisal period (or within 45 days of start of new employee or supervisor), each supervisor is expected to meet with his or her employees to discuss expectations of their contributions for that cycle. Approximately midway through each appraisal cycle, the rating official will meet with the employee to discuss his or her program under CCAS and make a notation of that discussion.

At the conclusion of the appraisal period, supervisors request input from employees on evidence of their contributions. Supervisors then use these data and their own observations and evidence to generate employee ratings. Subsequent to this rating process, the pay pool meets for the first time. During this meeting, supervisors present employee ratings to be placed in a pay pool matrix. The pay pool panel then works to adjust ratings for equity and consistency and enters OCS for all employees in the pay pool. Rating changes are discussed with the supervisors, and the pay pool panel meets a final time to address any remaining inconsistencies. After the pay pool manager approves all ratings, ratings are distributed to supervisors to discuss with the employees, and the pay adjustments become effective in the first full pay period of January.

Performance Feedback and Dialogue

As described in Chapter Four, the AcqDemo performance appraisal process calls for a significant amount of communication and feedback between supervisors and employees throughout the year. Each supervisor is required to talk with his or her employees at the beginning of the cycle about expectations for their contributions, including career path, broad band level, factors, and weights (if applicable). This process will ensure that employees are clear on the criteria against which they will be rated and allow employees the opportunity to note where accommodations may be necessary. It is also recommended that supervisors and employees communicate regularly throughout the year to discuss progress and reassess expectations. Approximately midway through each appraisal cycle, the rating official will meet with the employee to discuss his or her progress under CCAS and make a notation of that discussion. Finally, the employee is given the opportunity to play an important role in the rating process at the end of the cycle by providing input on the contributions that he or she believes he or she has made to the organization's mission.

The evidence on whether these processes are being implemented according to these expectations is mixed. Interviewees were not specifically asked about the feedback aspect of CCAS, and none of the AcqDemo 2012 conference materials on challenges and lessons learned mention communication between supervisors and employees as a particular issue. However, as Figure 7.5 in Chapter Seven indicates, AcqDemo survey respondents were less comfortable with the way the contribution appraisal system is administered than comparison-group employees were with their organizations' performance appraisal systems. This suggests that additional dialogue and performance feedback could be helpful in addressing discomfort with the appraisal system.

There are some Likert-scale survey items that provide information on whether these feedback and communication processes are being implemented effectively. Figure 8.1 indicates that AcqDemo respondents were as likely to have worked with the supervisor to set goals as were those in the comparison group. AcqDemo respondents were also as likely to report that supervisors communicated expectations and provided adequate feedback. Satisfaction with the role of feedback in AcqDemo was also expressed in open-ended comments, such as the remarks that follow:

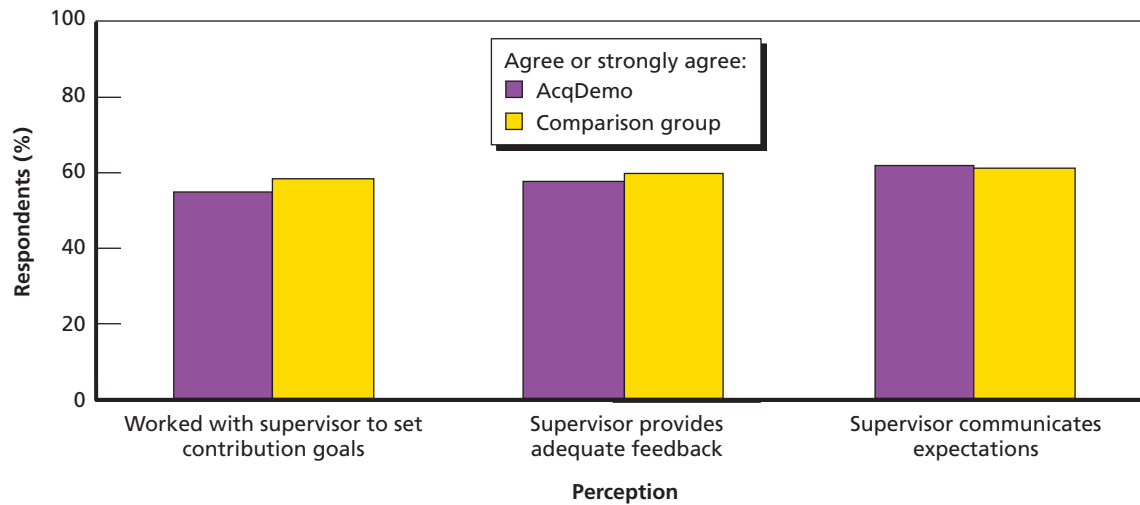
Provides a better forum for job expectations, recognition, and feedback than is available under GS. (respondent 4083; DoD agency; supervisor)

The AcqDemo system has given me a chance to document what I believe is expected of me, while also allowing my management to do the same. It provides an opportunity for communication between employee and manager. (respondent 4392; DoD agency; employee)

However, approximately one-fifth of AcqDemo respondents disagreed with these statements about having received feedback and guidance, indicating that the recommendations for communication efforts may not have been implemented evenly across AcqDemo. As the following remarks illustrate, some of the open-ended responses suggested that appropriate feedback was not provided by certain supervisors:

When supervisors don't do their part in setting objectives that align with the performance goals of the office and higher organization, or fail to conduct meaningful mid-year reviews

Figure 8.1
AcqDemo Survey Respondents Are as Likely as Those in the Comparison Group to Report Dialogue and Feedback



SOURCE: 2012 AcqDemo survey data.

NOTE: An asterisk denotes a statistically significant difference between survey respondents from AcqDemo and those from comparison-group organizations.

RAND TR1286-8.1

and then in effect steal from high achievers to level the pay in an office, it is a disservice to all involved and a lack of leadership by those who practice it. (respondent 1325; DoD agency employee)

The AcqDemo concept has tremendous potential, but success will require a much stronger commitment from supervisory personnel to leverage the AcqDemo tools and support effective two-way dialog [dialogue] on goals, objectives, expected contributions to programs, and managing employees. (respondent 2583; DoD agency; employee)

These comments suggest that there may be room for improvement to ensure that all employees benefit from the feedback processes that were built into the AcqDemo program.

Survey respondents also expressed frustration with the process to provide input on contributions at the end of the rating cycle. One set of criticisms focused on the time and effort required to write up this material. One respondent wrote,

CCAS is cumbersome and requires way too much time to effectively evaluate any employee both for the employee him/herself or the supervisor. It takes away valuable work time, minimizing the amount of time I have to perform my real job of supporting soldiers in the field. (respondent 5273; Army; supervisor)

As noted in Chapter Seven, respondents were also concerned that, because writing was such an important part of providing input on contributions, compensation may be directed to employees who are the best writers rather than those who made the greatest contribution. Finally, because the concept of contribution to mission was perceived by some as relatively abstract, respondents were concerned about the ability to convey contributions effectively. This, according to respondents, contributes to subjectivity in rating and places undue burden on supervisors.

Summary

AcqDemo uses an annual appraisal cycle that begins on October 1 and ends on September 30. Although supervisors and employees are encouraged to communicate frequently throughout the appraisal period, it is required that supervisors schedule a midcycle meeting to discuss progress. Employee ratings are gathered subsequent to the conclusion of a cycle, culminating in pay adjustments becoming effective in the first full pay period of January.

Our analysis of survey data found no statistically significant differences between AcqDemo and GS employees in the amount of dialogue and feedback they receive as part of their performance appraisal processes.

Assessment Criterion H: Impact on Career Progression

H. The project's impact on career progression.

The unusual history of AcqDemo's population discussed in Chapter One creates a short-run challenge for this analysis because there are relatively few employees who have continuously worked in AcqDemo for several years. Further, as we show in this chapter, those who have remained in AcqDemo do not appear to be representative of the population as a whole. Thorough analysis of objective data on career progression will require the passage of time with more employees who have longer histories in the program.

We begin with a comparison of the 2008 and 2011 AcqDemo workforce. We then address the question of the impact of AcqDemo on career progression, relying largely on interview data and survey results.

AcqDemo's Longer-Duration Employees

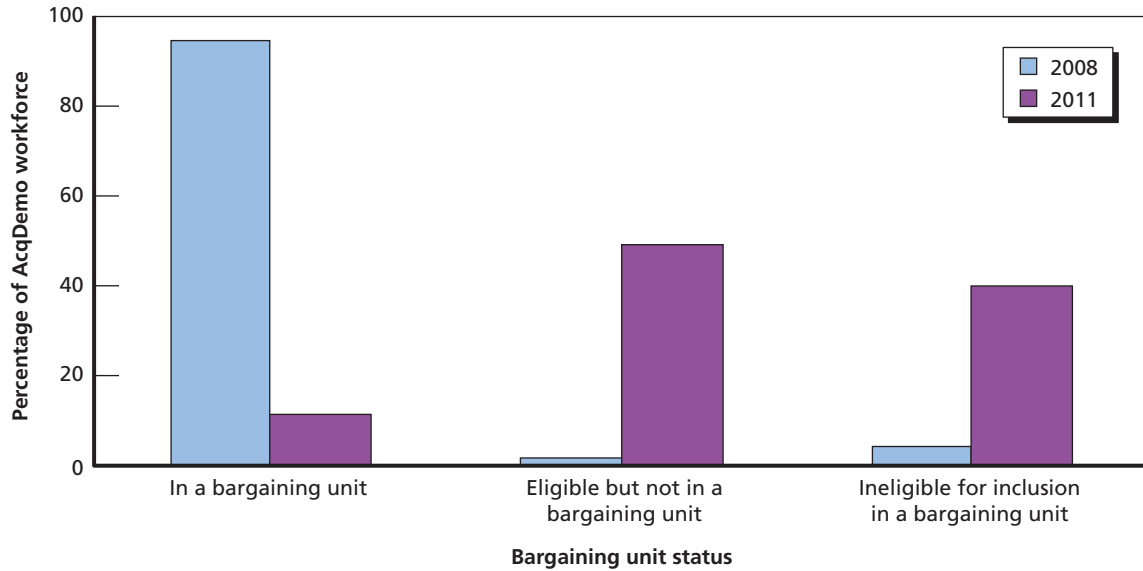
Employees who have been in AcqDemo for more than a year or so are not representative of a typical AcqDemo employee. Most notably, as shown in Figure 9.1, more than 90 percent of the 2008 employees (2,135 of 2,264) were unionized, compared with just 11 percent of the 2011 population.

Also, the vast majority of the 2008 workforce (90 percent) worked for the Army (see Figure 9.2). The 2011 workforce, by contrast, had a more mixed representation from the military services, with just 50 percent from the Army.

Therefore, the population that remained in AcqDemo continuously was highly unionized and Army-focused. Career-progression patterns for these individuals may therefore not be representative of what will happen to today's typical AcqDemo employee. We cannot draw inferences about the broader impact of AcqDemo on career progression from looking at these employees' careers. Instead, the observations in this chapter are based on insights from interviews, as well as survey results.

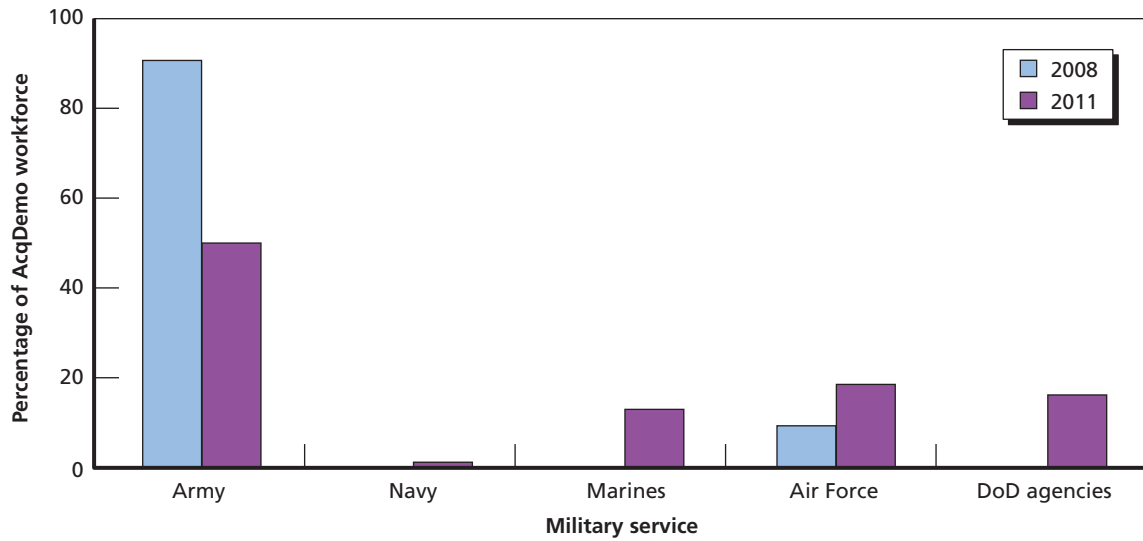
In Appendix B, we provide an additional analysis of the 2,135 unionized AcqDemo employees from 2008 and how their career outcomes subsequent to 2008 differed from those of a matched sample of non-AcqDemo unionized DoD employees. The results suggest that being in AcqDemo has increased both unionized employees' retention rates and their compensation levels. However, Appendix B's analysis is exploratory and should be primarily viewed as presenting an evaluation methodology that will be more informative when broader and richer data are available (e.g., for the congressionally mandated 2016 assessment).

Figure 9.1
AcqDemo 2008 and 2011 Populations, by Union Status



SOURCE: DMDC civilian data file.
 RAND TR1286-9.1

Figure 9.2
AcqDemo 2008 and 2011 Populations, by Military Service



SOURCE: DMDC civilian data file.
 RAND TR1286-9.2

Compensation

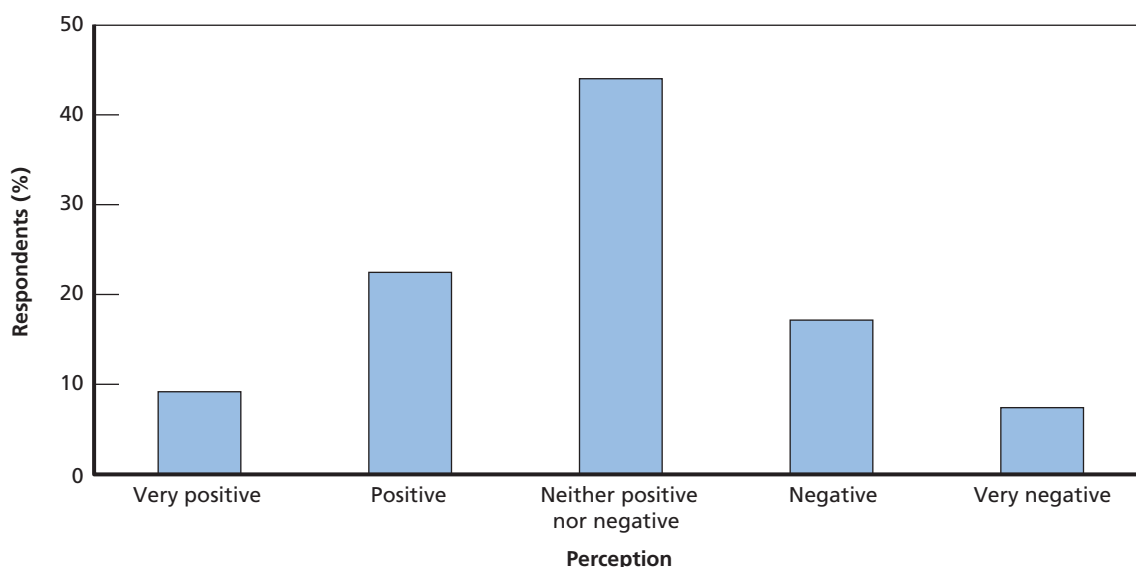
The broad band pay structure is intended to facilitate more rapid and more flexible movement across positions and levels of pay according to organizational needs and individual perfor-

mance. One interviewee noted that the opportunity for a higher starting salary and potential for quicker advancement were the most attractive aspects to new hires to AcqDemo, particularly those in the most competitive private labor markets. However, the survey evidence on whether AcqDemo is perceived to be having an impact on satisfaction with pay is mixed. Specifically, survey respondents were asked how AcqDemo influenced their satisfaction with their pay, with response options ranging from “very positive” to “very negative.” As shown in Figure 9.3, approximately 32 percent of respondents reported that AcqDemo had a positive or very positive impact on their satisfaction with pay, while 24 percent reported that it had a negative or very negative impact on their satisfaction with pay. AcqDemo participants were also no more likely to report that they are satisfied with pay than were those in the comparison group (60 percent and 58 percent, respectively, a nonsignificant difference).

The mixed opinions about pay were echoed in the open-ended responses. One respondent reported, “I have been able to make substantially more than I would if I had been in the GS system without having to move” (respondent 755; Army; supervisor). Another wrote, “I believe that, though I entered government employment with pay below private industry for equivalent work, I was able to climb quickly and maintain parity with private industry” (respondent 94; Army; supervisor). However, some other respondents expressed that AcqDemo had not improved compensation relative to what they would have earned under other compensation systems. Of course, the goal of a pay-for-performance system is not necessarily to increase every employee’s compensation level. However, an ideal outcome would be improved employee satisfaction with pay due to a strong, transparent link between contribution (or performance) and compensation.

Employees who face the greatest challenges with career advancement through compensation are those who were placed on retained pay or who otherwise have reached the top of a pay band. Without a promotion to a competitive position in another band, these employees are

Figure 9.3
The Reaction to AcqDemo’s Impact on Pay Is Mixed



SOURCE: 2012 AcqDemo survey data.

RAND TR1286-9.3

not able to receive salary increases based on their contribution (as would also be true for GS employees at the top of their pay bands). According to Executive Council meeting notes and site histories, the issue of how to address employees on retained pay in CCAS was discussed at length in the transition out of NSPS. Several briefings at the April 2012 AcqDemo 2.0 conference also addressed what to do with employees at the top of the NH IV band. Some survey respondents expressed frustration with these ceiling issues, and, indeed, this issue was identified in Chapter Seven as one of the barriers to using AcqDemo's flexibilities. As noted in Chapter Seven, approximately 29 percent of AcqDemo survey respondents reported falling at the top of a pay band.

Employees were also frustrated with the lack of additional compensation for taking on supervisory duties. One supervisor noted, "At leadership levels, though, it is a disincentivizing system because there are no rewards or incentives for taking on additional leadership and supervisory responsibilities" (respondent 4257; DoD agency; supervisor). SME interviews revealed that pay for supervisory duties was a key part of the NSPS and LabDemo projects that component representatives would like to see become a part of AcqDemo. On the other hand, the opportunities to receive additional pay without taking on supervisory duties were perceived to be higher by AcqDemo respondents than their counterparts in the comparison group.

Promotion

In addition to affecting salary, the broad band system may have implications for promotions to new positions. Overall, survey respondents felt more positive about their opportunities for promotion than did survey respondents from the comparison group. As shown in Figure 9.4,¹ 29 percent of AcqDemo respondents reported that they were *satisfied* or *strongly satisfied* with the opportunity to get a better job in their organization, compared with only 25 percent of respondents in the comparison group. With regard to opportunities for promotion, 29 percent of AcqDemo respondents were *satisfied* or *strongly satisfied*, compared with only 23 percent of the comparison group.

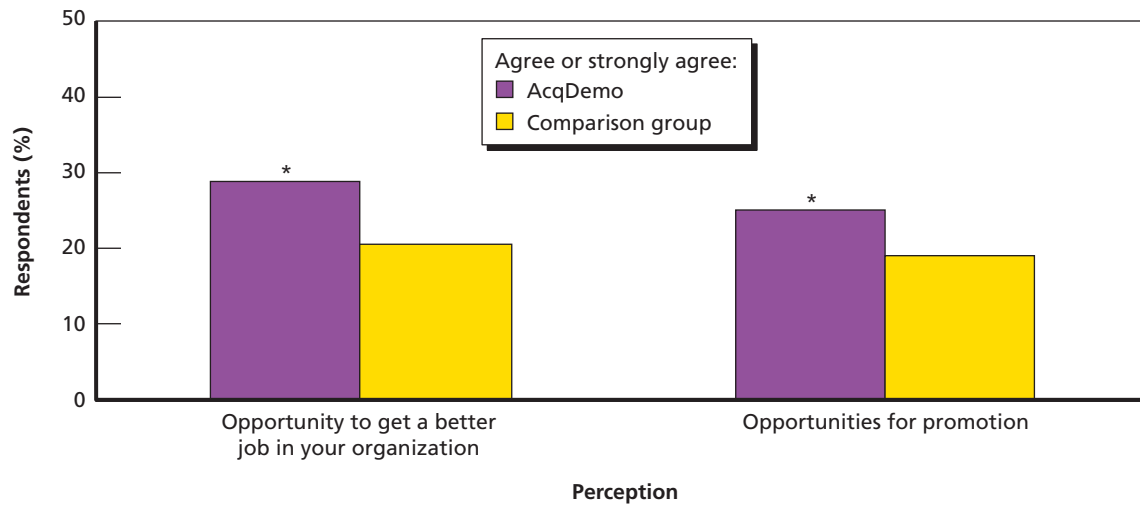
Professional Development

AcqDemo provides several opportunities for professional development that may not have been available under the GS system. Currently, all acquisition workers qualify under DAWIA for academic degree and certificate training. However, AcqDemo expands this opportunity to nonacquisition workers under the demonstration project. In addition, AcqDemo provides the option of sabbaticals to allow employees with at least seven years of experience to acquire knowledge and expertise outside of the standard working environment.

Additional professional development opportunities are among the less discussed aspects of AcqDemo. The opportunities were acknowledged in the training materials for employees and supervisors, and one interviewee mentioned academic training as being one of the strengths of the program. However, relatively few survey respondents mentioned this aspect of AcqDemo

¹ Figures 9.4 and 9.5 feature the results of our analysis of Likert-scale survey items that ranged from "strongly agree" to "strongly disagree" and included both a neutral midpoint and a "no basis to judge" option.

Figure 9.4
AcqDemo Survey Respondents Are More Likely Than Those in the Comparison Group to Be Satisfied with Promotion Opportunities



SOURCE: 2012 AcqDemo survey data.

NOTE: An asterisk denotes a statistically significant difference between survey respondents from AcqDemo and those from comparison-group organizations.

RAND TR1286-9.4

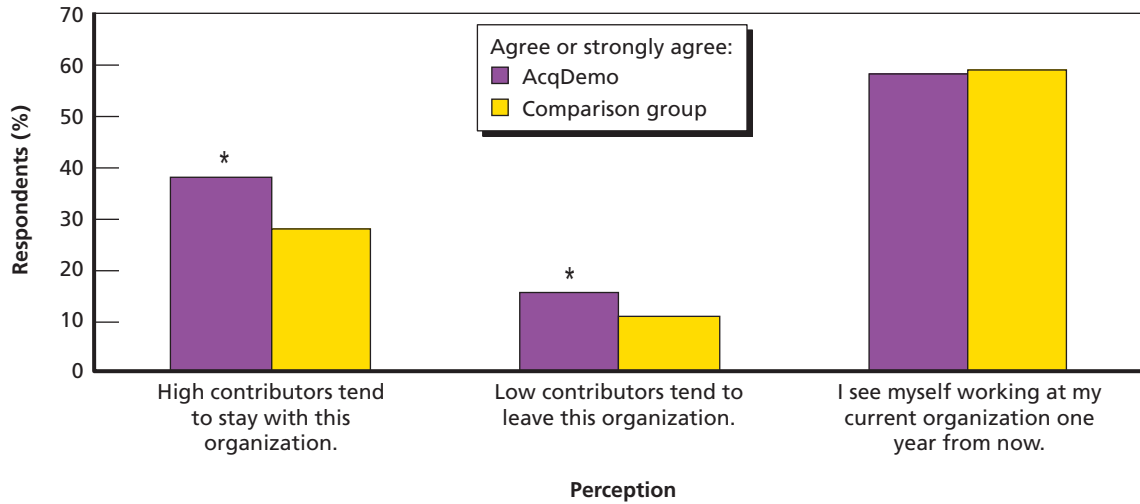
in open-ended responses on the program's impact. AcqDemo respondents were no more likely than comparison-group respondents to report that there were adequate opportunities for academic and degree training (approximately 80 percent across both groups).

Retention

AcqDemo has the potential to affect the makeup of the workforce by providing employees with varying financial incentives and changing the way that reduction-in-force (RIF) procedures are defined. As long as AcqDemo provides a clear link between pay and performance, high-performing employees will be encouraged to stay, and low performers will have increased incentives to leave. In addition, the link between retention service credits in RIF and performance is intended to ensure that nonvoluntary separations are concentrated among the lowest-performing employees. According to one SME whom we interviewed, this ability to retain a higher-quality workforce is the greatest strength of the AcqDemo program.

Employee survey data are mixed on the impact of AcqDemo on retention. As Figure 9.5 shows, AcqDemo respondents were more likely than comparison-group respondents to agree or strongly agree that high performers stay and low performers leave, indicating that AcqDemo employees are more likely to feel that their organizations are retaining the best people. However, there is no difference in individual plans for retention, with AcqDemo and comparison-group respondents equally likely to plan to be working for the same organization a year from now.

Figure 9.5
Evidence for AcqDemo’s Impact on Retention Is Mixed



SOURCE: 2012 AcqDemo survey data.

NOTE: An asterisk denotes a statistically significant difference between survey respondents from AcqDemo and those from comparison-group organizations.

RAND TR1286-9.5

Summary

We are not in a position to make a definitive judgment about AcqDemo’s effect on career progression. Too few employees have been continuously in AcqDemo for more than a year or two, and those who have been in AcqDemo for a longer period are unrepresentative of a typical AcqDemo employee.

As potential leading indicators of career progression, survey findings are mixed. Survey responses suggest that AcqDemo may provide greater promotion opportunities, and AcqDemo employees are more likely to feel that their organizations are retaining the most productive workers. However, when AcqDemo employees are asked about satisfaction with compensation and future job plans, there is no evidence of an impact from participating in AcqDemo.

Assessment Criterion I: Appropriateness in Light of Complexities of the Workforce

I. The project's appropriateness or inappropriateness in light of the complexities of the workforce affected.

As shown in Figure 2.3 in Chapter Two, AcqDemo civilian employees have higher education levels than the DoD civilian workforce overall. If higher education levels may be considered as a proxy for high levels of knowledge, skills, and abilities, this suggests that AcqDemo may be appropriate for many of the employees currently managed under this system. The SMEs we interviewed told us that AcqDemo's complexity is considerably mitigated by the high skill and knowledge levels intrinsic to the acquisition workforce (i.e., the majority of AcqDemo civilian employees). In addition, according to one interviewee, the education-based qualities of the population make AcqDemo a particularly suitable program because these employees have the potential for high salaries and otherwise attractive positions among private-sector employers, so AcqDemo's flexibility increases the competitiveness of acquisition jobs. AcqDemo is believed to be appropriate for the high-skill AcqDemo workforce because it increases competitiveness for the highest-quality workers, provides opportunities for rapid growth to a workforce with high levels of motivation, and provides supervisors the flexibility to staff positions quickly and efficiently in the fast-paced acquisition workforce (64 *Fed. Reg.* 1426 [OPM, 1999]).

The 2012 AcqDemo survey did not include questions expressly about the system's appropriateness, so we opted to regard favorability as a proxy for appropriateness. Table 10.1 displays the percentage of respondents who either agree or strongly agree with the statement "I am in favor of AcqDemo for my organization." As the table shows, a higher level of education is related to greater favorability toward the program. However, the relationship between education and favorability toward AcqDemo disappears when taking other employee characteristics (e.g., supervisory status, career path) into consideration, indicating that education alone

Table 10.1
Education Levels and Favorability Toward AcqDemo

Reported Education Level	N	Percentage Agreeing
High school or GED or less	58	29
Some college or trade school	673	36
Bachelor's degree	1,303	39
Graduate education	2,024	47

SOURCE: 2012 AcqDemo survey data.

may not drive perceptions of favorability. These feelings were mirrored in several open-ended responses about AcqDemo's impact. For example, one respondent wrote,

AcqDemo is for acquisition personnel who have obtained college degrees. It is in no way beneficial for me. It makes me feel that without a degree, no matter how hard I work, I should go back to the VA [U.S. Department of Veterans Affairs] since I can try to get back into the training arena and not have a degree or not be enrolled into college. (respondent 81; agency not provided; supervisor)

Some survey and interview data suggest that AcqDemo may not be suitable for certain employees. Chapter Seven noted frustration among a group of employees who are on retained pay or otherwise fall at the top of their pay bands. For AcqDemo to effectively link contribution and pay, employees must be able to receive compensation for performing beyond expectations. Yet, for those at the top of the pay band who cannot receive additional pay increases, the potential for AcqDemo to incentivize performance is greatly diminished, so AcqDemo may not be an appropriate means of rewarding strong performance among these groups of employees.

A particularly important aspect of AcqDemo is the ability of employees to link their daily work to the organizational mission. Nearly two-thirds of AcqDemo respondents reported that the six elements of CCAS are sufficient to describe their contribution to the mission. However, 16 percent of respondents did not feel that the system was adequate. Clearly describing contribution to the mission is critical in achieving a high ranking in CCAS and being rewarded for contribution, so, without the ability to sufficiently account for contribution, these employees may not be served effectively by AcqDemo. Certain comments suggest that AcqDemo may undervalue employees with less visible jobs or jobs that do not have a clear link to mission. Examples of these comments include the following:

For employees who have more visible jobs, ratings are easier to justify. (respondent 5143; Army; supervisor)

I believe that I am in the wrong track due to the fact that I am not in an acquisition-type position but in a support position, for which I believe GS would be a better fit. Comparing me against others who are acquisition specialists is not appropriate. (respondent 2632; DoD agency; employee)

It has become disconcerting to know that even if you excel at your job, if it's not one with high visibility in the organization, you will not be recognized by management as being important to or part of the "team" when it comes to awards. (respondent 5852; Army; employee)

Summary

AcqDemo is believed to be appropriate for the high-skilled workforce in the fast-paced acquisition environment because it increases competitiveness for the highest-quality workers, provides opportunities for rapid growth, and provides supervisors the flexibility to staff positions quickly and efficiently. AcqDemo civilian employees have higher education levels than the

DoD civilian workforce overall, and survey data suggest a positive relationship between a respondent's education level and his or her favorability toward AcqDemo. However, the relationship between education and favorability may be largely driven by other characteristics, such as supervisory status or career path.

There are certain groups of employees who feel that they are not fully able to benefit from the AcqDemo, suggesting that AcqDemo as currently designed may be less suitable for certain employees. For some employees, pay band limits prevent them from being paid according to contribution. Others believe that a lack of visibility, unclear linkages between position duties and mission, or both limit their opportunity for recognition.

Assessment Criterion J: Sufficient Protections for Diversity in Promotion and Retention

J. The project's sufficiency in terms of providing protections for diversity in promotion and retention of personnel.

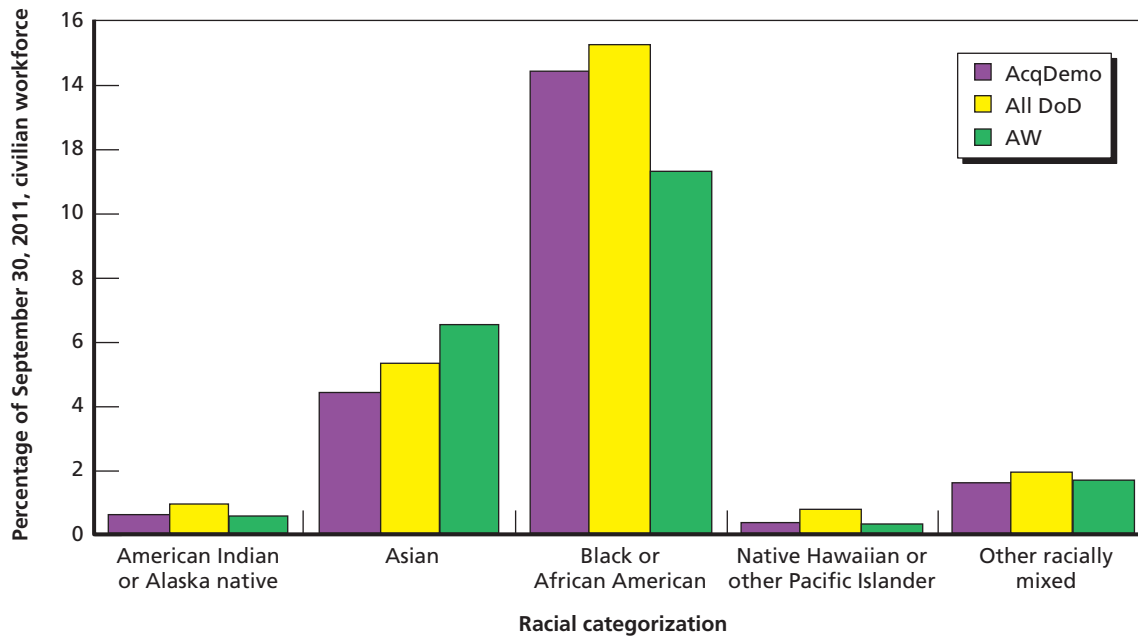
DoD and the federal government as a whole have a longstanding commitment to diversity in the workplace. As the U.S. population grows more diverse, so too does the need for both private and public sector employers to attract and manage a diverse workforce effectively. The federal workforce in particular has a special imperative to do this, given the longstanding recognition that all aspects of the federal government should reflect the diversity of its citizens (Kellough and Naff, 2004). The Civil Service Reform Act of 1978 (Pub. L. 95-454) is a prime example of the federal government's attempt to promote such diversity via legislation. This assessment criterion is consistent with that history.

AcqDemo has somewhat greater female representation than seen in the overall DoD civilian workforce and acquisition workforce (38 percent versus 35 percent and 31 percent, respectively). On the other hand, Figure 11.1 shows that AcqDemo has somewhat lower racial minority representation than seen DoD-wide. The findings are similar for ethnicity, with 5 percent of AcqDemo respondents Hispanic, compared with 6 percent DoD-wide. AcqDemo has proportionally more African American employees and fewer Asian American employees than the acquisition workforce. The gender and racial composition of the AcqDemo workforce does not indicate, in either direction, whether AcqDemo provides sufficient protections for diversity in promotion and retention of personnel.

Not all interviewees were questioned about diversity, but those who mentioned diversity asserted that AcqDemo offers the same protections as are offered in other personnel systems. There was no mention of diversity in presentations on challenges and lessons learned at the AcqDemo 2012 conference. One interviewee noted that the real challenge in diversity for her organization was in hiring, but she believed that the challenge was a recruitment issue, not something specific to AcqDemo. Several interviewees noted that they were regularly tracking compensation and promotion outcomes by demographic category, indicating that AcqDemo personnel managers and leadership are attuned to this issue. Ideally, we would look at a range of evidence to assess equality of opportunity, including equal-opportunity statistics, pay pool results, and retention rates. However, because of data limitations and the transitional population in AcqDemo, we are limited to survey responses to examine equality in perceptions of fairness and opportunity.

Examining employee responses by key demographics can help to shed light on whether racial and gender patterns in employee perceptions look similar across AcqDemo and the comparison group. There are likely to be differences in perceptions of the personnel management

Figure 11.1
Racial Diversity in AcqDemo Compared with That in DoD and the Acquisition Workforce



SOURCE: DMDC civilian data file.

NOTE: This figure omits whites, as well as those with unknown racial status, e.g., those employees who chose not to provide racial categorization information (about 3 percent of AcqDemo employees and 4 percent of DoD civilian employees).

RAND TR1286-11.1

system by race and gender for both AcqDemo and the comparison group. However, if we see larger differences for AcqDemo than in the comparison group on items on fairness and opportunity, it may *suggest* (but not confirm) inadequate protections for diversity.

Table 11.1 presents the percentage of respondents agreeing with the statement “I am comfortable with the way my organization administers the contribution appraisal system.” In both AcqDemo and the comparison group, female employees and nonwhite employees were less likely than others to indicate that they were comfortable with the appraisal system. The difference between white and nonwhite employees in AcqDemo (–10.3 percentage points) is slightly larger than the difference in the comparison group (–9.5 percentage points), but this “difference in differences” between AcqDemo and the comparison group is not statistically significant.¹ Gender differences for the AcqDemo and comparison groups were different, with males more comfortable with the appraisal system in AcqDemo, while females in the comparison group were more comfortable with the appraisal system. However, the difference in differences again was not statistically significant.

¹ In the analyses presented in Tables 11.1–11.4, we are most focused on the difference column and whether the difference in differences (e.g., between –10.3 percent and –9.5 percent) is statistically significant. Table 11.1 suggests, for instance, that white respondents are more comfortable with both AcqDemo’s appraisal system and with the GS appraisal system (the comparison population). But our focus is on whether the relative magnitude of racial difference (a 10.3-percentage-point gap for AcqDemo and a 9.5-percentage-point gap for GS) is statistically significant. In this case, logistic regression finds that the difference in differences is not statistically significant.

Table 11.1
Comfort with the Way the Appraisal System Is Administered (%)

Respondent	Race			Sex		
	White	Nonwhite	Difference	Male	Female	Difference
AcqDemo	34.4	24.2	-10.3	34.3	28.3	-6.1
Comparison	47.8	38.3	-9.5	42.2	54.6	12.4

SOURCE: 2012 AcqDemo survey data.

NOTE: For AcqDemo survey respondents, the survey item read, "I am comfortable with the way my organization administers the contribution appraisal system." For comparison-group survey respondents, the survey item read, "I am comfortable with the way my organization administers the performance appraisal system." The data show the percentages of respondents who agreed or strongly agreed. The differences between AcqDemo and the comparison group are not significant in this table when controlling for race and ethnicity, gender, education, age, years of service, component, supervisory status, and union status.

As noted in Chapter Seven, the areas that employees feel are among the least fair are the rating system and payout process. The subjectivity involved in the rating process creates a situation in which protections for diversity are particularly important. As Table 11.2 shows, across both AcqDemo and the comparison group, minority and female employees were typically less likely to feel that pay was fair, with the exception of minority employees in the comparison group. But, as in Table 11.1, the differences between them are not statistically significant.

With regard to promotion, differences by race and ethnicity and gender show a somewhat different pattern (Table 11.3). Minority respondents in the comparison group were less satisfied with opportunities for promotion, while minority respondents in AcqDemo were more satisfied with promotion opportunities. The difference in differences is statistically significant when controlling for other demographics, suggesting that satisfaction with promotion opportunities is more equal across racial and ethnic lines in AcqDemo. The differences by gender were similar for AcqDemo and the comparison group, indicating no impact of AcqDemo on satisfaction with promotion opportunities by gender.

Finally, we used responses to the item "I see myself working at my current organization one year from now" to examine demographic differences in immediate retention rates. There are no racial or ethnic differences in plans for retention in either AcqDemo or the comparison group (Table 11.4). With regard to the gender patterns in plans to stay, there is a large difference for the comparison group and only a small difference for AcqDemo respondents. The

Table 11.2
Perceptions of Fairness in Compensation (%)

Respondent	Race			Sex		
	White	Nonwhite	Difference	Male	Female	Difference
AcqDemo	34.3	23.1	-11.1	34.1	28.1	-6.0
Comparison	38.2	39.2	0.9	40.2	36.8	-3.4

SOURCE: 2012 AcqDemo survey data.

NOTE: The survey item read, "My organization administers pay fairly." The data show the percentages of respondents who agreed or strongly agreed. The differences between AcqDemo and the comparison group are not significant in this table when controlling for race and ethnicity, gender, education, age, years of service, component, supervisory status, and union status.

Table 11.3
Satisfaction with Promotion Opportunities (%)

Respondent	Race			Sex		
	White	Nonwhite	Difference	Male	Female	Difference
AcqDemo	24.9	26.2	1.3*	26.0	24.1	-1.9
Comparison	20.8	12.2	-8.6	20.1	18.8	-1.3

SOURCE: 2012 AcqDemo survey data.

NOTE: * = AcqDemo racial and ethnic and gender differences are statistically significantly different from those for the comparison group when controlling for race and ethnicity, gender, education, age, years of service, component, supervisory status, and union status. The survey item read, "I am satisfied with the opportunities for promotion." The data show the percentages of respondents who agreed or strongly agreed.

Table 11.4
Plans for Retention (%)

Respondent	Race			Sex		
	White	Nonwhite	Difference	Male	Female	Difference
AcqDemo	61.0	61.0	0.0	58.6	59.3	0.7*
Comparison	51.1	51.1	-0.1	67.4	46.9	-20.6

SOURCE: 2012 AcqDemo survey data.

NOTE: * = AcqDemo racial and ethnic and gender differences are statistically significantly different from those for the comparison group when controlling for race and ethnicity, gender, education, age, years of service, component, supervisory status, and union status. The survey item read, "I will be working in this organization one year from now." The data show the percentages of respondents who agreed or strongly agreed.

statistically significant finding suggests that AcqDemo may be more gender-equal in terms of retention than the GS is.

Summary

Our interview data suggest that sufficient protections have been put in place to ensure equal opportunity. In addition, analysis of survey data indicates that AcqDemo may be more equal in promotion of minority employees and may be more gender-equal in terms of retention. However, partially due to small sample sizes in the comparison group, the analyses that suggest moderately negative results are nonsignificant. As additional data become available, repeating analysis of the perception-based issues covered in this chapter and conducting new analysis of gender and racial and ethnic differences in actual career outcomes (e.g., promotions, pay raises) will provide a stronger basis for concluding whether adequate safeguards are in place to protect diversity.

Assessment Criterion K: Adequacy of Training

K. The adequacy of the training, policy guidelines, and other preparations afforded in connection with using the project.

Documentation from the AcqDemo Program Office, as well as SME interviews, show that the program office provides extensive training to human resource professionals, supervisors, and employees on how to implement the program. The AcqDemo Program Office standard is that 75 percent of employees be trained before an organization can join AcqDemo. According to one interviewee who is familiar with the training procedures, new organizations receive the following:

- a one-hour senior-leader overview training
- a day-long hands-on workshop for human resource staff
- a three-hour employee brief (typically lecture style)
- a one-day training session for supervisors on CCAS and employee assessments
- a half-day workshop for employees on writing self-assessments
- a workshop training for pay pool managers
- a class for data maintainers
- facilitators for the first pay pool process.

According to the preferences of organizations, training staff can return to update courses or provide training to new employees. “Just-in-time” training courses offer organizations the opportunity to deliver information right when employees most need it. Organizations request this training by contacting the program office. Because of concern about information overload, some organizations also encourage employees to revisit the program materials later in the year. In addition to this in-person training, survey responses and conference presentations suggest, alternative channels of information distribution (e.g., email) are being used to communicate with employees about AcqDemo. Training consultants are also developing e-learning courses and software applications in an effort to expand the options for accessing information on AcqDemo.

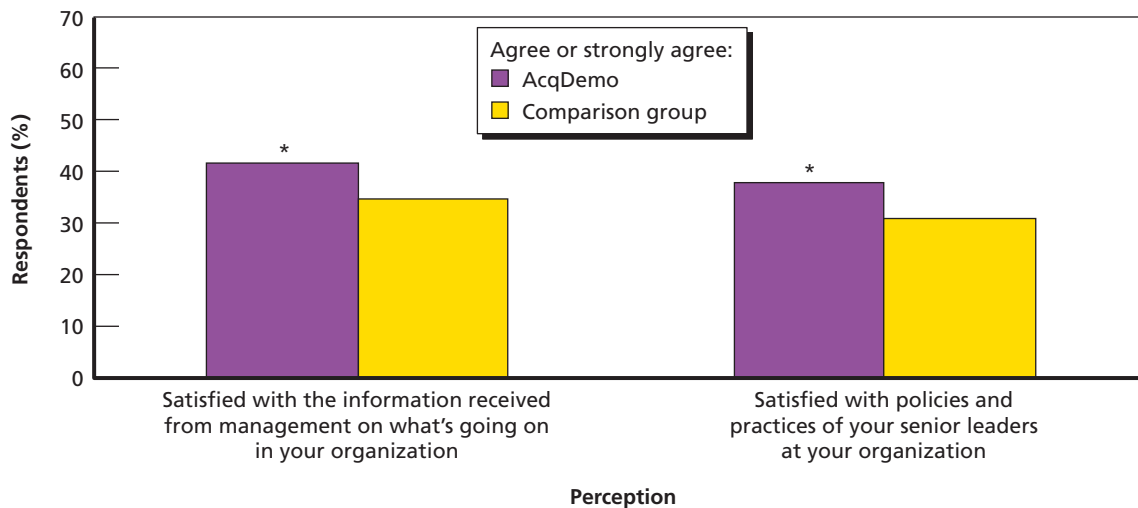
Interviews with SMEs and presentations at the 2012 AcqDemo 2.0 conference indicate that many believe that training for AcqDemo was adequate. Every organization representative who presented at the conference reported training as one of the things that “went well during the transition.” Executive Council meeting minutes reveal that training was a focus throughout the transition, and SMEs reported that feedback surveys given after training were generally favorable. As a human resource professional described during an interview, “[Our organization] worked very hard to train workers on how CCAS works. [Its leaders] have gone to great

[trouble] to make sure people understand it. The program office was instrumental in making sure that this happened.”

Despite these extensive training efforts, conference presentations and SME interviews acknowledge gaps in training for some employees. A small number of survey respondents echoed leadership concerns about gaps in training or training that was not received in time. The employee survey did not contain any items that directly asked about training on AcqDemo and CCAS, but several items indirectly addressed training and communication of AcqDemo policies and procedures. AcqDemo respondents were more likely to say they were satisfied with the information received on what was going on with their organizations and more likely to be satisfied with their organization’s policies and procedures than those in the comparison group (Figure 12.1).¹ However, when AcqDemo employees were questioned specifically about the impact of AcqDemo on satisfaction with information received and organizational policies and procedures, equal numbers of respondents reported feeling that AcqDemo had both positive and negative effects on information received and organizational policies and procedures.

Several of the SMEs interviewed noted that, even among those who received all of the training, AcqDemo and CCAS may remain challenging for some employees to understand, as alluded to in the discussion of criterion D. SME interviews revealed perceptions that supervisors understand the CCAS process better than nonsupervisors and that CCAS may be toughest to understand for employees in the support career paths. According to interviews and conference presentations, the most difficult aspect of CCAS to teach AcqDemo employees is how to effectively relate their work to “contribution to mission” through a write-up on the six evaluation areas. Leadership does not believe that the distinction between performance

Figure 12.1
AcqDemo Survey Respondents Reported Being More Satisfied Than Those in the Comparison Group with Information Received from Management and Their Organizations’ Policies and Procedures



SOURCE: 2012 AcqDemo survey data.

NOTE: An asterisk denotes a statistically significant difference between survey respondents from AcqDemo and those from comparison-group organizations.

RAND TR1286-12.1

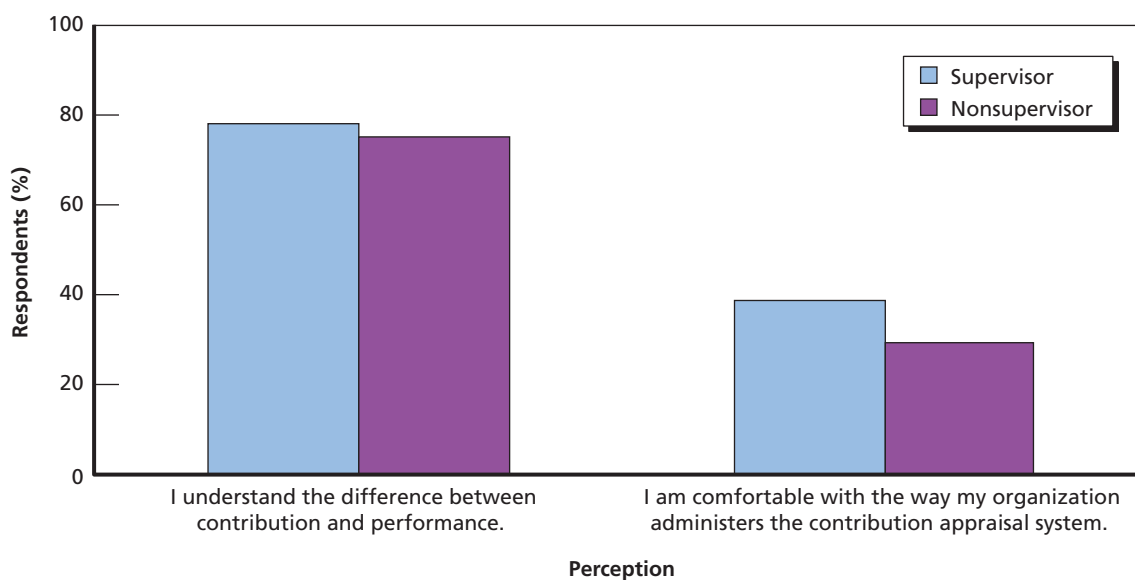
¹ Figures in this chapter feature the results of our analysis of Likert-scale survey items that ranged from “strongly agree” to “strongly disagree” and included both a neutral midpoint and a “no basis to judge” option.

and contribution is a trivial one, and one of the challenges is to make sure employees understand this distinction and are able to convey contributions in writing. Yet, according to several SMEs, a clear understanding of the CCAS process will come over time as employees gain a year or two of experience with the appraisal process. This learning by doing, along with just-in-time follow-up training and open access to training materials, was cited as a means to close gaps in understanding.

With regard to the distinction between contribution and performance, both groups have relatively strong understanding of the distinction between contribution and performance, and nonsupervisors are equally likely to know the difference between the two concepts (Figure 12.2). However, the data on comfort with the contribution appraisal system, which we have cited in several chapters, suggest a potential issue. Figure 7.5 in Chapter Seven showed that AcqDemo respondents were less likely to report being comfortable with the way their organizations administer the contribution appraisal system (32 percent of AcqDemo agreed or strongly agreed, versus 46 percent in the comparison group, who responded to a similar question about their performance appraisal system). Nonsupervisors were particularly unlikely to report being comfortable with the appraisal system. This evidence and other data presented on barriers in Chapter Seven suggest that additional training may be needed to address gaps in understanding and trust.

As context for these findings, we reiterate the observation shown in Figure 1.1 in Chapter One that AcqDemo experienced a large-scale influx of employees in 2011. There is no obvious benchmark for rating training against such a challenge.

Figure 12.2
Supervisors Are More Comfortable Than Those in the Comparison Group with the Contribution-Based Compensation and Appraisal System and More Satisfied with Information Provided by Management



SOURCE: 2012 AcqDemo survey data.

NOTE: An asterisk denotes a statistically significant difference between survey respondents from AcqDemo and those from comparison-group organizations.

RAND TR1286-12.2

Summary

The program office provides extensive training to human resource professionals, supervisors, and employees on how to implement AcqDemo. In addition, most interviewees reported that training was significant and sufficient. However, survey data suggest that less than one-third of AcqDemo respondents feel comfortable with the appraisal system, and nonsupervisors were particularly likely to report feeling a lack of comfort. This expressed lack of comfort and the barriers discussed in Chapter Seven suggest that additional training opportunities may exist.

Assessment Criterion L: Process for Ensuring Employee Involvement

L. Whether there is a process for ensuring employee involvement in the development and improvement of the project.

We learned about the process for ensuring employee involvement in the development and improvement of AcqDemo through interviews with AcqDemo Program Office staff, a review of program documents (e.g., AcqDemo's notice in the *Federal Register*, the project's operating manual [*DoD Civilian Acquisition Workforce Personnel Demonstration Project Operating Procedures*, 2003]) and data collection–related materials, and the April 2012 AcqDemo 2.0 conference, which we attended.

First, the project has three oversight-oriented groups in place: the Executive Council, the TRAC, and the EARC. The Executive Council was established in 1999, and its members include program office personnel; the AcqDemo program manager from each component and the DoD agency participating in the project; representation from the Office of the General Counsel and the Office of the Under Secretary of Defense for Personnel and Readiness, as needed; and a representative from SRA International, the contractor that supports AcqDemo administration. The council meets on a regular basis to discuss how the AcqDemo project is operating. In 2011, when many employees were transitioned back into AcqDemo, the Executive Council met at least monthly, with special meetings being called as needed to discuss and resolve issues. In 2012, the council moved to bimonthly meetings. We reviewed Executive Council meeting minutes and noted that topics on its agenda included training requirements related to the transition, CAS2Net, retained pay, and new operating procedures.

The TRAC is a relatively new committee that, at the time of our assessment, had provided only a limited amount of feedback on new e-learning products. The TRAC's charter, however, indicates that new training materials will be developed and released throughout 2012, so this committee should have more involvement in developing and improving AcqDemo, at least in terms of training, as time progresses.

The EARC was established in 2011 by the AcqDemo Program Office and Executive Council. According to its charter, "The EARC shall review all interventions and related elements of AcqDemo, including those mentioned in the NDAA 2011 assessment requirements, and provide their findings and recommendations to the AcqDemo Executive Council." Like the Executive Council, its members include program office personnel, AcqDemo points of contact from each component and DoD agency participating in the project, and SRA International contractors. At the time of this assessment, the EARC had met five times: four times in 2011 and once in 2012. A review of EARC meeting minutes revealed that the committee focused greatly on data collection efforts intended to inform the 2012 assessment mandated by

Congress, including site historian reports, an attitude survey, and focus groups with employees and supervisors.

These data collection efforts represent additional ways in which employees can be involved in developing and improving AcqDemo. AcqDemo program staff called for site historians for each organization in order to identify and report events, policies, or procedures that may affect their organizations and, consequently, how well the AcqDemo project operates. The AcqDemo Program Office has developed a site historian form and a training-related briefing, but, at the time of our assessment (spring 2012), not all organizations under AcqDemo had submitted site historian reports. It is possible that, once the project has moved into a steadier state, organizations will comply more readily with the program office's request and take advantage of this opportunity to provide input.

The survey and focus groups also provide ways for employees to suggest improvements to AcqDemo. The survey included several open-ended items intended to elicit ideas to improve the project, including questions about how to improve the administration of AcqDemo and increase opportunities available to employees in AcqDemo. Similarly, the focus groups that SRA International conducted in the spring and summer of 2012 covered such topics as the overall impact of AcqDemo; specific features concerning hiring, job classification, and CCAS; AcqDemo training; and desired improvements to the project. SRA International's sampling plan included sessions with employees, supervisors, and pay pool managers from different sites across the components. Focus groups were not yet completed at the time of our assessment, so we could not analyze the results, but the aforementioned topics SRA International covered and the types of personnel that participated should yield helpful insights about how to refine and improve AcqDemo.

Finally, the AcqDemo conference provides a venue to share ideas for improving the demonstration project. The April 2012 conference had approximately 150 attendees representing the components and DoD agencies. Many of the participants were human resource professionals, but others involved in implementing AcqDemo, such as pay pool managers and data maintainers, also participated. During the conference, participants gave presentations about what worked well, what challenges were faced, and how challenges were—or would be—overcome during the transition period, the initial review, and at present. The conference also had several hands-on opportunities for improvement. For example, participants reviewed new training materials and computer-based modules and provided feedback on them, and breakout sessions were scheduled during which personnel from the components and DoD agencies discussed the design modifications they wanted to recommend to AcqDemo Program Office staff. These ideas for design improvements were briefed to all conference attendees and later made available on the AcqDemo Program Office website.

Taken together, these various mechanisms demonstrate that AcqDemo program staff have taken steps to obtain employee input on where and how to improve AcqDemo. Although the response rate to the survey was relatively low, and not all organizations submitted site historian reports, these events may have been influenced by the timing of data collection, which closely followed the AcqDemo transition period and first review cycle. In addition, conference attendees suggested that AcqDemo's survey was fielded around the same time frame as other, completely independent survey efforts. The AcqDemo Program Office has indicated plans to conduct surveys and focus groups on a regular basis, possibly annually, so that it can monitor response rates and track changes to specific, relevant questions over time. For instance, in the 2012 survey, respondents were asked how satisfied they were with involvement in decisions that

affect their work. Forty-seven percent of respondents from AcqDemo organizations indicated they agreed or strongly agreed with that statement. Although this was statistically no different from responses from the comparison group, it is close to a majority view and may be corroborated with data from SRA International's focus groups.

Summary

AcqDemo has three oversight-oriented groups in place: the Executive Council, the TRAC, and the EARC. The Executive Council is the longest established and has monthly or bimonthly meetings. The AcqDemo Program Office has also solicited information via the 2012 AcqDemo survey fielded by SRA International and site histories. Focus groups are also planned. AcqDemo has also hosted annual conferences. Taken together, these various mechanisms demonstrate that AcqDemo program staff have taken steps to obtain employee input on where and how to improve AcqDemo.

Conclusions

Although its calendar was legislatively prescribed, this is a notably poor time for an assessment of AcqDemo. After being sharply diminished in the 2007–2010 time frame, the program was rejuvenated by an influx of employees in 2011 following the elimination of NSPS. Indeed, the workforce managed under AcqDemo grew markedly in 2011, increasing from 3,069 employees at the end of 2010 to 15,250 employees at the end of 2011. Accommodating these new employees (albeit many experienced with AcqDemo from prior to the NSPS epoch) has been a major administrative challenge, and the AcqDemo Program Office and organizations with personnel managed under AcqDemo accordingly have focused primarily—though not exclusively—on the implementation and transition issues inherent to such exponential growth. Thus, for the 2012 assessment, we believe that it would have been more appropriate to evaluate AcqDemo using implementation-related metrics rather than those more pertinent to a stable program in a steady state. In addition, the transitional state of the workforce creates methodological challenges in following employee career trajectories over time. Given these concerns and acknowledging the requirement for a full evaluation of AcqDemo in 2016, we both offer conclusions for our 2012 evaluation and highlight considerations for future evaluations.

Conclusions from Our 2012 Assessment

Conditional on the challenges inherent in evaluating a transitional program, we find that AcqDemo rates well against many of the legislatively prescribed criteria. AcqDemo clearly adheres to DoD policies with respect to veterans' preferences. The AcqDemo Program Office has embarked on an extensive training program to assist the organizations returning to AcqDemo. The program office has developed multiple mechanisms for ensuring employee involvement in the development and improvement of the project. In addition, interview and survey data suggest that certain aspects of AcqDemo are viewed positively, including supervisor perceptions regarding the ability to hire people as needed and to reassign or reclassify employees in response to changing mission needs. AcqDemo respondents reported being more optimistic about opportunities for promotion and were more likely to believe that their organization is retaining the highest-performing employees among their peers in the organizations selected for comparison. Moreover, additional DoD organizations are seeking to join AcqDemo. The fact that organizations are “voting with their feet” to join AcqDemo redounds to the program's credit.

However, the perceived complexity of AcqDemo's personnel evaluation system has been a longstanding concern. Full transparency for all employees may be an elusive goal. The

AcqDemo workforce is generally well educated and highly trained, which partially mitigates concerns about program complexity. However, survey data reveal a lack of comfort with the way the performance appraisal system is administered for many AcqDemo employees, and most AcqDemo employees did not indicate agreement with statements about the personnel system's fairness. SME interviews suggest that concerns about fairness often plague pay-for-performance systems in their early years and tend to subside, and Isaac (2001) asserts that the challenge for any performance-related pay system is to establish a pattern of pay that is regarded as fair by employees. Finally, a notable proportion of AcqDemo employees are at the top of their pay bands and thus cannot benefit fully from AcqDemo's performance appraisal flexibilities. If AcqDemo is too complex to be understood, perceived to be unfair, or constrained in its ability to award high contributors, then it will be challenging to uphold a key tenet of the AcqDemo program—namely, establishing a strong, tangible link between contribution (or performance) and compensation.

We are, on balance, sanguine about AcqDemo and how it is doing, especially in light of the manifest challenge associated with nearly quintupling its population in one year. But that judgment is conditional and incomplete, awaiting more and better evidence.

Considerations for Future Assessments

The next congressionally mandated assessment of AcqDemo, which shall be completed not later than September 30, 2016, will have opportunities that this current effort did not have. First and foremost, a large number of employees managed under AcqDemo, if not the majority of them, will have been in AcqDemo for years (rather than months). This will make longitudinal analysis possible, allowing evaluators to follow employees through careers and examine workforce outcomes. Further, the relatively stable state of the program will allow for more accurate measurement of perceptions and outcomes across a range of measures.

Throughout our report, we have commented about the types of data we would have analyzed if they had been available or if we had had additional time for evaluation. We encourage the AcqDemo Program Office to facilitate their collection and analysis to inform the next independent assessment in 2016. These include objective sources of information, such as personnel data on hiring (e.g., offer/accept ratios, the number of PRDs); general equal opportunity-related or AcqDemo-specific grievances; and workforce data (e.g., starting salaries, changes to the contract workforce, career progression by broad band and career path). Many of these data sources will be richer and consequently more informative as the number of employees going through multiple AcqDemo rating cycles increases. In addition, interviews with a sample of supervisors, pay pool managers, data maintainers, and human resource professionals representing different components and sites and interviews or focus groups with demographically diverse employees managed under AcqDemo, again from different components and sites, would not only complement these objective data sources but would also yield information about attitudes and perceptions that would inform the AcqDemo assessment along several criteria. Finally, greater clarity on the concept of "mission needs" would facilitate determining whether objective data can be collected to assess AcqDemo's ability to help organizations better meet mission needs. It would also provide a common basis for measuring perceptions of this important indicator of AcqDemo's effectiveness.

Our assessment was informed by a survey fielded in early 2012. A survey is an excellent complement to the interviews and focus groups suggested above; in particular, it can show how extensively held certain views are across the entire AcqDemo workforce. However, the 2012 AcqDemo survey was hindered by a low response rate. In the future, it may be more productive to administer the survey to a stratified random sample of AcqDemo's employees rather than seek responses from the entire population. This would ensure higher response rates, as well as a more representative set of survey results. In addition, as AcqDemo expands to include employees from all the military services and additional DoD components, the comparison group should be revised to ensure that it serves as a useful referent group. Lastly, to address important concepts, such as fairness and transparency, the survey could be expanded to include items that have been scientifically validated and used across multiple workplaces. For example, there is a robust body of research on procedural (i.e., process) and distributive (i.e., outcome) justice that could help in this regard.

Thinking more broadly about evaluation methodologies, Stecher and his colleagues (2010) suggest using the most rigorous design possible. Although the gold standard of evaluation, a randomized control trial, is less feasible than other options in this context, other well-regarded evaluation methods could be employed in the future. For example, a pretest-posttest comparison-group strategy could be used with new organizations entering AcqDemo. This would entail measuring important outcomes both before an organization's employees are managed under AcqDemo and after they have transitioned into the personnel system. In addition, by including a comparison group in its 2012 survey, the AcqDemo Program Office has already made use of another recommended technique, a nonequivalent group design. This could complement a pretest-posttest comparison if the referent group is expanded to match changes in the composition of AcqDemo's workforce (e.g., a lower proportion of Army civilian employees). Finally, future evaluations could incorporate propensity score matching to create a comparison group for career progression-focused analysis. An example of this type of analysis, based on a subset of AcqDemo employees (unionized employees in AcqDemo on September 30, 2008), is provided in Appendix B to illustrate the utility of this approach. Because the AcqDemo population is different from the GS population (DoD-wide and within the acquisition workforce), quasi-experimental methods must be used to ensure that the comparison group represents the counterfactual.

Finally, we recommend a reexamination of the criteria by which the AcqDemo program is evaluated in 2016. Although the criteria enumerated in the FY 2011 NDAA may be more appropriate in the future, as AcqDemo moves into a steadier state, than they were for the 2012 assessment, the question remains whether those assessment items will yield the most useful data for those responsible for AcqDemo program oversight. Stecher et al. (2010) state that an evaluation should focus on both procedures and outcomes and note that, as a program matures, effective evaluations must increasingly focus on outcomes. The evaluation criteria should therefore include both process and outcome measures for each of AcqDemo's key elements so that policymakers, AcqDemo program managers, and other stakeholders have a thorough understanding of the extent to which AcqDemo's features and incentives work together to induce the desired behaviors.

Analysis of Survey Data

Upon receipt of the survey data files on April 20, 2012, we first assessed how representative the survey was of the AcqDemo workforce. This was a particular concern, given that the survey response rate was lower than typically acceptable. After noting the large number of write-in responses to questions about the effects of AcqDemo and opportunities for improving its administration and training, we also examined how respondents who provided a write-in response differed demographically from respondents who did not do so. The results of this exercise are summarized in Table A.1. The results show that both the survey sample and the portion of survey respondents who provided an answer to at least one of the three open-ended questions we analyzed were similar in many of the demographics comparisons we made. The notable exceptions were that the survey sample tended to have a higher level of education than the AcqDemo workforce as a whole, the distribution across organizations differed in that the Marine Corps was underrepresented in the survey and DoD agencies overrepresented, and the proportion of supervisors taking the survey was greater than that in the overall AcqDemo workforce. Accordingly, before conducting the statistical analyses included in our assessment, we “weighted” the survey data in order to make them more representative of the AcqDemo population. In other words, we adjusted the sample in terms of education, organization, and supervisor status to compensate for disproportionate response rates.

After determining how representative the survey sample was of the AcqDemo population and applying weights to improve its representativeness, we then analyzed both the quantitative and the qualitative data from the survey. For the quantitative data, we calculated summary statistics, such as means, standard deviations, and frequencies, and conducted tests of statistical significance. We analyzed five-point Likert scales using the full range of responses (e.g., “strongly agree” to “strongly disagree”), but, for ease of presentation, we also collapsed the scales into three-point ones (e.g., strongly agree or agree, neutral, strongly disagree or disagree) and often focused on findings using the simpler option. We compared, for example, the percentage of the AcqDemo sample who agreed or strongly agreed with a question to the analogous proportion of the comparison-group sample and compared subgroups within the AcqDemo survey sample, such as men and women or supervisors and nonsupervisors. Given how new AcqDemo is to much of the workforce managed under this personnel system, we also looked closely at instances in which the proportion of respondents selecting the “no basis to judge” option was notably high (e.g., higher than the proportion who expressed agreement). For analysis in which we examined responses by demographic characteristics (e.g., Table 10.1 in Chapter Ten and Table 11.1 in Chapter Eleven), we ran logistic regression analysis controlling for available employee characteristics (e.g., age, organization) to determine whether the

Table A.1
Demographic Comparison of AcqDemo Population and Survey Sample (%)

Demography Category	Characteristic	AcqDemo Population (N = 15,250)	Survey Respondents (N = 5,256)	Open-Ended Question Respondents (N = 2,882)
Race and ethnicity	White	72	76	77
	Black	14	12	11
	Hispanic	5	5	5
	Other	5	3	4
	Asian	4	4	3
Gender	Male	62	64	66
	Female	38	36	34
Education level	Bachelor's degree	39	32	30
	Graduate degree	33	50	53
	High school graduate (or less education)	17	2	1
	Some college	7	11	3
	Associate's degree	5	6	13
Service or agency	Army	50	43	42
	Air Force	19	21	21
	DoD agency	16	32	33
	Marine Corps	13	4	4
	Navy	1	1	1
Pay plan	NH	93	94	95
	NK	4	3	3
	NJ	3	2	2
Supervisor	No	76	69	67
	Yes	24	31	33
Bargaining unit	No	89	90	90
	Yes	11	10	10

SOURCES: DMDC civilian data file; 2012 AcqDemo survey data.

NOTE: Percentages in a given set may not sum to 100 because of rounding.

relationship presented is statistically significant when controlling for observable characteristics. In all cases, results reported as significant are significant at the 5-percent level ($p < 0.05$).

With respect to the qualitative data, two members of the project team were involved in coding the responses to open-ended questions. The two team members worked together to develop a coding tree (i.e., a list of topics by which to tag and later organize the data) and then separately coded individual responses. All the responses to the question “How has being in an AcqDemo organization affected you?” were coded for the nature and direction of the effect.

For example, a remark might have been coded as expressing a negative effect related to pay increases, a positive effect related to pay increases, or a neutral effect, such as being too early to tell.

Given the relatively low response rate, particularly in terms of the open-ended responses, we opted not to analyze how frequently certain types of issues were raised. Instead, we used respondents' comments to help explain quantitative survey results, to corroborate findings suggested by other data sources, and to suggest the presence of a potential concern that would need more definitive research to understand its impact (e.g., a barrier to using AcqDemo's flexibilities).

A Propensity Score Matching Exploration of AcqDemo's Impact on Retention and Compensation of Unionized Employees

Criterion H called for an assessment of the project's impact on career progression. As we noted in Chapter Nine, our assessment of career progression is adversely affected by the fact that relatively few employees have been continuously in AcqDemo for many years. Moreover, most of those who have been in AcqDemo for a longer period are unionized and are therefore not representative of most of today's AcqDemo employees.

In this appendix, we explore the retention and compensation outcomes of the 2,135 unionized employees in AcqDemo on September 30, 2008. As shown in Figure 1.1 in Chapter One, September 30, 2008, was the low ebb of AcqDemo's population. In particular, we are interested in how their retention and compensation outcomes have differed from those of otherwise similar non-AcqDemo unionized DoD employees.¹

There are two broad purposes to this appendix. First, it is intrinsically important to evaluate how unionized employees have done in AcqDemo because trade-union leaders have expressed concerns about pay-for-performance systems, such as AcqDemo. Second, this appendix utilizes a propensity score matching technique that we believe can be used in future evaluations when more years of data are available to analyze a more representative AcqDemo population.

Propensity score matching attempts to adjust for any differences in observable characteristics between the "treatment" group (in this case, AcqDemo employees) and the "control" group (non-AcqDemo employees). This technique is based on the work of Rosenbaum and Rubin (1983), who suggested that the conditional probability (the propensity) of being in "treatment" or "control" can be determined by the observable covariates of the two groups. After determining the conditional probability for each treatment and control observation, a matching algorithm finds the best match between treatment and control observations based on these conditional probabilities to create observationally equivalent (or at least similar) treatment and control groups, differing only across treatment (AcqDemo) status. The treatment and control observation matches then become the records used in the analysis, in which the balance obtained across observables allows one to calculate an unbiased estimate of the treatment effect. For observational data, such as the data available on the AcqDemo program, this is an empirical way to understand the causal impact of the treatment (being in AcqDemo) on retention and compensation.

¹ Because more than 90 percent of AcqDemo employees on September 30, 2008, were unionized, we focus solely on unionized employees in this appendix. Further, because all September 30, 2008, AcqDemo employees were employed either by the Army or by the Air Force, we analyze only unionized employees employed by those two military services.

The goal for this algorithm is to create two populations, one in AcqDemo and one not, that look alike on every other dimension except for their status in AcqDemo. Then, to the extent we observe different outcomes for the AcqDemo population, we attribute those outcome differences to being in AcqDemo.

Our first step in this analysis is to undertake a logistic regression to predict which September 30, 2008, unionized Army and Air Force employees were in AcqDemo (dependent variable of 1) versus not (dependent variable of 0). More than 99 percent (236,877 of 239,012) of September 30, 2008, Army and Air Force unionized employees were not in AcqDemo. But the logistic regression assigns coefficients to each employee (inside or outside of AcqDemo) to estimate their individual probability of being in AcqDemo based on their observable characteristics, e.g., age, gender, race, 2008 compensation level, military service, AW status. We are especially interested in employees whose regression-estimated probabilities of being in AcqDemo are similar but whose actual statuses of being in AcqDemo differ. We match together such similar characteristic/different outcome employees in this procedure.

Table B.1 presents our logistic regression results. The dependent variable was whether the employee was in AcqDemo (1) or not (0). Our independent variables were the employee's age, 2008 compensation level, gender, minority status (white versus nonwhite), military service (Army or Air Force—we do not use other services in this estimation because all September 30, 2008, AcqDemo employees were employed by either the Army or the Air Force), and AW status.

Table B.1's negative coefficients suggest a lower likelihood of being in AcqDemo. For example, controlling for other observable characteristics, a unionized employee of the Air Force was less likely to be in AcqDemo than a unionized employee of the Army was. Likewise, non-AW employees were less likely than AW employees to be in AcqDemo. Females were more likely than males to be in AcqDemo, controlling for other observable independent variables.

Each of the 239,012 unionized Army- and Air Force–employed civilians was then assigned a probability or propensity score derived from Table B.1's estimates. (These propensity scores tended to be highest, i.e., more likely to be in AcqDemo, for younger, more highly paid, female, white Army employees in the acquisition workforce.)

Table B.1
AcqDemo Membership Logistic Regression Results

Result	Coefficient	Standard Error
Intercept	-5.1294*	0.1289
Age	-0.0252*	0.0024
2008 compensation	0.000054*	1.484E-6
Female	0.3766*	0.0478
Nonwhite	-0.1978*	0.0562
Air Force	-2.0082*	0.1001
Non-acquisition workforce	-2.4480*	0.0632

SOURCE: DMDC civilian data file.

NOTE: An asterisk indicates a coefficient estimate that is statistically significantly different from zero at $p < 0.05$.

Given these 239,012 propensity estimates, we then used an algorithm introduced by Coca-Perraillon (2007) that calculated a nearest-neighbor match for five controls to each treatment, without replacement. In other words, for each of the 2,135 unionized members of AcqDemo, we identified five non-AcqDemo employees with propensity scores closest to them. Because we did so without replacement, each of the five matches was to unique non-AcqDemo employees, so we ended up with a population of 10,675 ($2,135 \times 5$) control employees. We should think of these 10,675 non-AcqDemo unionized employees as being near or closest matches to the 2,135 AcqDemo unionized employees.

Our choice of five control observations to each treatment was somewhat arbitrary. We could have chosen a one-to-one matching or a one treatment-to-two controls matching as well. We used five control matches per treated employee because of the much larger pool of control observations that allowed us to generate a larger matched pool of control employees.

We assessed the fit of the matching procedure on the variables used to create the propensity scores. If the matching is conducted properly, then the distribution of variables used in matching between the treatment and control groups should be similar. The biggest deviations were found in 2008 compensation levels (with the treated population being more highly paid) and in being in the acquisition workforce (with the treated population being more likely to be in the acquisition workforce). The treated population was also somewhat more male than the control population. Tables B.2 and B.3 summarize the results of the matching procedure.

Table B.2
Propensity Score Matching Diagnostics,
Summary of Propensity Scores

Group	Minimum	Median	Maximum
Control	0.0001	0.0965	0.6360
Treatment	0.0001	0.0964	0.6425

SOURCE: DMDC civilian data file.

Table B.3
Propensity Score Matching Diagnostics, Paired T-Tests of Fit
Variables

Variable	Mean, Control	Mean, Treatment	P-Value
Age	46.876	46.816	0.8121
Compensation	71,933*	74,566	0.0000
Male	0.5639*	0.5937	0.0126
Nonwhite	0.2320	0.2154	0.0965
Air Force	0.0541	0.0499	0.4338
Acquisition workforce	0.7368*	0.8277	0.0000

SOURCE: DMDC civilian data file.

NOTE: An asterisk indicates a variable for which the control and treatment populations have mean values that are statistically significantly different from one another at $p < 0.05$.

Having created our two populations (2,135 treated employees in AcqDemo, 10,675 control employees not in AcqDemo), we then examined the two populations' retention and compensation outcomes for 2009–2011. Figure B.1 depicts the rates at which the two populations continued to be employed by DoD in the ensuing three fiscal years.

Figure B.1 suggests that the 2008 AcqDemo employees had somewhat greater retention in DoD employment than their non-AcqDemo counterparts.

Figure B.2 is similar but depicts their compensation levels relative to 2008, conditional on continued DoD employment. Unionized AcqDemo employees had, on average, greater increases in compensation between 2008 and 2011 than their non-AcqDemo unionized counterparts.

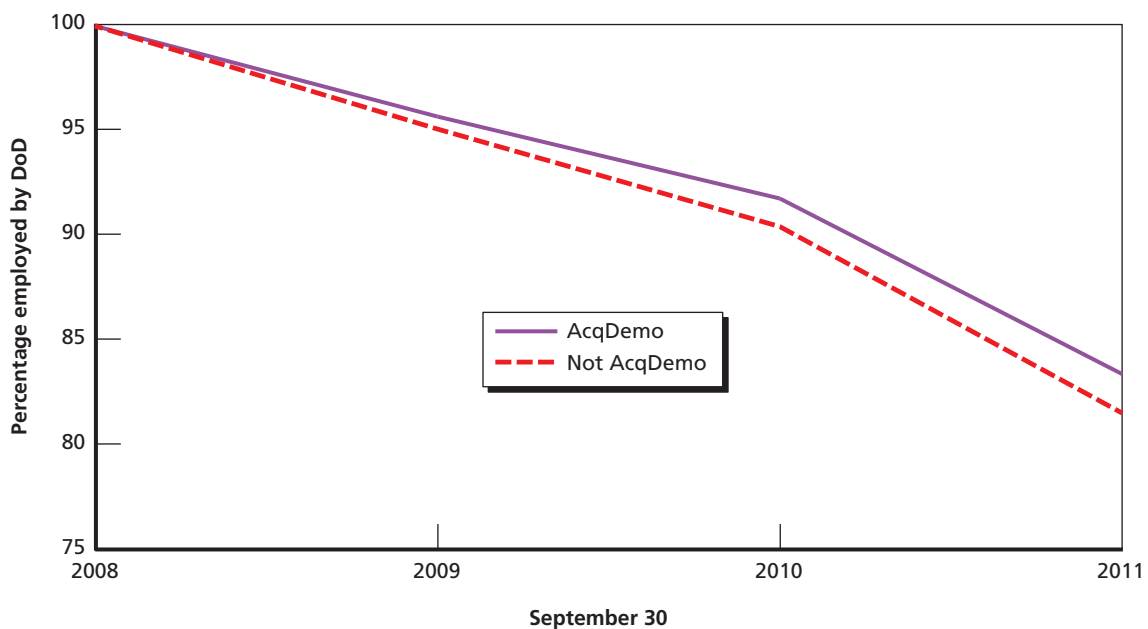
To more rigorously test the effect of being in AcqDemo on unionized employees' retention levels, we ran two different estimations. In the first, presented in Table B.4, we ran a logistic regression with the outcome being whether (1) or not (0) the employee was still employed by DoD on September 30, 2011.

Table B.4 suggests that there is a significant, positive effect of AcqDemo on retention within DoD. Those in AcqDemo were 12.8 percent more likely to be employed by DoD three years later than were the otherwise similar non-AcqDemo employees. This finding is consistent with Figure B.1's AcqDemo line being above Figure B.1's not-AcqDemo line.

Table B.5 presents a similar logistic regression estimation but including controls for race and gender, as well as allowing AcqDemo status, race, and gender to interact.

In this specification, AcqDemo status alone does not have significant impact, but it appears that being in AcqDemo increased retention among white males.

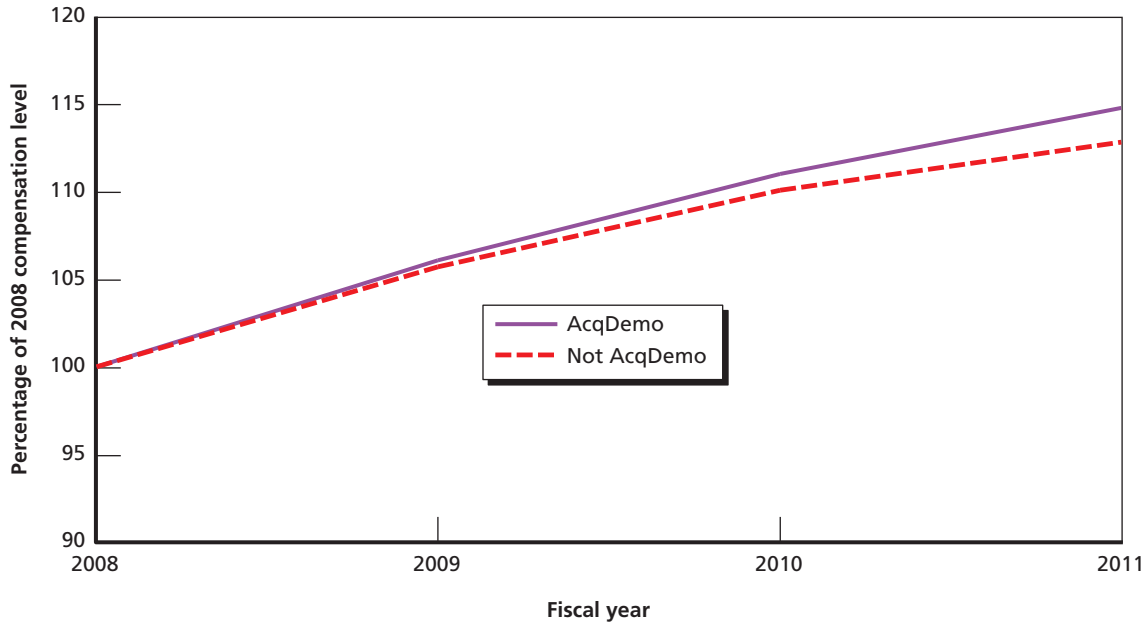
Figure B.1
Percentage of September 30, 2008, Employees Still Employed by DoD



SOURCE: DMDC civilian data file.

RAND TR1286-B.1

Figure B.2
Average Ratio of 2011 to 2008 Compensation Level, Conditional on Continued DoD Employment



SOURCE: DMDC civilian data file.
RAND TR1286-B.2

Table B.4
2011 Retention Regressed on 2008 AcqDemo Status

Result	Coefficient	Standard Error	Z-Statistic	P-Value
Intercept	1.484*	0.025	59.514	0.000
AcqDemo	0.128*	0.063	2.028	0.043

SOURCE: DMDC civilian data file.

NOTE: An asterisk indicates a coefficient estimate that is statistically significantly different from zero at $p < 0.05$.

Next, to evaluate the effect of AcqDemo on compensation (conditional on continued DoD employment), we ran similar estimations with the ratio of 2011 to 2008 compensation as the dependent variable. In Table B.6, we present a parsimonious specification with the sole nonintercept independent variable being whether the employee was in AcqDemo. Table B.6, like Figure B.2, necessarily covers only individuals still employed by DoD on September 30, 2011.

Table B.6 suggests that the typical non-AcqDemo unionized employee had 12.8 percent compensation growth between 2008 and 2011 but that being in AcqDemo added, on average, another 1.9 percent to the typical unionized employee’s compensation level.

Table B.7 presents a similar estimation but additionally including gender and racial status intercepts and interaction terms. The broad results are similar to Table B.6’s, i.e., being in AcqDemo increased the unionized employees’ compensation growth.

Table B.5
2011 Retention Regressed on 2008 AcqDemo Status, Racial, and Gender Variables

Result	Coefficient	Standard Error	Z-Statistic	P-Value
Intercept	1.197*	0.040	29.796	0.000
AcqDemo	-0.045	0.099	-0.454	0.649
Nonwhite	0.496*	0.090	5.547	0.000
Male	0.383*	0.056	6.875	0.000
AcqDemo × nonwhite	0.256	0.293	1.070	0.285
AcqDemo × male	0.281*	0.140	2.017	0.044
Nonwhite × male	-0.215	0.128	-1.682	0.093
AcqDemo × nonwhite × male	-0.225	0.344	-0.654	0.513

SOURCE: DMDC civilian data file.

NOTE: An asterisk indicates a coefficient estimate that is statistically significantly different from zero at $p < 0.05$.

Table B.6
2011/2008 Income Ratio Regressed on 2008 AcqDemo Status

Result	Coefficient	Standard Error	Z-Statistic	P-Value
Intercept	0.128*	0.001	112.085	0.000
AcqDemo	0.019*	0.003	6.992	0.000

SOURCE: DMDC civilian data file.

NOTE: An asterisk indicates a coefficient estimate that is statistically significantly different from zero at $p < 0.05$.

Table B.7
2011/2008 Income Ratio Regressed on 2008 AcqDemo Status, Racial, and Gender Variables

Result	Coefficient	Standard Error	Z-Statistic	P-Value
Intercept	0.135*	0.002	65.557	0.000
AcqDemo	0.035*	0.005	6.786	0.000
Nonwhite	0.010*	0.004	2.447	0.014
Male	-0.015*	0.003	-5.441	0.000
AcqDemo × nonwhite	-0.019	0.010	-1.924	0.054
AcqDemo × male	-0.024*	0.007	-3.672	0.000
Nonwhite × male	-0.009	0.005	-1.675	0.094
AcqDemo × nonwhite × male	0.032*	0.013	2.418	0.016

SOURCE: DMDC civilian data file.

NOTE: An asterisk indicates a coefficient estimate that is statistically significantly different from zero at $p < 0.05$.

One interesting implication of Table B.7 is that female unionized employees, in particular, benefited from being in AcqDemo (i.e., the male coefficient estimates in Table B.7 tend to be negative). This finding is consistent with the finding in Table 11.4 in Chapter Eleven that females appear to have a greater preference for AcqDemo relative to the GS system than males have.

We reiterate, however, that this appendix is intended to be illustrative and exploratory. Firmer evidence of AcqDemo's effects on retention and compensation await more and better data. But we think that the analysis technique presented in this appendix will be well suited to that future analysis.

References

- AcqDemo Program Office—See U.S. Department of Defense Civilian Acquisition Workforce Personnel Demonstration Project Program Office.
- Beer, Michael, and Mark D. Cannon, “Promise and Peril in Implementing Pay-for-Performance,” *Human Resource Management*, Vol. 43, No. 1, Spring 2004, pp. 3–48.
- Brady, Rodney H., “MBO Goes to Work in the Public Sector,” *Harvard Business Review*, March–April 1973, pp. 65–74.
- Coca-Perraillon, Marcelo, “Local and Global Optimal Propensity Score Matching,” *SAS Global Forum 2007*, Paper 185-2007, 2007. As of July 24, 2012:
<http://www2.sas.com/proceedings/forum2007/185-2007.pdf>
- Colquitt, Jason A., D. E. Conlon, M. J. Wesson, C. O. Porter, and K. Y. Ng, “Justice at the Millennium: A Meta-Analytic Review of 25 Years of Organizational Justice Research,” *Journal of Applied Psychology*, Vol. 86, No. 3, June 2001, pp. 425–445.
- Cornett, Lynn M., and Gale F. Gaines, *Reflecting on Ten Years of Incentive Programs: The 1993 SREB Career Ladder Clearinghouse Survey*, Atlanta, Ga.: Southern Regional Education Board, April 1994.
- Drago, Robert, and Gerald T. Garvey, “Incentives for Helping on the Job: Theory and Evidence,” *Journal of Labor Economics*, Vol. 16, No. 1, January 1998, pp. 1–25.
- Drucker, Peter F., *The Practice of Management*, New York: Harper and Row, 1954.
- Gates, Susan M., Edward G. Keating, Adria D. Jewell, Lindsay Daugherty, Bryan Tysinger, Albert A. Robbert, and Ralph Masi, *The Defense Acquisition Workforce: An Analysis of Personnel Trends Relevant to Policy, 1993–2006*, Santa Monica, Calif.: RAND Corporation, TR-572-OSD, 2008. As of July 24, 2012:
http://www.rand.org/pubs/technical_reports/TR572.html
- Gates, Susan M., Edward G. Keating, Bryan Tysinger, Adria D. Jewell, Lindsay Daugherty, and Ralph Masi, *The Department of the Navy’s Civilian Acquisition Workforce: An Analysis of Recent Trends*, Santa Monica, Calif.: RAND Corporation, TR-555-NAVY, 2009. As of July 24, 2012:
http://www.rand.org/pubs/technical_reports/TR555.html
- Gibson, Jane Whitney, and Dana V. Tesone, “Management Fads: Emergence, Evolution, and Implications for Managers,” *Academy of Management Executive*, Vol. 15, No. 4, November 2001, pp. 122–133.
- Isaac, J. E., “Performance Related Pay: The Importance of Fairness,” *Journal of Industrial Relations*, Vol. 43, No. 2, June 2001, pp. 111–123.
- James, Kay Cole, *A Fresh Start for Federal Pay: The Case for Modernization*, Washington, D.C.: Office of Personnel Management, April 2002. As of June 20, 2012:
<http://www.opm.gov/strategiccomp/whtpaper.pdf>
- Keating, Edward G., Hugh G. Massey, Judith D. Mele, and Benjamin F. Mundell, *An Analysis of the Populations of the Air Force’s Medical and Professional Officer Corps*, Santa Monica, Calif.: RAND Corporation, TR-782-AF, 2010. As of July 24, 2012:
http://www.rand.org/pubs/technical_reports/TR782.html

Kellough, J. Edward, and Katherine C. Naff, "Responding to a Wake-Up Call: An Examination of Federal Agency Diversity Management Programs," *Administration and Society*, Vol. 36, No. 1, March 2004, pp. 62–90.

Konovsky, Mary A., "Understanding Procedural Justice and Its Impact on Business Organizations," *Journal of Management*, Vol. 26, No. 3, June 2000, pp. 489–511.

Martinko, Mark J., and William L. Gardner, "Learned Helplessness: An Alternative Explanation for Performance Deficits," *Academy of Management Review*, Vol. 7, No. 2, April 1982, pp. 195–204.

Miller, Danny, and Jon Hartwick, "Spotting Management Fads," *Harvard Business Review*, October 2002, pp. 26–27.

Office of the Deputy Under Secretary of Defense for Civilian Personnel Policy, "Science and Technology Reinvention Laboratory Personnel Management Demonstration Project, Department of Navy, Office of Naval Research," *Federal Register*, Vol. 75, No. 237, December 10, 2010, pp. 77380–77447. As of May 27, 2012: <http://www.gpo.gov/fdsys/pkg/FR-2010-12-10/pdf/2010-30876.pdf>

———, "Science and Technology Reinvention Laboratory (STRL) Personnel Management Demonstration Project, Department of the Navy (DON), Naval Air System Command (NAVAIR) Naval Air Warfare Center, Aircraft Division (NAWCAD), and Naval Air Warfare Center, Weapons Division (NAWCWD)," *Federal Register*, Vol. 76, No. 30, February 14, 2011, pp. 8530–8570. As of May 27, 2012: <http://www.gpo.gov/fdsys/pkg/FR-2011-02-14/pdf/2011-3094.pdf>

OPM—See U.S. Office of Personnel Management.

Orvis, Bruce R., James Hosek, Michael G. Mattock, L. Ani Haigazian, and Alvin K. Ludwig, *PACER SHARE Productivity and Personnel Management Demonstration Baseline Evaluation*, Santa Monica, Calif.: RAND Corporation, R-3753-FMP, 1990. As of July 24, 2012: <http://www.rand.org/pubs/reports/R3753.html>

Orvis, Bruce R., James Hosek, Michael G. Mattock, Rebecca Mazel, and Iva MacLennan, *PACER SHARE Productivity and Personnel Management Demonstration: Third Year Evaluation*, Santa Monica, Calif.: RAND Corporation, MR-310-P&R, 1993. As of July 24, 2012: http://www.rand.org/pubs/monograph_reports/MR310.html

President's Blue Ribbon Commission on Defense Management, *A Quest for Excellence: Final Report to the President*, Washington, D.C., June 1986. As of July 30, 2012: <http://www.ndu.edu/library/pbrc/36ex2.pdf>

Public Law 81-429, Classification Act of 1949, October 28, 1949.

Public Law 95-454, Civil Service Reform Act of 1978, October 13, 1978.

Public Law 101-510, National Defense Authorization Act for Fiscal Year 1991, November 5, 1990.

Public Law 111-383, Ike Skelton National Defense Authorization Act for Fiscal Year 2011, January 7, 2011. As of July 24, 2012: <http://www.gpo.gov/fdsys/pkg/PLAW-111publ383/content-detail.html>

Rosenbaum, Paul R., and Donald B. Rubin, "The Central Role of the Propensity Score in Observational Studies for Causal Effects," *Biometrika*, Vol. 70, No. 1, April 1983, pp. 41–55.

Stecher, Brian M., Frank Camm, Cheryl L. Damberg, Laura S. Hamilton, Kathleen J. Mullen, Christopher Nelson, Paul Sorensen, Martin Wachs, Allison Yoh, Gail L. Zellman, and Kristin J. Leuschner, *Toward a Culture of Consequences: Performance-Based Accountability Systems for Public Services*, Santa Monica, Calif.: RAND Corporation, MG-1019, 2010. As of July 24, 2012: <http://www.rand.org/pubs/monographs/MG1019.html>

U.S. Department of Defense Civilian Acquisition Workforce Personnel Demonstration Project Program Office, *DoD Civilian Acquisition Workforce Personnel Demonstration Project Operating Procedures*, May 15, 2003.

———, *Department of Defense (DoD) Civilian Acquisition Workforce Personnel Demonstration Project (AcqDemo): Summative Evaluation Report*, Alexandria, Va., June 2006.

- , “Transition to DoD Civilian Acquisition Workforce Personnel Demonstration Project (AcqDemo): Employee Orientation Briefing,” briefing slides, Winter–Spring 2011a.
- , “DoD Civilian Acquisition Workforce Personnel Demonstration Project (AcqDemo): Contribution-Based Compensation and Appraisal System (CCAS) for Supervisors,” briefing slides, Summer–Fall 2011b.
- , “DoD Civilian Acquisition Workforce Personnel Demonstration Program (AcqDemo) Senior Leader Overview: Managing Workforce Quality in Defense Acquisition,” briefing slides, Fall 2011c.
- U.S. General Accounting Office, *Performance Management: How Well Is the Government Dealing with Poor Performers?* Washington, D.C., GAO/GGD-91-7, October 1990.
- , *Federal Performance Management: Agencies Need Greater Flexibility in Designing Their Systems*, Washington, D.C., GAO/GGD-93-57, February 1993.
- , *Acquisition Management: Fiscal Year 1995 Waivers of Acquisition Workforce Requirements*, Washington, D.C., GAO/NSIAD-96-102, April 1996. As of July 24, 2012:
<http://purl.access.gpo.gov/GPO/LPS26580>
- U.S. Office of Personnel Management, “Pay Retention for Former Employees of the Department of Defense National Security Personnel System (NSPS),” fact sheet, undated (a). As of August 14, 2012:
http://www.opm.gov/oca/pay/html/payRetention_DOD_NSPS.asp
- , “VetGuide,” undated (b). As of May 26, 2012:
<http://www.opm.gov/staffingportal/vetguide.asp>
- , “Civilian Acquisition Workforce Personnel Demonstration Project; Department of Defense (DoD),” *Federal Register*, Vol. 64, No. 5, January 8, 1999, pp. 1426–1492. As of May 27, 2012:
<http://www.gpo.gov/fdsys/pkg/FR-1999-01-08/pdf/99-79.pdf>
- Van Eerde, Wendelien, and Henk Thierry, “Vroom’s Expectancy Models and Work-Related Criteria: A Meta-Analysis,” *Journal of Applied Psychology*, Vol. 81, No. 5, October 1996, pp. 575–586.

