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# A Strategic Approach to Joint Officer Management

Analysis and Modeling Results

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Margaret C. Harrell, Harry J. Thie,  
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Prepared for the Office of the Secretary of Defense

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## Preface

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Several recent studies, including one authorized under the 2002 National Defense Authorization Act, have indicated the need for the U.S. Department of Defense (DoD) to update the practice, policy, and law applied to joint officer management and Joint Professional Military Education (JPME) to meet the demands of a new era more effectively.

In 2003, DoD asked the RAND National Defense Research Institute to undertake an analysis that would provide overarching guidance on officer education and development in joint matters. The results of that effort were documented in *Framing a Strategic Approach for Joint Officer Management*<sup>1</sup> and in a companion report, *Framing a Strategic Approach for Reserve Component Joint Officer Management*.<sup>2</sup>

One of the goals of the current project, which builds on the earlier effort, is to operationalize this strategic approach for joint officer management in the active component through extensive data analysis and complex modeling. As a lead-in to this effort, in summer 2005, the research sponsor and another organization conducted the Joint Officer Management Census survey (the JOM survey) of individuals serving in billets that were likely to either require prior joint experience or provide

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<sup>1</sup> Harry J. Thie, Margaret C. Harrell, Roland J. Yardley, Marian Oshiro, Holly Ann Potter, Peter Schirmer, and Nelson Lim, *Framing a Strategic Approach for Joint Officer Management*, Santa Monica, Calif.: RAND Corporation, MG-306-OSD, 2005.

<sup>2</sup> Harry J. Thie, Margaret C. Harrell, Sheila Nataraj Kirby, Al Crego, Roland J. Yardley, and Sonia Nagda, *Framing a Strategic Approach for Reserve Component Joint Officer Management*, Santa Monica, Calif.: RAND Corporation, MG-517-OSD, 2006.

officers with joint experience. An earlier report<sup>3</sup> provided an overview of the survey responses, including the extent to which officers believe that their assignments provide them with joint experience or require them to have prior joint education, training, or experience.

This report uses data from the 2005 JOM survey to examine further the demand for and supply of “jointness” in billets. These billets include those on the current Joint Duty Assignment List (JDAL), formally recognized in law as providing joint experience and thus eligible for joint duty credit; those in external organizations with some billets on the JDAL; and internal service billets that are currently excluded from consideration for joint duty credit. The report focuses on three areas: (1) analyzing the characteristics that measure “jointness” of a billet and using that analysis to identify billets that could be recommended for inclusion in the JDAL; (2) determining whether sufficient numbers of officers with joint education, training, and experience are likely to be available to satisfy DoD’s needs; and (3) exploring whether and how the experiences of selected communities of officers—for example, those assigned to billets dealing with acquisition matters—differ from those of their peers. As such, this report should be of particular interest to military personnel managers dealing with joint officer management issues or particular communities of officers. Findings from the analyses were provided to the sponsor and used in developing DoD’s new strategic plan for joint officer management and JPME, issued in April 2006,<sup>4</sup> and the implementation plan for the new joint officer qualification system, issued in March 2007.<sup>5</sup> Because the work presented here predates the new system now being implemented, we present the recommendations as they were initially provided to the sponsor. Many of these recommendations have been incorporated into the new joint officer qualification system.

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<sup>3</sup> Sheila Nataraj Kirby, Al Crego, Harry J. Thie, Margaret C. Harrell, Kimberly Curry Hall, and Michael S. Tseng, *Who Is “Joint”? New Evidence from the 2005 Joint Officer Management Census Survey*, Santa Monica, Calif.: RAND Corporation, TR-349-OSD, 2006.

<sup>4</sup> DoD, *Strategic Plan for Joint Officer Management and Joint Professional Military Education*, 2006.

<sup>5</sup> DoD, *Joint Qualification System Implementation Plan*, March 2007.

This research was sponsored by the Under Secretary of Defense for Personnel and Readiness. It was 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 Department of the Navy, the Marine Corps, the defense agencies, and the defense Intelligence Community. The principal investigators are Harry Thie and Margaret Harrell. Comments are welcome and may be addressed to Harry Thie at [harry\\_thie@rand.org](mailto:harry_thie@rand.org) and to Margaret Harrell at [margaret\\_harrell@rand.org](mailto:margaret_harrell@rand.org).

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# Summary

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## Background and Purpose of Project

Since 1991, successes in Iraq (Operations Desert Shield and Storm), Bosnia, and Afghanistan (among others), and more recently in Operation Iraqi Freedom, have testified to the effectiveness of the joint military force and its warfighting potential. The ways in which joint officers are currently educated and trained are largely governed by Title IV of the Goldwater-Nichols Act of 1986 (GNA).<sup>6,7</sup> However, it is increasingly recognized that the current approach to joint matters needs to evolve from its current static format to a more dynamic approach that broadens the definitions of *joint matters* and *joint qualifications* and

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<sup>6</sup> Public Law 99-433, Goldwater-Nichols Department of Defense Reorganization Act of 1986, October 1, 1986.

<sup>7</sup> Throughout this report we use the term *joint* as shorthand to refer to the management of officers with education and assignments in joint matters. DoD defines *joint matters* as

Matters related to the achievement of unified action by multiple military forces in operations conducted across domains such as land, sea, or air, in space, or in the information environment, including matters relating to national military strategy; strategic planning and contingency planning; command and control of operations under unified command; national security planning with other departments and agencies of the United States; and combined operations with military forces of allied nations. In the context of joint matters, the term “multiple military forces” refers to forces that involve participation from the armed forces and one or more of the following: other departments and agencies of the United States; the military forces or agencies of other countries; non-governmental persons or entities. (DoD, “DoD Joint Officer Management Program,” DoD Instruction 1300.19, August 21, 2008.)

allows for multiple paths to growing joint officers.<sup>8</sup> DoD's most recent strategic plan for joint officer management and joint officer development states eloquently,

Joint Task Forces (JTFs) now define the way we array our armed forces for both war and operations other than war. The effectiveness of joint operations is no longer simply the integration and/or interoperability of two or more military services; it requires the synergistic employment of forces from multiple services, agencies, and nations. Non-governmental agencies and commercial enterprises must now be routinely combined with these traditional military forces and the interagency component to achieve national objectives. Such a dynamic and varied environment demands flexibility, responsiveness, and adaptability not only from the individual Soldiers, Sailors, Airmen, and Marines, but also from the processes supporting them.<sup>9</sup>

In 2003, DoD asked the RAND National Defense Research Institute to undertake an analysis that would provide overarching guidance on officer training and development in joint matters. The results of that effort were documented in *Framing a Strategic Approach for Joint Officer Management*.<sup>10</sup> That work indicated that the next step in the approach to joint officer management was to implement the strategic plan, a step that would require extensive data on the billets that require or provide joint experience. The prior report outlined a plan to collect the relevant data.

This plan was implemented by the sponsor office, which conducted a Web-based survey of individuals serving in joint or potentially

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<sup>8</sup> U.S. General Accounting Office, *Joint Officer Development Has Improved, But a Strategic Approach Is Needed*, Washington, D.C., GAO-03-238, 2002; Booz Allen Hamilton, *Independent Study of Joint Officer Management and Joint Professional Military Education*, McLean, Va., 2003.

<sup>9</sup> DoD, *Strategic Plan for Joint Officer Management and Joint Professional Military Education*, 2006, p. 3.

<sup>10</sup> Harry J. Thie, Margaret C. Harrell, Roland J. Yardley, Marian Oshiro, Holly Ann Potter, Peter Schirmer, and Nelson Lim, *Framing a Strategic Approach for Joint Officer Management*, Santa Monica, Calif.: RAND Corporation, MG-306-OSD, 2005.

joint billets in the summer of 2005. These billets included those on the current JDAL, formally recognized in law as providing joint experience and thus eligible for joint duty credit; those in external organizations with some billets on the JDAL; and internal service billets nominated by the services as “potentially joint” that are currently excluded from consideration for joint duty credit.<sup>11</sup>

A companion report by Kirby et al. provides an overview of the survey responses.<sup>12</sup> In the current report, we use data from the 2005 survey to examine the demand for and supply of “jointness” in billets. The report focuses on three areas: (1) analyzing the characteristics that measure “jointness” of a billet and using that analysis to identify billets with joint content; (2) determining whether sufficient numbers of officers with joint education, training, and experience are likely to be available to satisfy DoD’s needs; and (3) exploring whether and how the experiences of selected communities of officers—for example, those assigned to billets dealing with acquisition matters—differ from those of their peers.

Findings from these analyses were provided to the sponsor and used in developing the DoD’s new *Strategic Plan for Joint Officer Management and Joint Professional Military Education*, issued in April 2006,<sup>13</sup> and the implementation plan for the new joint officer qualification system, issued in March 2007.<sup>14</sup> Because the work presented here predates the new system now being implemented, we present the recommendations as they were initially provided to the sponsor. Many of these recommendations have been incorporated into the new joint officer qualification system.

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<sup>11</sup> Internal service organizations are those that consist almost exclusively of personnel from a single service, and whose command structure is of that service (e.g., combat units, service staff). External organizations are those that include individuals from multiple services, and whose command structure is inclusive of multiple services (e.g., defense agencies, combatant commands, JTFs, joint staff).

<sup>12</sup> Sheila Nataraj Kirby, Al Crego, Harry J. Thie, Margaret C. Harrell, Kimberly Curry Hall, and Michael S. Tseng, *Who Is “Joint”? New Evidence from the 2005 Joint Officer Management Census Survey*, Santa Monica, Calif.: RAND Corporation, TR-349-OSD, 2006.

<sup>13</sup> DoD, 2006.

<sup>14</sup> DoD, *Joint Qualification System Implementation Plan*, March 2007.

## Findings from the 2005 Joint Officer Management Census Survey

The analyses reported in Kirby et al. (2006) used two major classification schemes to examine differences in survey responses. In the first scheme, billets were characterized as JDAL billets, non-JDAL billets in external organizations that have some JDAL billets, or internal service billets. The second scheme analyzed billets according to the major billet organization in which the billet was located. The survey gathered information by asking about billet characteristics that are generally regarded as defining jointness. This information included the types of tasks, whether or not the billet was supervised by the same service, the frequency and number of interactions with organizations and individuals from other services, the perceived need for prior joint experience or joint education, and the types of joint experience provided by the billet.

Four tasks were selected as representing “highly joint” activities: (1) providing strategic direction and integration, (2) developing/assessing joint policies, (3) developing/assessing joint doctrine, and (4) fostering multinational, interagency, or regional relations. Close to 80 percent of JDAL officers performed one or more of these tasks, and 27 percent of JDAL officers performed at least three of these tasks. In contrast, only 45 percent of officers in internal service billets performed any of these joint tasks, and less than 10 percent of officers in internal service billets performed three or more of these tasks.

The analysis also considered the extent to which officers were interacting with organizations or personnel from other services. Officers in JDAL billets reported the highest frequency of interactions with organizations in other services. When considered by organization, officers working in Office of the Secretary of Defense (OSD) or Joint Staff billets had the most non-own-service organizational interactions compared with officers in internal service billets. Likewise, officers in JDAL and non-JDAL external organization billets had more reported interactions with individuals from other services than did officers in internal service billets. Related to this, close to 80 percent of JDAL billets and 75 percent of non-JDAL external billets were supervised by personnel



from another service, compared with about 20 percent of internal billets surveyed.

In terms of joint experience (multiservice, multinational, and interagency), the analysis found that 87 percent of officers in JDAL billets reported that they gained significant experience in multiservice matters, and 65 to 75 percent reported gaining significant experience in multinational and interagency matters. Officers in non-JDAL external billets were more likely to gain multinational than multiservice or interagency expertise. Officers serving in service-nominated billets were less likely to gain these types of expertise, compared with other surveyed officers.

The survey asked officers whether Phase II JPME (JPME II) and prior joint experience were either required or desired to perform the duties of the billet successfully. The majority of all officers surveyed, regardless of organization, reported a need for joint education and experience. Even 70 to 80 percent of officers serving in internal service billets indicated such a need.

## **Identifying Attributes of Joint Billets**

One of the main purposes of the new study was to examine and identify the characteristics of joint billets with a view to developing criteria that could be used to classify future billets as suitable for the JDAL. We used a number of different classification methods to try to identify clusters of variables that appeared to characterize “joint” billets; to check the robustness of these findings across different samples and different techniques; and to identify “misclassified” cases, in particular, groups of non-JDAL billets in external organizations and service-nominated billets that appeared to share the attributes of JDAL billets. We started with one major underlying presumption—that JDAL billets characterize “joint” billets, so non-JDAL billets that rank high on similar characteristics might be billets that could qualify their incumbents for joint duty credit.

We explored three main avenues in our research: (1) classification techniques, such as classification and regression tree analysis (CART)

and nonparametric kernel classification, to identify variables that offer some ability to discriminate among groups; (2) exploration of correlations among the data to see if characteristics could be pared down to some smaller subset of underlying attributes or “factors” through factor analysis; and (3) logistic regression models to identify factors that appeared to distinguish JDAL billets from non-JDAL billets and to use these factors to identify a set of non-JDAL billets that were “closer” to JDAL billets than non-JDAL billets.

These variables used in the analyses included (1) types of tasks performed; (2) substitutability of civilians or other service members in a given billet; (3) types of knowledge, education, and experience required for or provided by the billet; (4) interactions and service with organizations and personnel outside of own service; and (5) other characteristics of the billets in terms of assignment, location, and pays.

Table S.1 identifies the variables that were significant in classifying and distinguishing among the three types of billets—JDAL, external organization, and service-nominated. Because the factor analysis had identified natural groupings of the variables, we grouped these variables according to the nine factors identified by the factor analysis. Some variables were robust across the different techniques in discriminating billets. These included (1) whether the billet involved serving with other military departments; (2) whether the billet was primarily tactical, operational, or strategic in nature; (3) the types of experiences provided by the billet, especially multiservice and interagency experience; (4) whether the billet involved having frequent interactions with different types of non-own-service personnel;<sup>15</sup> and (5) whether the billet involved frequent interactions with non-own-service organizations.

The table does not make an attempt to rank the relative importance of the variables across the various methods. Each method, of course, uses a different criterion for determining significance. For example, CART uses cross-validation and pruning, while logistic regression uses traditional significance testing. Ranking the variables in order of importance could be done through simulation methods, which were outside

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<sup>15</sup> Non-own-service personnel include DoD military or civilian personnel from a different service than the referent individual.

**Table S.1**

**Summary of Variables Selected by Various Analyses as Important in Classification of Billets, Organized by Factor**

Variable	CART	Heuristic Approach	Logistic Regression (JDAL Versus Service-Nominated Billets)	Logistic Regression (JDAL Versus Non-JDAL External Organization Billets)
<b>Deployment</b>				
Currently serving at home base			√	√
Currently receiving family separation allowances			√	√
Currently receiving hostile pay				
Currently receiving hardship pay			√	
Currently receiving combat tax exclusion				√
<b>Joint tasks</b>				
Perform "develop joint doctrine" task			√	√
Perform "develop joint policies" task				
Task of developing joint doctrine important to job				
Task of developing joint policies important to job			√	
<b>Job assessment</b>				
Billet gives significant experience in multiservice matters	√	√	√	
Billet gives significant experience in multinational matters			√	√
Billet gives significant experience in interagency matters		√	√	√

Table S.1—Continued

Variable	CART	Heuristic Approach	Logistic Regression (JDAL Versus Service-Nominated Billets)	Logistic Regression (JDAL Versus Non-JDAL External Organization Billets)
Prior joint experience desired or required for job performance			√	√
Civilian could perform billet duties effectively			√	√
Billet summary (primarily tactical, operational, or strategic in nature)	√		√	√
Number of knowledge elements required for job				√
Number of knowledge elements in which job incumbent will gain proficiency by serving in job	√			√
Number of Level 1 or Level 2 non-own-service supervisors			√	
Job does not require unique knowledge of own service	√			√
Billet involves serving full-time with members from another military department	√	√	√	
Number of types of personnel with whom incumbent interacts frequently	√		√	√
Organizational interactions				
Perform “foster complex relations” task			√	√
Task of fostering complex relations is important to job			√	√

**Table S.1—Continued**

Variable	CART	Heuristic Approach	Logistic Regression (JDAL Versus Service-Nominated Billets)	Logistic Regression (JDAL Versus Non-JDAL External Organization Billets)
Perform “strategic direction and integration” task			√	
Task of providing strategic direction and integration important to job			√	
Serving in a JTF Headquarters Staff billet	√		√	
Serving in a JTF subordinate organization billet				
Serving in a JTF service component billet			√	√
Multinational assignment				
Billet involves full-time service with armed forces of another country or international military/treaty organization				√
Assigned simultaneously to own service and joint, combined, or multinational organization			√	
Other variables				
JPME II desired or required for job performance			√	√
Number of non-own-service organizations with whom incumbent interacts frequently	√		√	

the scope of the project. Our purpose here was more limited. We were interested in identifying characteristics that appeared to discriminate “more-joint” billets from “less-joint” billets across a variety of statistical classification methods. The objective was to present policymakers with a robust range of characteristics that they could use to identify positions for which joint duty credit should be awarded or which are good candidates for the JDAL. Policymakers may choose to assign different weights to the variables in determining jointness, something we were not able to do in our analysis.

There was a good deal of consistency in the variables identified by the various methods as important discriminators of billets that resemble JDAL billets. The list of variables may prove useful in developing guidelines and criteria for evaluating individual billets. Currently, officers receive joint credit for serving in positions on the JDAL. As we have pointed out elsewhere, one frequent criticism of the current system is that officers are serving in non-JDAL assignments that provide a rich joint experience but do not grant the officers joint credit.<sup>16</sup> Likewise, there are officers serving in assignments on the JDAL that may not provide what some would consider a joint experience, either because of the content of their work or because of limited interaction with other services, nations, or agencies. Our analysis provides evidence to support both these assertions.

## **Determining Whether There Are Sufficient Joint-Experienced Officers to Meet the Demand for Them**

We modeled the extent to which there is a sufficient number of officers with joint experience to satisfy the demand for such officers. The key inputs included the number of billets that require prior joint experience, the number of billets that provide officers with joint experience, and the management model used to assign, promote, and retain those offi-

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<sup>16</sup> Thie et al., 2005; Harry J. Thie, Margaret C. Harrell, Sheila Nataraj Kirby, Al Crego, Roland J. Yardley, and Sonia Nagda, *Framing a Strategic Approach for Reserve Component Joint Officer Management*, Santa Monica, Calif.: RAND Corporation, MG-517-OSD, 2006.

cers. This analysis included excursions for four communities of officers: Army Infantry, Navy Surface Warfare officers, Air Force Space and Missile officers, and Marine Corps ground officers. For each community, we explored two supply situations. First, we considered the implications if only officers serving in billets currently on the JDAL received valid joint experience, and, second, we considered the implications of also acknowledging those billets for which survey respondents reported that they received significant joint experience. For each community, we also explored the implications of three demand situations: demand for joint experience that was limited only to today's critical billets; demand to fill all the billets that survey respondents indicated required prior joint experience; and demand to fill the billets that survey respondents indicated either required or desired prior joint experience. We matched each supply possibility to each demand possibility, using three different management frameworks (further discussed below).

This modeling and analysis indicates that whether there are sufficient numbers of joint-experienced officers depends more on the assumptions made about demand than about supply. There will likely not be any difficulty developing and managing sufficient joint officers to fill critical billets—those currently acknowledged as requiring prior joint experience. It will be more challenging to fill billets that survey respondents indicated would benefit from prior joint experience, and it does not appear feasible to assign an officer with prior joint experience to every billet for which prior joint experience is required or desired. One challenge of joint officer management is that so many of the billets that might benefit from prior joint experience also provide joint experience. Thus, one management tradeoff is determining whether to maximize the performance in those billets by assigning officers with prior joint experience, or whether to provide other officers the opportunity to gain joint experience.

Our analysis found that it was considerably easier to satisfy the identified need for joint-experienced officers if officers could obtain valid joint experience from billets that were identified by survey respondents as providing a valid joint experience, rather than only from billets on the current JDAL.

The analysis reported here was based, in part, on the differences among the three management frameworks, which determined how officers were assigned, promoted, and retained: (1) the **managing leadership succession** model, in which officers are managed as future military leaders and thus experience shorter joint assignments and higher promotion rates; (2) a **managing competencies** system, which places emphasis on developing intensely experienced officers in joint matters and would result in something that might be considered a joint cadre that experienced longer and repeated joint assignments; and (3) a **managing skills** system, which would distribute joint experience throughout the officer corps.

Throughout this analysis, our determination of “sufficient to meet demand” varies by the communities examined and the management model employed. For example, the managing leadership succession model, in which more officers serve in shorter joint assignments and then are retained and promoted, provides the greatest ratio of joint-experienced officers to billets. However, other management frameworks might require lower ratios. For example, joint officers in a managing competencies framework would be expected to serve multiple joint assignments, and thus there may be fewer competing opportunities for each individual officer.

## Recommendations

Currently, officers receive joint credit for serving in positions on the JDAL. However, our analysis supports two frequent criticisms. First, officers are serving in non-JDAL assignments that provide a rich joint experience but do not grant the officers joint credit. Second, there are officers serving in assignments on the JDAL that may not provide what some would consider a joint experience, either because of the content of their work or because of limited interaction with other services, nations, or agencies.

In a previous report, we suggested that a point system be considered in which individuals could petition to receive credit for joint duty assignments not currently included on the JDAL by developing



portfolios to be evaluated by officer boards.<sup>17</sup> The variables associated with jointness identified in the statistical analysis in this report would provide a good start at outlining the guidelines for putting together such portfolios and criteria for evaluating them.

The best management system in terms of feasibility, management flexibility, and movement toward the Chairman's vision for joint officer development<sup>18</sup> is to recognize that a larger number of billets require prior experience and to use a modified JDAL system that allows individual officer assessment of joint experience and accredits officers accordingly. Our recommendations include the following:

- Maintain a billet-based system that is an organization-based system and supplement it with an individual-based system. In other words, judge all the billets within an organization to be equally joint, and supplement this system with an evaluation of individuals' cumulative joint experiences gained elsewhere.
- When implementing an individual-based system, recognize intensity of experience when considering those in either non-JDAL billets or those in JDAL billets with tenure appeals.
- Because they include joint content, consider O-3 billets for inclusion on the JDAL and consider experience in O-3 billets when assessing the joint experience of individuals.
- Consider recency of experience when measuring an individual's experience. Thus, if a senior officer's only joint experience was gained as an O-3, that prior assignment may not provide sufficient prerequisite experience for important senior joint assignments.
- Consider managing (and tracking relevant experience) separately for multiservice, multinational, and interagency matters.
- Reconsider the exclusion of certain occupational groups from the JDAL.
- When determining tenure restrictions for joint credit, recognize that it is in the best interest of the joint organization to have

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<sup>17</sup> Thie et al., 2006.

<sup>18</sup> Joint Chiefs of Staff, *CJCS Vision for Joint Officer Development*, Washington, D.C., November 2005.

longer-tenured personnel, but that the average individual gains acculturation and joint experience quickly. Thus, tenure restrictions may benefit the organization more but may be less relevant to determining who has received a valid joint experience.

Many of these recommendations have been incorporated into the new joint officer qualification system implemented in October 2007.

# Abbreviations

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CART	classification and regression tree analysis
CENTCOM	U.S. Central Command
COCOM	combatant command
CSA	combat support agency
DMDC	Defense Manpower Data Center
DoD	U.S. Department of Defense
GNA	Goldwater-Nichols Act of 1986
JDAL	Joint Duty Assignment List
JOM survey	Joint Officer Management Census survey
JPME	Joint Professional Military Education
JPME II	Phase II Joint Professional Military Education
JPO	Joint Program Office
JSO	Joint Specialty Officer
JTF	Joint Task Force
OSD	Office of the Secretary of Defense



# Introduction

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## Background and Purpose of Project

Since 1991, successes in Iraq (Operations Desert Shield and Desert Storm), Bosnia and Afghanistan (among others), and more recently in Operation Iraqi Freedom, have testified to the effectiveness of the joint military force and its warfighting potential. The ways in which joint officers are currently educated and trained are largely governed by Title IV of the Goldwater-Nichols Act of 1986 (GNA).<sup>1</sup> However, it is increasingly recognized that the current approach to joint matters needs to evolve from its current static format to a more dynamic approach that broadens the definitions of *joint matters* and *joint quali-*

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<sup>1</sup> Throughout this report we use the term *joint* as shorthand to refer to the management of officers with education and assignments in joint matters. The U.S. Department of Defense (DoD) defines *joint matters* as

Matters related to the achievement of unified action by multiple military forces in operations conducted across domains such as land, sea, or air, in space, or in the information environment, including matters relating to national military strategy; strategic planning and contingency planning; command and control of operations under unified command; national security planning with other departments and agencies of the United States; and combined operations with military forces of allied nations. In the context of joint matters, the term “multiple military forces” refers to forces that involve participation from the armed forces and one or more of the following: other departments and agencies of the United States; the military forces or agencies of other countries; non-governmental persons or entities. (DoD, “DoD Joint Officer Management Program,” DoD Instruction 1300.19, August 21, 2008.)

*fications* and allows for multiple paths to growing joint officers.<sup>2</sup> DoD's most recent strategic plan for joint officer management and joint officer development states eloquently,

Joint Task Forces (JTFs) now define the way we array our armed forces for war and operations other than war. The effectiveness of joint operations is no longer simply the integration and/or interoperability of two or more military services; it involves the synergistic employment of multi-component forces from multiple services, agencies, and nations. Non-governmental agencies and commercial enterprises must now be routinely combined with traditional military forces to achieve national objectives. Such a dynamic and varied environment demands flexibility, responsiveness, and adaptability not only from the individual Soldiers, Sailors, Airmen, and Marines, but *also from the processes which support them*.<sup>3</sup>

The RAND National Defense Research Institute was asked in fiscal year 2003 to undertake an analysis that was intentionally broad—looking beyond joint manpower issues to establish the context for officer development in joint matters. That analysis was designed to conceptualize a strategic approach for officer development in such matters. The intent of such a strategic approach is to provide overarching guidance on officer training and development in joint matters to best meet DoD's mission and goals in the context of evolving combatant command (COCOM) and service requirements, revolutionary changes in technology, and a dramatic cultural shift in the military that require the services to move from differentiation to integration of their workforces. Thus, a strategic approach to human resource management determines which critical workforce characteristic(s) are needed, given missions, goals, and desired organizational outcomes; assesses the availability

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<sup>2</sup> U.S. General Accounting Office, *Joint Officer Development Has Improved, But a Strategic Approach is Needed*, Washington, D.C., GAO-03-238, 2002; Booz Allen Hamilton, *Independent Study of Joint Officer Management and Joint Professional Military Education*, McLean, Va., 2003.

<sup>3</sup> DoD, *Strategic Plan for Joint Officer Management and Joint Professional Military Education*, 2006, pp. 2–3. Italics added.

of the characteristic(s) now and in the future; and suggests changes in management practices for personnel with those characteristic(s) to minimize gaps between need and availability.

The results of that earlier effort are documented in *Framing a Strategic Approach for Joint Officer Management*,<sup>4</sup> which presented the findings of the joint officer analysis, a conceptual strategic approach for joint officer management, and recommendations to implement the strategic plan. That report also pointed out that the next research step to operationalize or implement the strategic plan for joint officer management was to gather extensive data on billets that require joint experience, education, or training and billets that provide such experience, and it outlined a detailed plan for gathering the data.

This plan was subsequently implemented by the research sponsor. The sponsor conducted a Web-based survey of individuals serving in joint or potentially joint billets in the summer of 2005. Surveyed billets included those currently on the Joint Duty Assignment List (JDAL), non-JDAL billets in external organizations that have some billets on the JDAL, and non-JDAL internal service billets nominated by the services.<sup>5</sup> A second report<sup>6</sup> provided an overview of the approximately 21,000 responses to the Joint Officer Management Census survey (hereafter the JOM survey). The report was designed to set the stage for the more complex task of analytic job evaluation—the subject of the current report. It examined officers' responses to questions regarding their backgrounds and assignments, including the extent to which officers believed their assignment provided them with joint experience

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<sup>4</sup> Harry J. Thie, Margaret C. Harrell, Roland J. Yardley, Marian Oshiro, Holly Ann Potter, Peter Schirmer, and Nelson Lim, *Framing a Strategic Approach for Joint Officer Management*, Santa Monica, Calif.: RAND Corporation, MG-306-OSD, 2005.

<sup>5</sup> Internal service organizations are those that consist almost exclusively of personnel from a single service, and whose command structure is of that service (e.g., combat units, service staff). External organizations are those that include individuals from multiple services, and whose command structure is inclusive of multiple services (e.g., defense agencies, COCOMs, JTFs, joint staff).

<sup>6</sup> Sheila Nataraj Kirby, Al Crego, Harry J. Thie, Margaret C. Harrell, Kimberly Curry Hall, and Michael S. Tseng, *Who Is "Joint"? New Evidence from the 2005 Joint Officer Management Census Survey*, Santa Monica, Calif.: RAND Corporation, 2006.

or required them to have had prior joint education, training, or experience and whether and how these answers differed across the organizations and/or services in which these billets were located.

## Purpose and Organization of Report

This report uses data from the 2005 JOM survey to examine the demand for and supply of “jointness” in billets. As mentioned above, these billets include those on the current JDAL, which are formally recognized in law as providing joint experience and thus eligible for joint duty credit; those in external organizations with some billets on the JDAL; and internal service billets that are currently excluded from consideration for joint duty credit. The report focuses on three areas: (1) analyzing the characteristics that measure “jointness” of a billet and using that analysis to identify billets with joint content; (2) determining whether sufficient numbers of officers with joint education, training, and experience are likely to be available to satisfy DoD’s needs; and (3) exploring whether and how the experiences of selected communities of officers—for example, those assigned to billets dealing with acquisition matters—differ from those of their peers. As such, this report should be of particular interest to military personnel managers dealing with joint officer management issues or particular communities of officers.

Findings from these analyses and from Kirby et al. (2006) were provided to the sponsor and used in developing DoD’s new *Strategic Plan for Joint Officer Management and Joint Professional Military Education*, issued in April 2006,<sup>7</sup> and the implementation plan for the new joint officer qualification system, issued in March 2007.<sup>8</sup> Because the work presented here predates the new system now being implemented, we present the recommendations as they were initially provided to the

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<sup>7</sup> DoD, *Strategic Plan for Joint Officer Management and Joint Professional Military Education*, 2006.

<sup>8</sup> DoD, *Joint Qualification System Implementation Plan*, March 2007.



sponsor. Many of these recommendations have been incorporated into the new joint officer qualification system.

The report is organized as follows. Chapter Two presents a brief overview of findings from the 2005 JOM survey taken from the Kirby et al. (2006) report. The next three chapters deal directly with the three central questions highlighted above. Chapter Three examines the characteristics of billets that might suggest their level of jointness. Chapter Four considers whether there will be sufficient joint-experienced officers to satisfy the demand for them. Chapter Five discusses billets involved with acquisition matters and examines how these billets compare with JDAL billets in terms of work, experiences, and requirements for joint education and prior experience. Chapter Six discusses other related issues, such as intensity and duration of experience and accrediting officers with joint experience. Chapter Seven provides conclusions and recommendations. The supporting appendixes include the JOM survey protocol and a description of the joint officer management model.



## Findings from the 2005 Joint Officer Management Census Survey

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### Background

The JOM survey addresses the following types of billets:

- billets currently on the JDAL<sup>1</sup>
- non-JDAL billets in external organizations that have some billets on the JDAL
- internal service billets not on the JDAL that were nominated by the services as likely to provide joint experience or to require joint experience or joint education.

Services and external organizations were asked to identify (1) billets for which a prerequisite Joint Professional Military Education (JPME) course and/or experience gained through a previous joint tour of duty might better qualify an officer to perform the mission requirements of his or her position and (2) billets that provide officers with significant experience in joint matters (for example, billets that provide incumbents with multinational, multiservice, or interagency experience) and

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<sup>1</sup> At the time of the survey, a joint duty assignment was defined as an assignment to a billet in a multiservice or multinational command/activity that is involved in the integrated employment or support of the land, sea, and air forces of at least two of the three military departments. The JDAL is a consolidated roll that contains all billets that are approved joint duty assignments for which joint credit can be applied. Billets are added to and deleted from the JDAL, and there is a validation process to review positions nominated for addition.

thus could be deemed to be similar to joint duty assignments. Each service used its own criteria for nominating billets.

Although the intention had been to survey all billets that met the criteria above—in other words, to conduct a census of actual and potential JDAL billets—the survey actually encompassed a subset of billets rather than the census because of an outdated sampling frame and some inadvertently excluded organizations. The 30,043 billets that were surveyed included 8,475 JDAL billets (out of 9,700 billets in 2004); 6,384 non-JDAL billets in external organizations (which encompassed almost all the billets in most of the organizations with some exceptions, most notably intelligence organizations); and 15,184 service-nominated billets (which presumably covered all the billets the services designated as meeting their criteria). We received a total of 21,214 responses—a response rate of 71 percent. However, the response rates varied considerably across types of organizations.

## Categorization of Billets

We used two major classification schemes to examine the differences in the responses:

- *JDAL status.* Billets are categorized into one of three groups: billets currently on the JDAL; non-JDAL billets in external organizations with some billets on the JDAL; and internal service billets (which are not on the JDAL by law) that are nominated by the four services.
- *Major billet organization.* Billets are categorized according to the organization in which the billet is currently assigned. Those mutually exclusive groups include the following:
  - U.S. Army
  - U.S. Navy
  - U.S. Air Force
  - U.S. Marine Corps
  - Joint Staff
  - Office of the Secretary of Defense (OSD)

- U.S. Central Command (CENTCOM) JTFs
- international organizations
- combat support agencies (CSAs)
- OSD defense agencies
- other non-OSD defense agencies
- educational agencies
- geographic commands
- force providers
- functional commands.<sup>2</sup>

About half the billets in the responding sample had been nominated by the services, 29 percent were JDAL billets, and the remaining billets were non-JDAL billets in external organizations. Together, the Army and Air Force billets account for 40 percent of the responding sample. Navy billets account for a little less than 10 percent of the sample, and the Marine Corps accounts for 0.3 percent of the sample. The Marine Corps nominated few internal billets compared with the other services.

## Caveats

Sample sizes are quite small for some groups; thus, our findings should be seen as suggestive rather than definitive. Because we are unable to correct for nonresponse, it is important to view the findings here as being representative of the responding sample and not the entire universe of joint or potentially joint officers.

Although we show differences in characteristics of the billets nominated by the four services, it is important to remember that these billets cannot and should not be directly compared. The services were provided with broad criteria for nominating billets; however, how the criteria should be operationalized and any additional criteria to be used were left up to the individual services. As a result, the billets nominated

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<sup>2</sup> See Table 3.1 in Chapter Three of Kirby et al. (2006) for a crosswalk between organizations that were surveyed and the categorization used here.

by the services are wide-ranging, with the Marine Corps being the most selective and most parsimonious in its nominations. Thus, one should not expect these billets to be comparable or draw inferences regarding how “joint” billets in one service compare with those in another.

### Typical Metrics of “Jointness”

The JOM survey gathered information by asking questions about a number of billet characteristics that are generally regarded as defining jointness: types of tasks performed during a typical work week, supervision of the billet by non-own-service or civilian personnel, frequency and number of interactions with non-own-service organizations and personnel, the need for joint professional education or prior joint experience for successful job performance, and types of joint experience provided by the billet. There are other measures of jointness, but these characteristics are a reasonable subset to use for our analysis. We use officers’ responses to these questions to provide a broad-brush picture of how billets in various organizations rank along the various dimensions.

Table 2.1 defines the set of indicators used to characterize jointness. Tables 2.2 through 2.4 describe the billets along the various dimensions, by JDAL category and billet organization.

### Tasks Performed During a Typical Workweek

Four tasks were selected as representing “highly joint” activities: (1) providing strategic direction and integration, (2) developing/assessing joint policies, (3) developing/assessing joint doctrine, and (4) fostering multinational, interagency, or regional relations. Officers were much more likely to report doing the first task than the other three, as shown in Table 2.2. Close to 80 percent of JDAL officers performed one or more of these tasks, and 27 percent of JDAL officers performed at least three of these tasks. In contrast, only 45 percent of officers in internal service billets performed any of these joint tasks, and less than 10 percent of officers in internal service billets performed three or more of these tasks. The non-JDAL, non-service billets ranked

**Table 2.1**  
**Definitions of Indicators Used to Characterize “Jointness”**

<b>Metric</b>	<b>Indicators</b>
Tasks performed during the typical work week	Percentage of officers providing strategic direction and integration Percentage of officers developing/assessing joint policies Percentage of officers developing/assessing joint doctrine Percentage of officers fostering multinational, interagency, or regional relations Percentage of officers performing three or more of these tasks
Interactions with non-own-service organizations and personnel	Median number of non-own-service organizations with whom the officer interacts monthly or more frequently Median number of non-own-service personnel with whom the officer interacts monthly or more frequently
Supervision of billet by non-own-service personnel/civilians	Percentage of officers reporting being supervised by one or more non-own-service supervisor/civilian/non-U.S. military personnel or civilian
Need for joint professional education or prior joint experience	Percentage of officers reporting that JPME II is required or desired for the assignment Percentage of officers reporting that prior joint experience is required or desired for the assignment
Types of joint experience provided by the billet	Percentage of officers reporting getting significant experience in multiservice matters Percentage of officers reporting getting significant experience in multinational matters Percentage of officers reporting getting significant experience in interagency matters Percentage of officers reporting getting significant experience in all three areas

in the middle, with 60 percent of officers performing at least one of the four tasks and 15 percent performing at least three of the tasks. Eighty-five percent of officers in Joint Staff or OSD staff billets and 75 percent of officers in Marine Corps, international organization, force provider, and functional command billets performed one or more of these tasks. Between 22 and 36 percent of surveyed officers in these organizations performed three or more of these tasks.

Based on this set of indicators, JDAL and non-JDAL billets in external organizations rank either first or second among JDAL categories, while internal service billets rank third. When we examine major billet organizations, billets assigned to the Joint Staff, OSD staff, edu-

**Table 2.2**  
**Rankings of Billet Categories Based on Tasks Performed During the Typical Workweek**

	Percentage of Officers Providing Strategic Direction and Integration	Rank	Percentage of Officers Developing or Assessing Joint Policies	Rank	Percentage of Officers Developing or Assessing Joint Doctrine	Rank	Percentage of Officers Fostering Multinational, Interagency, or Regional Relations	Rank	Percentage of Officers Performing Three or More of These Tasks	Rank
JDAL Category										
JDAL billets	59.0	1	37.5	1	32.8	1	31.6	1	27.0	1
Non-JDAL billets in external organizations	45.2	2	22.8	2	18.8	2	21.3	2	14.6	2
Service- nominated billets	34.0	3	12.1	3	12.9	3	15	3	8.5	3
Major Billet Organization										
Joint Staff	68.3	2	54.4	1	44.1	2	21.6	8	36.4	1
OSD	77.6	1	45.2	2	22.8	8	24.7	6	25.5	5
CENTCOM JTFs	42.4	12	18.3	12	11.2	15	33.5	3	10.4	12
Army	26.4	15	10.2	15	12.7	13	17.1	11	8	14
Navy	33.1	14	11.8	14	11.5	14	16.4	12	7.9	15
Air Force	40.7	13	13.6	13	13.1	12	12.4	13	9	13
Marine Corps	55.4	5	36.9	6	41.5	4	20	9	23.1	8



Table 2.2—Continued

	Percentage of Officers Providing Strategic Direction and Integration	Rank	Percentage of Officers Developing or Assessing Joint Policies	Rank	Percentage of Officers Developing or Assessing Joint Doctrine	Rank	Percentage of Officers Fostering Multinational, Interagency, or Regional Relations	Rank	Percentage of Officers Performing Three or More of These Tasks	Rank
International organizations	47.1	10	33.6	7	25.4	7	48.8	1	24.6	6
CSAs	46.3	11	18.8	11	14.8	11	25.1	5	12	11
Other non-OSD defense agencies	54.7	6	25.4	10	21.4	9	27.5	4	20.5	9
OSD defense agencies	57.1	4	31.7	9	20.5	10	9.3	14	18	10
Educational agencies	49.8	9	40.5	4	43.5	3	24.1	7	30.4	2
Geographic commands	52.5	7	32.1	8	28.6	6	34.5	2	23.6	7
Force providers	50.7	8	40.1	5	46	1	19.6	10	28.2	4
Functional commands	62.3	3	41	3	38.6	5	8.7	15	28.3	3

NOTE: Organizations with equal percentages of officers meeting the particular criterion were given the same rank.

cational agencies, force providers, and the functional commands seem to rank high on these task-based measures of “jointness.” The rankings of the others are more mixed, with some ranking high on all tasks performed and others ranking high on the “providing strategic direction and integration” indicator. The Marine Corps billets rank higher than the other three services in performing all four tasks.

### **Frequency and Number of Interactions with Non-Own-Service Organizations and Personnel**

Officers in JDAL billets tended to interact frequently with the highest number of non-own-service organizations (six), whereas officers assigned to internal service billets interacted with a median of one (see Table 2.3). Officers serving in the OSD or Joint Staff reported interacting with between nine and 13 non-own-service organizations frequently. Officers from the defense agencies, CSAs, and the COCOMs reported interacting with five non-own-service organizations. Respondents from CENTCOM JTFs, educational agencies, and international organization billets interacted frequently with two to three organizations. Among the services, officers in Marine Corps billets interacted with three non-own-service organizations compared with one for the Army and Air Force.

Overall, using the median, JDAL and non-JDAL billet officers reported interactions with five types of personnel, compared with two for officers serving in the billets nominated by the services. Officers serving in CENTCOM JTFs, educational agencies, and geographic commands reported interacting frequently with six types of personnel (excluding own-service personnel), while all other non-service billets reported interacting with five types of non-own-service personnel. Among the services, the median for the Navy and Marine Corps billets was four types of personnel, compared with two for the Army and Air Force billets.

### **Supervision of Billet by Non-Own-Service Personnel**

Not unexpectedly, close to 80 percent of JDAL billets and about 75 percent of non-JDAL billets in external organizations are supervised

**Table 2.3**  
**Rankings of Billet Categories Based on Frequent Interactions with Non-Own-Service Organizations and Personnel and Non-Own-Service Supervision**

	Median Number of Non-Own-Service Organizations with Whom Officers Interact Monthly or More Frequently	Rank	Median Number of Non-Own-Service Personnel with Whom Officers Interact Monthly or More Frequently	Rank	Percentage of Billets Supervised by Non-Own-Service Supervisors or Civilians	Rank
<b>JDAL Category</b>						
JDAL billets	6	1	5	1	78	1
Non-JDAL billets in external organizations	4	2	5	1	75.4	2
Service- nominated billets	1	3	2	3	21	3
<b>Major Billet Organization</b>						
Joint Staff	13	1	5	4	77.8	8
OSD	9	2	5	4	94.6	2
CENTCOM JTFs	3	9	6	1	50.1	10
Army	1	14	2	14	8.9	15
Navy	2	12	4	12	29.6	12
Air Force	1	14	2	14	26.8	13
Marine Corps	3	9	4	12	13.8	14

**Table 2.3—Continued**

	Median Number of Non-Own-Service Organizations with Whom Officers Interact Monthly or More Frequently	Rank	Median Number of Non-Own-Service Personnel with Whom Officers Interact Monthly or More Frequently	Rank	Percentage of Billets Supervised by Non-Own-Service Supervisors or Civilians	Rank
International organizations	2	12	5	4	45.5	11
CSAs	5	3	5	4	83.9	4
Other non-OSD defense agencies	5	3	5	4	83.7	6
OSD defense agencies	5	3	5	4	96.1	1
Educational agencies	3	9	6	1	85.5	3
Geographic commands	5	3	6	1	74.5	9
Force providers	5	3	5	4	83.9	5
Functional commands	5	3	5	4	79	7

NOTE: Organizations with the same median number of or equal percentages of officers meeting the particular criterion were given the same rank.

by at least one non-own-service supervisor,<sup>3</sup> compared with a little more than 20 percent of the service-nominated billets (see Table 2.3).

Officers serving in OSD staff or OSD defense agency billets are almost all supervised by at least one non-own-service supervisor, and this was true of 75 percent or more of officers assigned to other agencies, the Joint Staff, and the COCOMs. Only 45 percent of those serving in international organizations reported having at least one non-own-service supervisor. Of the major billet organizations, the four services, particularly the Army and Marine Corps, were the least likely to have supervisors from other organizations.

JDAL billets rank first on both indicators (interaction with non-own-service organizations and interaction with non-own-service personnel); Joint Staff and OSD billets rank first or second. However, CENTCOM JTF billets rank low on the interactions-with-organizations indicator but rank very high on the interactions-with-personnel indicator. Other non-service organizations were in the middle, with the services generally ranking last on these indicators, with the exception of the Marine Corps.

### **Joint Experience Provided by a Billet**

JDAL billets provided the most experience in multiservice, multinational, and interagency matters (see Table 2.4). Overall, 87 percent of officers in JDAL billets reported that they gained significant experience in multiservice matters, and between 65 and 75 percent reported gaining significant experience in multinational and interagency matters. Officers in non-JDAL, non-service billets were much less likely to report gaining experience with multinational matters than with multiservice or interagency matters. Compared with officers in non-service billets, officers in service-nominated billets were less likely to report gaining experience in these areas. More than 70 percent of the non-service organizations provide significant experience in multiservice matters, and this is also true of Marine Corps billets. By comparison, 46–52 percent of the Army, Navy, and Air Force billets provide such

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<sup>3</sup> Non-own-service personnel include DoD military or civilian personnel from a different service than the referent individual.

**Table 2.4**  
**Rankings of Billet Categories Based on Types of Joint Experience Provided by the Billet**

	Officers Reporting Getting Significant Experience in Multiservice Matters (%)	Rank	Officers Reporting Getting Significant Experience in Multinational Matters (%)	Rank	Officers Reporting Getting Significant Experience in Interagency Matters (%)	Rank	Officers Reporting Getting Significant Experience in All Three Areas (%)	Rank
JDAL Category								
JDAL billets	86.9	1	65	1	75.1	2	53.4	1
Non-JDAL billets in external organizations	79.1	2	56.7	2	75.9	1	47.5	2
Service- nominated billets	48.9	3	39.6	3	43.8	3	23.5	3
Major Billet Organization								
Joint Staff	89.3	2	57.1	5	74.4	7	51.6	4
OSD	92.5	1	55.8	6	84.6	2	50.6	5
CENTCOM JTFs	82.4	7	81.2	2	71.9	8	63.1	2
Army	49.7	14	50.4	10	42.1	15	28.5	11
Navy	52.3	13	37.2	12	43.6	14	23.8	14
Air Force	46.2	15	31.3	14	45.7	12	19.1	15
Marine Corps	77.1	10	45.9	11	44.3	13	24.6	13
International organizations	65.9	12	96.3	1	47.8	11	39.5	9

Table 2.4—Continued

	Officers Reporting Getting Significant Experience in Multiservice Matters (%)	Rank	Officers Reporting Getting Significant Experience in Multinational Matters (%)	Rank	Officers Reporting Getting Significant Experience in Interagency Matters (%)	Rank	Officers Reporting Getting Significant Experience in All Three Areas (%)	Rank
CSAs	77.8	9	54.3	8	81.3	5	45.8	7
Other non-OSD defense agencies	75.8	11	55.4	7	81.6	4	48.3	6
OSD defense agencies	86.4	4	36.6	13	85.1	1	34.8	10
Educational agencies	81.4	8	71.7	4	83.1	3	65	1
Geographic commands	88.7	3	73.2	3	76.7	6	59.8	3
Force providers	85.9	5	51.5	9	62.1	10	45.8	8
Functional commands	82.7	6	30.5	15	62.7	9	26.5	12

NOTE: Organizations with equal percentages of officers meeting the particular criterion were given the same rank.

experience. Other billets that ranked high on this indicator were educational agency, OSD defense agency, geographic command, and force provider billets.

Almost all officers assigned to international organizations reported getting significant experience in multinational matters. Other organizations that ranked high on this indicator include CENTCOM JTFs, geographic commands, and educational agencies, with 70–80 percent of officers in these organizations agreeing or strongly agreeing that their billets provide significant experience in multinational matters.

With a few exceptions, non-service billets provide significant amounts of experience in interagency matters. Those serving in OSD staff or other agency billets were particularly likely to agree strongly with this statement. About 40–45 percent of officers in internal service billets reported getting such experience. Ninety percent or more of JDAL and non-JDAL, non-service billets provide experience in at least one of the three joint areas (multiservice, multinational, or interagency). About half provide experience in all three areas, compared with 24 percent of internal service billets. Well over 85 percent of billets, except for those in the services, provide significant experience in at least one of these areas, and, with some exceptions, well over 70 percent provide significant experience in two of the areas. More than half of the billets in the educational agencies, CENTCOM JTFs, geographic commands, Joint Staff, and OSD staff provide significant experience in all three areas. Not unexpectedly, JDAL billets rank first on every indicator. Educational agencies, CENTCOM JTF billets, and billets in the geographic commands rank very high on providing significant experience in all three areas.

### **Need for Joint Professional Education and Prior Joint Experience for Billet Assignment**

The majority of officers believed that Phase II Joint Professional Military Education (JPME II) and prior experience in a joint environment were required or desired to perform their duties successfully (see Table 2.5).<sup>4</sup> Officers in internal service billets were less likely to report

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<sup>4</sup> Large percentages of officers reported that they had no experience with JPME II. For example, 52 percent of officers in non-JDAL billets in external organizations indicated that



**Table 2.5**  
**Rankings of Billet Categories Based on Need for Joint Professional Education and Prior Joint Experience in Billet Assignment**

	Officers Reporting That JPME II Is Required or Desired for the Assignment (%)	Rank	Officers Reporting That Prior Joint Experience Is Required or Desired for the Assignment (%)	Rank
<b>JDAL Category</b>				
JDAL billets	91.7	1	88.9	1
Non-JDAL billets in external organizations	86.3	2	84.9	2
Service-nominated billets	70.9	3	69.9	3
<b>Major Billet Organization</b>				
Joint Staff	90.4	5	86.7	5
OSD	91.8	4	90.5	3
CENTCOM JTFs	84.7	10	85.3	7
Army	77.7	13	73.7	13
Navy	60.7	15	64.4	15
Air Force	69.6	14	69.1	14
Marine Corps	82.5	12	83.6	9
International organizations	85.1	9	83.1	11
CSAs	84.3	11	84.9	8
Other non-OSD defense agencies	88.1	8	83.2	10
OSD defense agencies	89.9	6	86.3	6
Educational agencies	95.2	1	95	1
Geographic commands	93.3	3	90	4
Force providers	94.2	2	91	2
Functional commands	88.4	7	82.8	12

NOTE: Organizations with equal percentages of officers meeting the particular criterion were given the same rank.

these views, but even among those officers, between 70 and 80 percent believed that such education and experience is required or desired for effective job performance. Among major billet organizations, well over 80 percent of officers in non-service billets and in the Marine Corps billets reported that joint education and experience were required or desired for the assignment.

Although the ranking reflects these percentages, even among those organizations that ranked last, 60–78 percent of officers reported a need for joint education and experience.

## **Summary**

The 2005 JOM survey was designed to elicit information on joint billets on the JDAL, potential joint billets in external organizations with some billets on the JDAL, and internal service billets nominated by the services as requiring or providing joint experience. The findings provide a rich, descriptive portrait of the experiences of officers in the various joint or potential joint billets and lay the groundwork for the more detailed analyses in the later chapters.

## Identifying Attributes of “Joint” Billets

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One of the main analytical tasks of this project was to examine and identify the characteristics of joint billets, with a view to developing criteria that could be used to classify future billets as suitable for the JDAL. Because our purpose was largely exploratory, we used a number of different techniques to try to identify clusters of variables that appeared to characterize “joint” billets; to see how robust these findings were across different samples and different techniques; and to identify groups of non-JDAL billets in external organizations with some billets on the JDAL and service-nominated billets that appeared to share the attributes of JDAL billets. A fundamental tenet of belief underlying the analyses is that JDAL billets characterize “joint” billets, so non-JDAL billets that rank high on similar characteristics might be potential JDAL billets or billets that could qualify their incumbents for joint duty credit.

We explored three main avenues in our research: (1) classification techniques, such as classification and regression trees (CART) and nonparametric kernel classification; (2) exploration of correlations among the data to see whether characteristics could be pared down to some smaller subset of underlying attributes or “factors” through factor analysis; and (3) logistic regression models to identify factors that appeared to distinguish JDAL billets from non-JDAL billets and to use these factors to identify a set of non-JDAL billets that were “closer” to JDAL billets than non-JDAL billets.

Before conducting the analyses, we examined the data and identified a set of variables that we believed should be related to “jointness”

of billets or should be useful in distinguishing “more-joint” billets from “less-joint” billets. We cast our net rather broadly for this exercise and came up with a list of 32 variables that appeared to fit these criteria. These are shown in Table 3.1. We used the same set in all of the subsequent analyses. These variables broadly characterize the billets in terms of types of tasks performed; substitutability of civilians or other service members in a given billet; types of knowledge, education, and experience required for or provided by the billet; interactions and service with organizations and personnel outside of own service; and other characteristics of the billets in terms of assignment, location, and pays.

## Data

In the dataset, we have three types of billets classified as (1) JDAL billets ( $n = 6,308$ , 29.7 percent); (2) non-JDAL external organization billets ( $n = 4,318$ , 20.4 percent); and (3) service-nominated billets ( $n = 10,588$ , 49.9 percent). Some of the analytic techniques used here required us to identify a smaller subset of the data as a “training set” on which to estimate the model; we then applied the results to the larger dataset to see how well the model fit the data. For the training set, rather than a proportionally representative sample, we wanted to get equal numbers of billets from each of the three groups. We stratified billets by billet organization (i.e., the organization in which the billet resided) and then chose a purposive sample of each type to maximize the differences among the three groups of interest—JDAL billets, billets in external organizations, and service-nominated billets. Thus,

- For the JDAL billets, we selected tactical operations officers in billet grades O-4 to O-6 who were serving on the Joint Staff in JDAL billets ( $n = 1,219$ ).<sup>1</sup>

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<sup>1</sup> “Tactical operations officers” is a DoD occupational group that includes such combat occupations as pilots, navigators, missile officers, infantry, armor, and surface warfare officers.

**Table 3.1**  
**Analysis Variables**

		Mean/Frequencies	
Variable	Definition	Training Set (n = 600)	Total (n = 21,214)
Tasks performed and importance of tasks			
Perform_Strategic	= 1 if respondent's duties include performing strategic direction and integration	1 = 51.3%	1 = 42.0%
	= 0 otherwise	0 = 48.7%	0 = 58.0%
Perform_Dev_Joint_Doctrine	= 1 if respondent's duties include developing/assessing joint doctrine	1 = 21.7%	1 = 19.2%
	= 0 otherwise	0 = 78.3%	0 = 70.8%
Perform_Dev_Joint_Policies	= 1 if respondent's duties include developing/assessing joint policies	1 = 25.5%	1 = 21.0%
	= 0 otherwise	0 = 74.5%	0 = 79.0%
Perform_Foster_Complex_Relations	= 1 if respondent's duties include fostering multinational, interagency, alliance, or regional relations	1 = 19.7%	1 = 20.4%
	= 0 otherwise	0 = 80.3%	0 = 79.6%
Import_Strategic	Importance of performing strategic direction and integration to billet duties:		
	= 0 if task not performed	0 = 49.3%	0 = 58.9%
	= 1 if of peripheral importance	1 = 3.2%	1 = 3.0%
	= 2 if of secondary importance	2 = 8.8%	2 = 7.4%
	= 3 if of primary importance	3 = 20.5%	3 = 16.5%
	= 4 if vitally important	4 = 18.2%	4 = 14.3%
Import_Dev_Joint_Doctrine	Importance of developing/assessing joint doctrine to billet duties:	0 = 78.5%	0 = 81.2%
	= 0 if task not performed		
	= 1 if of peripheral importance	1 = 4.7%	1 = 3.8%
	= 2 if of secondary importance	2 = 8.3%	2 = 7.8%
	= 3 if of primary importance	3 = 7.7%	3 = 6.3%
	= 4 if vitally important	4 = 0.8%	4 = 0.9%

Table 3.1—Continued

Variable	Definition	Mean/Frequencies	
		Training Set (n = 600)	Total (n = 21,214)
Import_Dev_Joint_Policies	Importance of developing/assessing joint policies to billet duties: = 0 if task not performed	0 = 75.0%	0 = 79.5%
	= 1 if of peripheral importance	1 = 5.7%	1 = 3.6%
	= 2 if of secondary importance	2 = 8.2%	2 = 7.9%
	= 3 if of primary importance	3 = 9.5%	3 = 7.6%
	= 4 if vitally important	4 = 1.7%	4 = 1.4%
Import_Foster_Complex_Relations	Importance of fostering multinational, interagency, alliance, or regional relations to billet duties: = 0 if task not performed	0 = 80.8%	0 = 80.2%
	= 1 if of peripheral importance	1 = 2.7%	1 = 2.6%
	= 2 if of secondary importance	2 = 5.2%	2 = 5.7%
	= 3 if of primary importance	3 = 8.2%	3 = 7.7%
	= 4 if vitally important	4 = 3.2%	4 = 3.9%
Billet_Summary	Best summary of the level of the job: = 0 if missing	0 = 1.2%	0 = 3.8%
	= 1 if tactical	1 = 9.8%	1 = 14.8%
	= 2 if operational	2 = 45.2%	2 = 43.7%
	= 3 if strategic	3 = 43.8%	3 = 37.6%
Substitutability of civilians or other service members in billet			
Civilian_Could_Perform	A civilian could perform duties and responsibilities as effectively: = 0 if missing	0 = 1.8%	0 = 4.6%
	= 1 if strongly disagree	1 = 23.2%	1 = 28.8%
	= 2 if disagree	2 = 30.0%	2 = 25.0%
	= 3 if neither agree nor disagree	3 = 12.8%	3 = 13.1%
	= 4 if agree	4 = 22.2%	4 = 18.7%
	= 5 if strongly agree	5 = 10.0%	5 = 9.8%

Table 3.1—Continued

Variable	Definition	Mean/Frequencies	
		Training Set (n = 600)	Total (n = 21,214)
Other_Svc_Member_ Could_Perform	Position does not require unique knowledge of own service: = 0 if missing	0 = 2.2%	0 = 23.6%
	= 1 if strongly disagree	1 = 14.0%	1 = 15.0%
	= 2 if disagree	2 = 15.7%	2 = 13.7%
	= 3 if neither agree nor disagree	3 = 11.8%	3 = 10.3%
	= 4 if agree	4 = 35.2%	4 = 23.6%
	= 5 if strongly agree	5 = 21.2%	5 = 13.9%
Types of knowledge, education, experience required for billet			
Position_Success_ JPME2	To perform position duties successfully, an individual would find JPME II = 0 if not sure, no JPME II experience, or not helpful	0 = 58.5%	0 = 60.3%
	= 1 if desired	1 = 30.0%	1 = 28.6%
	= 2 if required	2 = 11.5%	2 = 11.1%
Position_Success_ Prior_Joint	To perform position duties successfully, an individual would find prior joint experience = 0 if not helpful	0 = 21.0%	0 = 25.0%
	= 1 if desired	1 = 63.5%	1 = 61.9%
	= 2 if required	2 = 15.5%	2 = 13.1%
KNR_Count	Number of knowledge elements required for the position = 1–65 elements	Mean = 15.4	Mean = 14.0
Types of knowledge and experience provided by billet			
KNP_Count	Number of knowledge elements in which respondent will become proficient through serving in billet = 1–65 elements	Mean = 15.7	Mean = 12.9

Table 3.1—Continued

Variable	Definition	Mean/Frequencies	
		Training Set (n = 600)	Total (n = 21,214)
Billet_Gives_ Exp_Multiservice	The position gives me significant experience in multiservice matters		
	= 0 if missing	0 = 1.5%	0 = 4.5%
	= 1 if strongly disagree	1 = 4.5%	1 = 3.4%
	= 2 if disagree	2 = 12.7%	2 = 12.7%
	= 3 if neither agree nor disagree	3 = 12.3%	3 = 15.9%
	= 4 if agree	4 = 31.7%	4 = 35.2%
Billet_Gives_ Exp_Multinational	The position gives me significant experience in multinational matters		
	= 0 if missing	0 = 1.5%	0 = 4.5%
	= 1 if strongly disagree	1 = 10.0%	1 = 6.6%
	= 2 if disagree	2 = 24.3%	2 = 20.4%
	= 3 if neither agree nor disagree	3 = 18.2%	3 = 20.1%
	= 4 if agree	4 = 24.7%	4 = 28.2%
Billet_Gives_ Exp_Interagency	The position gives me significant experience in interagency matters		
	= 0 if missing	0 = 1.5%	0 = 4.5%
	= 1 if strongly disagree	1 = 4.3%	1 = 4.0%
	= 2 if disagree	2 = 12.2%	2 = 14.4%
	= 3 if neither agree nor disagree	3 = 17.2%	3 = 20.0%
	= 4 if agree	4 = 36.7%	4 = 34.6%
	= 5 if strongly agree	5 = 28.2%	5 = 22.5%
Interactions and service with non-own-service organizations and personnel			
N_Monthly_ Interact_Orgs	Number of non-own-service organizations with whom respondent interacts monthly or more frequently		
	= 1–49	Mean = 5.6	Mean = 4.8
N_Monthly_ Interact_Personnel	Number of types of non-own-service personnel with whom respondent interacts monthly or more frequently		
	= 1–9	Mean = 4.1	Mean = 3.8



Table 3.1—Continued

Variable	Definition	Mean/Frequencies	
		Training Set (n = 600)	Total (n = 21,214)
N_Supervisors_ Not_Own_Service	Number of explicitly identified Level 1 or Level 2 supervisors not in own military service (including civilians and non-U.S. military) = 0–2	0 = 30.8% 1 = 37.3% 2 = 31.8%	0 = 60.8% 1 = 22.7% 2 = 16.6%
Serve_With_ Other_Mil_Dept	= 1 if billet typically involves full-time service with members from another military department  = 0 otherwise	1 = 69.0%  0 = 31.0%	1 = 59.0%  0 = 41.0%
Serve_With_ Other_Country	= 1 if billet typically involves full-time service with the armed forces of another or international military or treaty organization  = 0 otherwise	1 = 9.3%  0 = 90.7%	1 = 10.8%  0 = 89.2%
Assigned_ Simultaneously	= 1 if assigned simultaneously to own service and joint, combined, or multinational organization  = 0 otherwise	1 = 4.8%  0 = 95.2%	1 = 7.7%  0 = 92.3%
Characteristics of billet in terms of assignment, location, and pays			
Assigned_JTF_HQ	= 1 if serving as Joint Task Force Headquarters Staff  = 0 otherwise	1 = 4.5%  0 = 95.5%	1 = 8.0%  0 = 92.0%
Assigned_JTF_ Sub_Org	= 1 if serving in a Joint Task Force subordinate organization  = 0 otherwise	1 = 1.2%  0 = 98.8%	1 = 5.8%  0 = 94.2%
Assigned_JTF_ Service_Comp	= 1 if serving in a Joint Task Force service component  = 0 otherwise	1 = 1.0%  0 = 99.0%	1 = 5.1%  0 = 94.9%
Currently_Serving_ At_Home_Base	= 1 if currently serving at home base  = 0 otherwise	1 = 91.2%  0 = 8.8%	1 = 85.2%  0 = 14.8%
Currently_ Receiving_FSA	= 1 if receiving (or, if had children, would receive) family separation allowance  = 0 otherwise	1 = 4.5%  0 = 95.5%	1 = 10.3%  0 = 89.7%

Table 3.1—Continued

Variable	Definition	Mean/Frequencies	
		Training Set (n = 600)	Total (n = 21,214)
Currently_Receiving_ Hostile_Pay	= 1 if currently receiving hostile fire or imminent danger pay	1 = 4.0%	1 = 10.1%
	= 0 otherwise	0 = 96.0%	0 = 89.9%
Currently_Receiving_ Hardship_Pay	= 1 if currently receiving hardship pay	1 = 3.3%	1 = 8.0%
	= 0 otherwise	0 = 96.7%	0 = 92.0%
Currently_Receiving_ Tax_Excl	= 1 if currently receiving combat tax exclusion	1 = 4.3%	1 = 10.2%
	= 0 otherwise	0 = 95.7%	0 = 89.8%

- For non-JDAL external organization billets, we selected O-4–O-6 billets located in the following organizations: Defense Advanced Research Projects Agency; Defense Contract Management Agency (a CSA); Defense Finance and Accounting Service; Defense Legal Services Agency; Defense Technology Security Administration; DoD Human Resources Activity; DoD Inspector General; Missile Defense Agency; Office of Economic Adjustment; Pentagon Force Protection Agency; and TRICARE Management Activity (n = 315).
- For service-nominated billets, we selected O-4–O-6 billets in one of the following organizations: Army Materiel Command; Army Criminal Investigation Command; Army Corps of Engineers; Army Space and Missile Defense Command; Army Training and Doctrine Command; Naval Sea Systems Command; Space and Naval Warfare Systems Command; Air Training Command; and Air Force Materiel Command (n = 1,041).

From each of these groups, a random sample of 200 cases was drawn, thus giving us a total training sample of 600 billets.

## Classification Methods

Classification methods are "multivariate techniques concerned with *separating* distinct sets of objects (or observations) and with *allocating* new objects (observations) to previously defined groups."<sup>2</sup> Classification rules are usually developed from "learning samples" or "training sets" that consist of random samples of observations that are "known" to come from each of the populations of interest. We want an optimal classification rule that minimizes both errors in classification and takes into account classification cost associated with wrongly classifying objects. Suppose, for example, that there are two populations,  $\Pi_1$  and  $\Pi_2$ , into which we are attempting to classify objects and that wrongly classifying an object that belongs in population  $\Pi_1$  as belonging to  $\Pi_2$  is a much more serious error than committing the reverse error. The classification rule should account for the costs associated with misclassification.

We used two methods for constructing a classifier for the training set: (1) a classification tree and (2) a heuristic pattern recognition approach described by Sullivan and Perry<sup>3</sup> that seeks to minimize misclassification using only a subset of the total variable set and provides the ability to assign relative importance to various characteristics ("feature weighting").<sup>4</sup> Each approach has its advantages and disadvantages; Sullivan and Perry strongly recommend that no approach be used alone.

### Classification and Regression Trees

This method of classification is useful precisely because it is so general and can deal with variables that are both ordered and nominal. Thus,

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<sup>2</sup> Richard Arnold Johnson and Dean W. Wichern, *Applied Multivariate Statistical Analysis, Fifth Edition*, Upper Saddle River, N.J.: Prentice Hall, 2002.

<sup>3</sup> Thomas J. Sullivan and Walt L. Perry, "Identifying Indicators of Chemical, Biological, Radiological, and Nuclear (CBRN) Weapons Development Activity in Sub-National Terrorist Groups," *Journal of the Operational Research Society*, Vol. 55, No. 4, 2004, pp. 361–374.

<sup>4</sup> We also used linear discriminant analysis that, like the heuristic approach, also provides relative importance values. However, it requires assumptions about the distribution of the class densities. As a result, we do not report those results here.

CART is “not tied to an underlying population probability distribution of characteristics. Nor is it tied to a particular optimality criterion.”<sup>5</sup> CART starts off by considering all objects as a single group. The group is split into partitions based on the values of a variable (for example, by separating those billets that a civilian could perform from those that a civilian could not perform). The two subgroups are then divided or split using values of a second variable. Each split point is referred to as a “branching” of the tree, and the resulting groups are called “leaves.”

Because the CART algorithm uses a one-step-ahead approach to identify splits at a node, “the tree construction is not necessarily globally optimal,”<sup>6</sup> but more complex classification tree algorithms have not generally produced substantially improved predictive performance.<sup>7</sup>

Figure 3.1 depicts a pruned classification tree.<sup>8</sup> Pruning is conducted to avoid overfitting the tree to the training set and to remove splits that do not separate observations into distinct groups. Here the class membership index is defined as

- 1 = JDAL billets
- 2 = non-JDAL external organization billets
- 3 = service-nominated billets.

Of the 32 variables, CART selected seven variables to construct the tree, as shown in Table 3.2. The table also shows the splitting rules.

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<sup>5</sup> Johnson and Wichern, 2002, p. 643.

<sup>6</sup> Sullivan and Perry, 2004, p. 370.

<sup>7</sup> Francesco Mola and Raffaele Miele, “Evolutionary Algorithms for Classification and Regression Trees,” in S. Zani, A. Cerioli, M. Riani, and M. Vichi, eds., *Data Analysis, Classification and the Forward Search: Proceedings of the Meetings of the Classification and Data Analysis Group (CLADAG) of the Italian Statistical Society, University of Parma, June 6–8, 2005*, New York: Springer, 2006.

<sup>8</sup> We used the “tree” function in R. We then determined the appropriate number of leaves using a cross-validation of the original tree to prune based on the misclassification rate. After looking at the plot of the output of the misclassifications vs. size, it was determined that growing trees beyond size = 6 added little reduction in misclassification rates. We therefore had R prune the tree—setting the “best” parameter in the function to 6. The resulting nine-leaved tree is depicted in the report.



**Table 3.2**  
**Variables and Splitting Rules Used in the Classification Tree**

Variable	Definition	Splitting Rules
Serve_With_Other_Mil_Dept	= 1 if billet typically involves full-time service with members from another military department = 0 otherwise	< 0.5
N_Monthly_Interact_Personnel	Number of types of non-own-service personnel with whom respondent interacts monthly or more frequently = 1-9	< 4.5
N_Monthly_Interact_Orgs	Number of non-own-service organizations with whom respondent interacts monthly or more frequently = 1-49	< 13.5
Billet_Summary	Best summary of the level of the job: = 0 if missing = 1 if tactical = 2 if operational = 3 if strategic	< 1.5
Other_Svc_Member_Could_Perform	Position does not require unique knowledge of own service: = 1 if strongly disagree = 2 if disagree = 3 if neither agree nor disagree = 4 if agree = 5 if strongly agree	< 1.5
Assigned_JTF_HQ	= 1 if serving as JTF Headquarters Staff = 0 if no	< 0.5
Billet_Gives_Exp_Multiservice	The position gives me significant experience in multiservice matters = 0 if missing = 1 if strongly disagree = 2 if disagree = 3 if neither agree nor disagree = 4 if agree = 5 if strongly agree	< 4.5
KNP_Count	Number of knowledge elements in which respondent will become proficient through serving in billet = 1-65 elements	< 15.5

- the billet is primarily operational or strategic in nature *and*
- the position does not require unique knowledge of own service *and*
- the billet is a JTF headquarters billet.

Interestingly, if the billet is not a JTF headquarters billet but meets the first two criteria, then two further characteristics help distinguish a JDAL billet from a non-JDAL billet in an external organization: If the billet provides significant experience in multiservice matters but provides proficiency in a limited set of knowledge elements while serving in the billet, then the billet is classified as a non-JDAL billet in an external organization.

On the other hand, the tree classifies a billet as a service billet (and arguably the least joint) if

- it does not require serving with other military departments *or*
- it does require serving with other military departments *but* it requires only a limited number of frequent interactions with non-own organizations *and* it is best described as tactical *or* it is an operational or strategic billet that requires unique knowledge of one's own service.

The tree seems to fit with intuition, but when we used the tree to classify the billets in the training set, we found an “error” rate of 30.8 percent. We also fit the tree to the entire dataset ( $n = 21,214$  billets). Overall, 40 percent of all billets in the data were “misclassified,” meaning, for example, that some billets on the JDAL had more similarities with service-nominated billets than with other JDAL billets, and that some service-nominated billets had more similarities with JDAL billets than with other service-nominated billets (Table 3.3).<sup>9</sup> About 50 percent of JDAL billets were correctly classified, as were 77 percent of the service-nominated billets. The largest error was in classifying non-JDAL external organization billets—only 36 percent were correctly

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<sup>9</sup> In the literature, such tables are often referred to as “confusion” matrices. In our case, because the misclassification may not really be an “error,” we prefer to avoid that terminology.

**Table 3.3**  
**Actual Versus Predicted Group Membership of Billets, Pruned Classification Tree**

Actual Class Index	Predicted Class Index			
	JDAL Billet	External Organization Billet	Service-Nominated Billet	Total
JDAL billet	3,123 (50%)	1,796 (28%)	1,389 (22%)	6,308
External organization billet	1,462 (34%)	1,571 (36%)	1,285 (30%)	4,318
Service-nominated billet	730 (7%)	1,740 (16%)	8,118 (77%)	10,588

classified; another 34 percent were classified as JDAL billets, and about 30 percent were classified as service-nominated billets.

In most analyses, an error rate this large would be cause for concern. However, recall that external organization billets are in those organizations with some billets on the JDAL—so it is likely that many of the non-JDAL billets “look” like JDAL billets. In addition, services were asked to nominate billets that might provide a joint experience or require joint training and/or education, and about 7 percent appeared to resemble JDAL billets. What is interesting is that at least some of the JDAL billets, according to the tree, are closer in characteristics to non-JDAL billets.

**Heuristic Approach**

Most efforts to identify a simple group structure from a complex set of data require a measure of “closeness,” and proximity or similarity is often indicated by some sort of distance metric when items are clustered. The heuristic approach uses a weighted Minkowski metric, which allows different weights to be assigned for smaller and larger absolute differences. This, combined with a nonparametric kernel-based classification method, allows one to find a classifier that mini-



mizes classification costs.<sup>10</sup> In our analysis, we weighted the costs of misclassifying a JDAL billet as a service billet or vice versa more heavily than misclassifying a JDAL billet as an external organization billet or vice versa. The features that were extracted by this method included only three variables—these are shown below, along with their relative importance weights:

Serve_With_Other_Mil_Dept	0.557
Billet_Gives_Exp_Multiservice	0.145
Billet_Gives_Exp_Interagency	0.298.

Adding one or more of the other variables did not reduce the misclassification rate, and the resulting classifier is, therefore, a more parsimonious classifier, meaning that it is the simplest explanation of the data. However, the classification error was high, as shown in Table 3.4. Overall, 37.8 percent of all billets in the training set were “misclassified.” Because the overall error rate for the training set was high, we did not attempt to fit the model to the overall dataset.

Of the 200 JDAL billets, only 63.5 percent were correctly classified as JDAL; 28 percent were classified as external organization billets, while 8.5 percent were classified as service-nominated billets. The error rate for the external organization billets was even higher—43 percent.

**Table 3.4**  
**Actual Versus Predicted Group Membership of Billets, Heuristic Approach**

Actual Class Index	Predicted Class Index			Total
	JDAL Billet	External Organization Billet	Service-Nominated Billet	
JDAL billet	127 (64%)	56 (28%)	17 (8%)	200
External organization billet	56 (28%)	114 (57%)	30 (15%)	200
Service-nominated billet	29 (14%)	39 (20%)	132 (66%)	200

<sup>10</sup> See Sullivan and Perry (2004) for a detailed description of the heuristic approach.

Among service-nominated billets, 14.5 percent were classified as JDAL billets and another 19.5 percent as external organization billets, for an error rate of 34 percent.

## Factor Analysis

Factor analysis is an exploratory tool used to uncover the latent structure or dimensions of a set of variables. “The essential purpose of factor analysis is to describe, if possible, the covariance relationships among many variables in terms of a few underlying, but unobservable, random quantities called *factors*.”<sup>11</sup> As such, a dependent variable is not specified. For our purposes, factor analysis is particularly useful because it offers a parsimonious way to reduce a mass of data and helps group interdependent variables into descriptive categories.

The main objective of exploratory factor analysis is “to determine the minimum number of common factors that would satisfactorily produce the correlations among the observed variables.”<sup>12</sup> Factor analysis assumes that the observed variables are linear combinations of some underlying factors, some of which are common across two or more variables and some of which are unique to each variable. Thus, factor analysis attempts to express each variable as the sum of common and unique portions—the common portions of all the variables are, by definition, fully explained by the common factors. As explained by Darlington,<sup>13</sup> the purpose is to find the simplest hypothesis—that is, the lowest number,  $m$ , of common factors that is consistent with the data.

The next section introduces some terms used in factor analysis.

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<sup>11</sup> Johnson and Wichern, 2002, p. 477.

<sup>12</sup> Jae-on Kim and Charles W. Mueller, *Factor Analysis: Statistical Methods and Practical Issues*, Beverly Hills and London: Sage Publications, 1978, p. 12.

<sup>13</sup> Richard B. Darlington, “Factor Analysis,” Web page, no date.

### Basic Concepts<sup>14</sup>

**Unrotated Factor Matrix.** Each factor represents a pattern or grouping of variables. Thus, the factor matrix consists of columns (factors) and rows (variables). Two different types of factor matrices are presented—the unrotated factor matrix, which is the original set of factors, and the rotated factor matrix, in which the original set of factors is manipulated to increase the ease of interpretation of the factors.

The first factor pattern in the unrotated matrix delineates the largest pattern of relationships; the second delineates the next-largest pattern that is independent of or uncorrelated with the first; and so on. That is, the amount of variation in the data described by each pattern decreases with each factor; the first factor accounts for the largest amount of variation, the last factor for the least.

**Loadings.** The loadings,  $\alpha$ , show the degree and direction of relationship of the variables with a given factor or pattern. Squaring  $\alpha$  and multiplying it by 100 yields the percentage of variation that a variable has in common with the unrotated factor. Thus, if a variable loading is 0.50, we know that 25 percent of its variation is involved in that factor ( $[0.50 \times 0.50] \times 100$ ); put another way, it is the percentage of data on a variable that can be predicted from knowing the values of the other variables involved in the same factor.

**Communality.** Each observed variable's communality,  $h^2$ , is the proportion of its variance that is explained by the common factors. It can also be looked as a measure of uniqueness. Thus, if the communality estimate of a variable is 0.55, then it implies that 55 percent of the variation in this variable is related to the other characteristics in the patterns and 45 percent is unrelated to the other characteristics. The communality estimate reported in the factor matrix is calculated by summing the squares of the variable's loadings on all the patterns.

**Eigenvalues.** The eigenvalue,  $\lambda$ , for a particular factor is the sum of the squared loadings for that factor. It measures the amount of variation in the data accounted for by that pattern or factor. Eigenvalues are also used commonly to determine the number of factors to retain

<sup>14</sup> This section is largely excerpted from R. J. Rummell, "Understanding Factor Analysis," *Journal of Conflict Resolution*, Vol. 11, No. 4, December 1967, pp. 444–480.

in the analysis. While there are several rules that are used, the most common is Kaiser's rule, in which factors with  $\lambda > 1$  are retained. Variables are standardized to have a variance of 1; because an eigenvalue is the amount of variance explained by one more factor, it makes little sense to add a factor that explains less variance than is present in one variable.

Dividing the eigenvalues by the number of variables and multiplying by 100 shows the percentage of total variance accounted for by that factor.<sup>15</sup> Thus, for example, if we had 10 variables and the eigenvalue of the first factor was 4.5, then the first factor accounts for 45 percent of the total variance in the data. Dividing the eigenvalues by the sum of the communality estimates,  $h^2$ , shows the percentage of common variance accounted for by that factor. Thus, if four factors are retained and together they explain 80 percent of the variance in the data, then the first factor accounts for 56.3 percent ( $[45/80] \times 100$ , where 45 is based on the first eigenvalue) of the variation accounted for by all the patterns.

**Rotated Factor Matrix.** The unrotated factors define the general patterns in the data. These factors are rotated to find distinct clusters of interrelated variables.<sup>16</sup> A simple structure rotation is characterized by the fact that each variable is identified with one or a small proportion of factors, and the number of variables loading on a factor is mini-

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<sup>15</sup> The number of variables equals the sum of their variances because the variables are standardized to have a variance of 1.

<sup>16</sup> Darlington (no date) provides an intuitive explanation of rotation:

Think of the  $m$  factors  $F$  as a set of independent or predictor variables and think of the  $p$  observed variables  $X$  as a set of dependent or criterion variables. Consider a set of  $p$  multiple regressions, each predicting one of the variables from all  $m$  factors. The standardized coefficients in this set of regressions form a  $p \times m$  matrix called the *factor loading matrix*. If we replaced the original factors by a set of linear functions of those factors, we would get exactly the same predictions as before, but the factor loading matrix would be different. Therefore we can ask which, of the many possible sets of linear functions we might use, produces the simplest factor loading matrix. Specifically we will define simplicity as the number of zeros or near-zero entries in the factor loading matrix—the more zeros, the simpler the structure.

mized.<sup>17</sup> A simple table, borrowed from Rummel,<sup>18</sup> helps illustrate the purpose of rotation. Table 3.5 shows a simple structure rotation of three unrotated factors into three rotated factors involving distinct clusters of interrelated variables that presumably are easier to interpret.

In the unrotated matrix, factor patterns are ordered by the amount of variation they explain in the data, with the first factor explaining the largest proportion of variance; in an orthogonally rotated matrix, there is no significance to the factor order.

## Results

We used the principal components factor method in SAS,<sup>19</sup> and this resulted in nine factors with  $\lambda > 1$ , which were retained in accordance with the Kaiser rule. We can use the eigenvalues to calculate the percentage of total variance accounted for by each factor (Table 3.6) by

**Table 3.5**  
**Illustration of a Simple Structure Rotation**

Variables	Unrotated Factors			Rotated Factors		
	F1	F2	F3	F1	F2	F3
1	x	x		x		
2	x	x	x	x		
3	x	x	x	x	x	
4	x		x		x	
5	x	x	x		x	
6	x	x			x	x
7	x		x			x

SOURCE: Rummel, 1967, Table 8, p. 475.

NOTE: The letter x indicates a moderate to large loading of a variable on a factor.

<sup>17</sup> An orthogonal rotation ensures that the factors are uncorrelated; an oblique rotation has greater flexibility in looking for patterns, regardless of their correlation. The latter often achieves a simpler structure, but interpretation of the factors needs to take into account factor intercorrelations. If clusters of variables are correlated, then orthogonal rotation cannot clearly discriminate among them and simple structure can only be approximated.

<sup>18</sup> Rummel, 1967, p. 22.

<sup>19</sup> SAS software, Release 8.2 (TS2M0), copyright 2009 SAS Institute Inc., Cary, N.C.

dividing the eigenvalue for that factor by 32 (the total number of variables in the analysis) and multiplying by 100. Together, these nine factors explain 70.4 percent of the total variation in the data.

We now turn to the rotated factor matrix, shown in Table 3.7. We note two things about the table. First, variables are included in a particular factor only if the loading,  $\alpha$ , is moderate or large, defined as 0.50 or higher. While there is no hard-and-fast rule about what constitutes a moderate or large loading, it seems defensible to limit the pattern to those variables with 25 percent or more of their variation involved in that pattern. Second, we use these clusters of high-loading variables to interpret and “name” the factor. This is essentially a judgment call but is standard practice in factor analysis.

The nine factors seem to involve different clusters of variables because there is no overlap among the variables. Broadly speaking, these factors seem to represent the following characteristics of billets:

- Deployment: The billet requires serving abroad, as measured by the receipt of a variety of pays and allowances associated with deployment.

**Table 3.6**  
**Eigenvalues of the Nine Factors Retained in**  
**the Factor Analysis Procedure**

Factor	Eigenvalue	Percentage of Total Variance
		Explained by Factor
1	7.14	22.31
2	4.20	13.13
3	2.65	8.28
4	1.82	5.69
5	1.71	5.34
6	1.55	4.84
7	1.39	4.34
8	1.14	3.56
9	1.03	3.22

**Table 3.7**  
**Rotated Factors and Variable Loadings**

Variable	Factors								
	Deployment	Joint Tasks	Job Assessment	Breadth and Depth of Knowledge	Interactions with Other Services	Organizational Interactions	Strategic Work	Joint Task Force Service	Multinational Assignment
Currently_Receiving_Hostile_Pay	0.91								
Currently_Receiving_Tax_Excl	0.90								
Currently_Receiving_FSA	0.85								
Currently_Receiving_Hardship_Pay	0.83								
Currently_Serving_At_Home_Base	-0.60								
Import_Dev_Joint_Doctrine		0.89							
Perform_Dev_Joint_Doctrine		0.89							
Perform_Dev_Joint_Policies		0.88							
Import_Dev_Joint_Policies		0.87							
Billet_Gives_Exp_Interagency			0.74						
Billet_Gives_Exp_Multiservice			0.71						
Position_Success_Prior_Joint			0.69						
Billet_Gives_Exp_Multinational			0.65						
Billet_Summary			0.58						

Table 3.7—Continued

Variable	Factors							
	Deployment	Joint Tasks	Job Assessment	Breadth and Depth of Knowledge	Interactions with Other Services	Organizational Interactions	Strategic Work	Joint Task Force Service
Civilian_Could_Perform			0.50					
KNP_Count				0.81				
KNR_Count				0.80				
N_Supervisors_Not_Own_Service2					0.80			
Other_Svc_Member_Could_Perform					0.70			
Serve_With_Other_Mil_Dept					0.65			
N_Monthly_Interact_Personnel					0.52			
Import_Foster_Complex_Relations						0.94		
Perform_Foster_Complex_Relations						0.94		
Perform_Strategic							0.92	
Import_Strategic							0.92	
Assigned_JTF_Service_Comp								0.83
Assigned_JTF_Sub_Org								0.81
Assigned_JTF_HQ								0.60
Serve_With_Other_Country								0.79
Assigned_Simultaneously								0.68



- **Joint Tasks:** The billet involves developing joint doctrine and joint policies, and these are rated as important tasks for the job.
- **Job Assessment:** The billet provides significant multiservice, multinational, and interagency experience and requires prior joint experience for successful performance; is characterized as primarily strategic; and could be performed by a civilian.
- **Depth and Breadth of Knowledge:** The billet requires and provides several different types of knowledge (out of 65 specific types of job knowledge).
- **Interactions with Other Services:** The billet is supervised by non-own-service members; could be performed by other service members; requires serving with other military departments; and involves frequent interactions with a number of different types of personnel.
- **Organizational Interactions:** The billet involves fostering multinational, interagency, or regional relations, and this is rated as an important task for the job.
- **Strategic Work:** The billet involves providing strategic direction and integration, and this is rated as an important task for the job.
- **Joint Task Force:** The billet involves serving on a JTF at the service component, subordinate organization, or headquarters level.
- **Multinational Assignment:** The billet involves serving with the armed forces of another nation or with an international military or treaty organization, in a billet formally assigned to that organization.

These factors appear reasonable, and several of these variables had been shown to be important in the classification analyses.

We also split the data by type of billet and examined the factors that emerged for the three different sets of billets. The factors were very similar and involved the same clusters of variables as seen above, suggesting that the factors are pretty robust across types of billets, i.e., the same variables appear to be accounting for major variation in the data, regardless of type of billet.

Using the Nine Factors to Characterize Billets

We used the results of the factor analysis to calculate “factor” scores for the nine factors for each billet. We calculated these factor scores using the factor loadings and the actual values of the variables for each billet (analogous to calculating a predicted value from regression coefficients). We then grouped billets into the three categories—JDAL, external organization, and service-nominated billets—to see whether and how the three types of billets differed on these factors. Table 3.8 presents the means and standard deviations.

Some of the factors help to distinguish among the three types of billets. For example, JDAL billets rank first on the “joint tasks” factor (mean = 2.04), followed by external organization billets and service-nominated billets (means = 1.16 and 0.69, respectively). Similarly, in terms of “breadth and depth of knowledge” both required and provided by the billets, we find JDAL billets have a much higher mean

**Table 3.8**  
**Means and Standard Deviations of Rotated Factor Scores, by JDAL Category**

Factors	JDAL Billets		External Organization Billets		Service-Nominated Billets	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Deployment	−0.70	1.38	0.31	2.90	−0.39	2.05
Joint tasks	2.04	2.69	1.16	2.22	0.69	1.79
Job assessment	12.68	1.73	12.35	1.87	10.28	2.47
Breadth and depth of knowledge	32.47	27.10	20.78	23.91	19.10	22.83
Interactions with other services	6.89	1.42	6.68	1.48	3.70	1.84
Organizational interactions	1.13	1.74	0.68	1.41	0.47	1.19
Strategic work	2.20	1.94	1.57	1.88	1.24	1.81
JTF service	0.26	0.73	0.51	1.02	0.38	0.94
Multinational assignment	0.26	0.55	0.26	0.54	0.18	0.46

(32.47) than the other two (with means of 20.78 and 19.10, respectively). This is also true of the "organizational interactions" factor. In some instances, JDAL and external organization billets appear to share characteristics. For example, they both rank high on the factor "interactions with other services" (which includes such characteristics as having non-own-service supervisors, substitutability of other service members in the billet, serving with other military departments, and frequent interactions with a number of different types of personnel) compared with service-nominated billets.

We now turn to regression analysis.

## Logistic Regression Analysis

As before, we allow JDAL billets to represent "jointness" and model differences between (1) JDAL billets and external billets and (2) JDAL billets and service-nominated billets.<sup>20</sup> Empirically, we use a dichotomous dependent variable, which is equal to 1 if the billet is a JDAL billet and equal to 0 otherwise. The models allow us to see what characteristics appear to be related to jointness (and, as such, important in distinguishing one set of billets from the other) and whether different variables appear to be important in the two models. These multivariate models allow us to measure the net effect of different variables on the probability of being "joint," while controlling for the effects of other variables.

Given that there are two groups in each set of models (JDAL versus external organization billets or JDAL versus service-nominated billets), the probability of membership in the first group (i.e., JDAL billets),  $p_1(x)$ , is

$$p_1(x) = 1/(1 + \exp[-(\alpha + \beta'X)]).$$

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<sup>20</sup> We also estimated a multinomial logit model using a dependent variable that equals 1 if the billet was an internal service billet, 2 if the billet was an external organization billet, or 3 if the billet was a JDAL billet. The results were substantially the same but harder to interpret.

The ratio  $p(x)/(1 - p(x))$  is simply the odds in favor of a billet with features  $x$  being a JDAL billet. The logarithm of the odds is assumed to be linear in the independent variables (or in some transformation of them), and the effects of the explanatory variables are assumed to be additive. The coefficients measure how the log-odds in favor of being a JDAL billet change as the independent variables change by a unit.

We first estimated the model on the full sample. Then, in order to test the robustness of the results, we used cross-validation to randomly select ten different samples consisting of 90 percent of the total number of billets composing the population. The model results were validated on the remaining 10 percent of billets. We calculated a probability for each of these billets of being a JDAL billet (with 1 minus the estimated probability being the probability of membership in the other group) and used this probability to assign each of these billets to one of the two groups; we then compared this assignment with the actual membership of the billet to calculate an “error” rate. This allowed us to see what types of billets appeared to display characteristics that were similar to those of the other group—in particular, the types of external organization and service-nominated billets that most resembled JDAL billets and thus might be considered for joint duty credit.

Thus, for example, from the approximately 17,000 JDAL and service-nominated billets ( $n = 16,996$ ), we randomly selected a 90 percent sample on which to estimate the model, and then fit the model to the approximately 1,700 billets that formed the validation sample. We repeated this ten times, each time randomly selecting a new 90 percent sample. Thus, we have ten different sets of estimated coefficients that were used to assign probabilities and calculate “error” rates for the ten validation samples for the JDAL versus service-nominated billets model. Similarly, from the 10,626 JDAL and external organization billets, we randomly selected a 90 percent sample of billets on which to estimate the model (approximately 9,500–9,600 billets) and then fit the model to the remaining 1,000–1,100 billets.<sup>21</sup>

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<sup>21</sup> We also estimated logistic models using the nine rotated factor scores as the independent variables. With few exceptions, all the factors were highly significant in the regressions. Factors are useful when dealing with high multicollinearity among the variables. We do have

In the following sections, we first present the model results from the full sample estimation—coefficients, significance, and overall misclassification rates. The next section looks specifically at the cases that were misclassified in the ten iterations discussed above. Comments provided by the respondents provide some additional insights into these misclassified cases.

### **Results: JDAL Versus Service-Nominated Billets**

Table 3.9 shows the coefficients for the logistic regression model for estimating the probability of JDAL versus service-nominated billets.<sup>22</sup> Overall, higher probabilities of being a JDAL billet were significantly associated with

- performing certain joint tasks, such as providing strategic direction and integration and developing joint doctrine
- rating certain tasks, such as developing joint policies and fostering complex relations, as important to the billet
- greater substitutability of civilians in the billet
- summarizing the billet as strategic or operational rather than tactical
- being supervised by non-own-service supervisors
- serving with other military departments
- being assigned to JTF headquarters
- currently receiving hardship pay
- frequent interactions with larger numbers of non-own-service organizations and different types of non-own-service personnel
- rating the billet as providing significant multinational experience
- reporting that JPME II was required for successful performance in the billet.

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collinear variables in our data, but this does not appear to have substantially affected either the direction or significance of the estimated coefficients. Given this and given the fact that the factor analysis was exploratory, we choose not to report those results here but instead to focus on the effects of the individual variables, rather than linear combinations of them.

<sup>22</sup> These results were consistent across the ten sets of estimates.

**Table 3.9**  
**Estimated Coefficients, Logistic Models: JDAL Versus Service-Nominated Billets**

Independent Variables	Coefficient	Standard Error	Wald Chi-Square	p-value
Intercept	-2.78	0.12	555.60	< 0.0001*
Perform_Strategic	0.35	0.12	9.26	0.0023*
Perform_Dev_Joint_Doctrine	0.45	0.18	6.47	0.0110*
Perform_Dev_Joint_Policies	-0.08	0.17	0.22	0.6428
Perform_Foster_Complex_Relations	-0.68	0.14	24.06	< 0.0001*
Civilian_Could_Perform	0.08	0.02	20.35	< 0.0001*
Other_Svc_Member_Could_Perform	-0.04	0.02	5.64	0.0175*
Billet_Summary	0.41	0.04	117.80	< 0.0001*
KNR_Count	0.00	0.00	0.01	0.9105
KNP_Count	0.00	0.00	0.00	0.9493
N_Supervisors_Not_Own_Service	0.90	0.04	611.26	< 0.0001*
Serve_With_Other_Mil_Dept	2.43	0.06	1468.47	< 0.0001*
Serve_With_Other_Country	0.01	0.07	0.01	0.9352
Assigned_Simultaneously	-0.27	0.04	41.81	< 0.0001*
Assigned_JTF_HQ	0.62	0.05	138.12	< 0.0001*
Assigned_JTF_Sub_Org	0.04	0.06	0.33	0.5634
Assigned_JTF_Service_Comp	-0.93	0.07	168.67	< 0.0001*
Currently_Serving_At_Home_Base	-0.68	0.05	205.80	< 0.0001*
Currently_Receiving_FSA	-0.72	0.07	122.65	< 0.0001*
Currently_Receiving_Hostile_Pay	0.04	0.08	0.29	0.5907
Currently_Receiving_Hardship_Pay	0.15	0.07	5.10	0.0239*
Currently_Receiving_Tax_Excl	-0.13	0.08	2.40	0.1212
Import_Strategic	-0.08	0.04	4.65	0.0311*
Import_Dev_Joint_Doctrine	-0.17	0.07	5.43	0.0198*
Import_Dev_Joint_Policies	0.20	0.07	8.50	0.0035*
Import_Foster_Complex_Relations	0.28	0.05	31.67	< 0.0001*
N_Monthly_Interact_Orgs	0.06	0.01	119.98	< 0.0001*

**Table 3.9—Continued**

Independent Variables	Coefficient	Standard Error	Wald Chi-Square	p-value
N_Monthly_Interact_Personnel	0.16	0.01	140.41	< 0.0001*
Billet_Gives_Exp_Multiservice	-0.14	0.03	20.79	< 0.0001*
Billet_Gives_Exp_Multinational	0.17	0.03	42.60	< 0.0001*
Billet_Gives_Exp_Interagency	-0.12	0.03	16.83	< 0.0001*
Position_Success_JPME2	0.52	0.02	473.15	< 0.0001*
Position_Success_Prior_Joint	-0.39	0.05	71.61	< 0.0001*

\* Indicates statistically significant coefficients with p-values  $\leq 0.05$ .

Significantly lower probabilities of being a JDAL billet were associated with

- performing such duties as fostering complex relations
- rating the tasks of providing strategic direction and integration as important to the billet
- reporting that other service members could perform billet duties
- being "dual-hatted" or assigned simultaneously
- being assigned to a JTF service component
- currently serving at home base
- currently receiving family separation allowance
- rating the billet as providing significant multiservice or inter-agency experience
- reporting that prior joint duty experience was required for successful performance in the billet.

It is useful to note that variables that were consistently insignificant in these models were also not useful in the other approaches. We expand on this point at the end of the chapter.

The diametrically opposed effects on the probability of being a JDAL billet of performing certain joint tasks (for example, providing strategic direction and integration) and rating them as important for the billet seem puzzling. However, this can be partially explained by the fact that officers in service-nominated billets who performed the

four “joint” tasks tended to rate these as important to the job.<sup>23</sup> The negative effect of the variables measuring whether the billet provides significant multiservice or interagency experience (the very definition of a joint duty billet) is harder to explain. Between 44 and 49 percent of officers in service-nominated billets reported gaining significant experience in these two areas, compared with 75–87 percent of officers in JDAL billets. However, we saw earlier, in the factor analysis, that the data tend to be highly correlated, so multicollinearity among the independent variables may well be causing some of the unexpected signs on the coefficients. The overall model fits the data well, judging by the misclassification rate of around 8 percent (i.e., about 8 percent of the cases in the full sample were misclassified on the basis of the regression model).

As mentioned above, we fit the model to the 10 percent validation sample—cases that were not part of the estimating sample. The “error rate,” i.e., the percentage of cases for which the predicted membership did not agree with the actual membership, ranged from 15 to 16 percent. Of these cases, about 55 percent were service-nominated billets that were classified as JDAL billets, and the Air Force and Navy accounted for a somewhat higher proportion of these than the Army. The remaining 45 percent were JDAL billets that were classified as service-nominated billets, and these were drawn, as we show below, from a number of the geographic commands, force providers, and functional commands, as well as the Joint Staff, OSD, NATO, and a handful of other agencies.

The logistic models fit much better than the CART model in terms of lower prediction error. This may be due to the fact that the logistic models were estimated using a binary dependent variable, whereas the CART model had to distinguish among three categories. Logistic regression works well when the relationship between covariates and outcomes is well approximated by a model that is linear on the log-odds scale.

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<sup>23</sup> Kirby et al., 2006.



### JDAL Versus External Organization Billets

Table 3.10 presents the coefficients from the regressions estimated using the JDAL and external organization billets. A higher probability of being a JDAL billet was significantly associated with

- performing such duties as developing joint doctrine
- greater probability that other service members could perform billet duties
- summarizing the billet as strategic or operational rather than tactical
- a higher number of different types of knowledge required for the billet and gained through billet assignment
- serving with other countries
- currently serving at home base
- rating the task of fostering complex relations as important to the billet
- frequent interactions with different types of non-own-service personnel
- rating the billet as providing significant multinational experience
- reporting that JPME II was required for successful performance in the billet.

Lower probabilities of being a JDAL billet were significantly associated with

- performing such duties as fostering complex relations
- greater substitutability of civilians in the billet
- being assigned to a JTF service component
- currently receiving family separation allowance
- currently receiving a tax exclusion
- rating the billet as providing significant interagency experience
- reporting that prior joint duty experience was required for successful performance in the billet.

Some of these variables were important in the first model as well. For example, compared with non-JDAL billets, JDAL billets appear

**Table 3.10**  
**Estimated Coefficients, Logistic Models: JDAL Versus Non-JDAL External Organization Billets**

Independent Variables	Coefficient	Standard Error	Wald Chi-Square	p-value
Intercept	−0.29	0.09	9.62	0.0019
Perform_Strategic	0.18	0.10	3.07	0.0797
Perform_Dev_Joint_Doctrine	0.37	0.16	5.28	0.0215*
Perform_Dev_Joint_Policies	0.13	0.15	0.75	0.3880
Perform_Foster_Complex_Relations	−0.36	0.13	7.74	0.0054*
Civilian_Could_Perform	−0.08	0.02	21.60	< 0.0001*
Other_Svc_Member_Could_Perform	0.06	0.01	19.83	< 0.0001*
Billet_Summary	0.09	0.04	6.23	0.0126*
KNR_Count	0.01	0.00	11.34	0.0008*
KNP_Count	0.01	0.00	22.00	< 0.0001*
N_Supervisors_Not_Own_Service	−0.01	0.03	0.14	0.7106
Serve_With_Other_Mil_Dept	0.08	0.08	1.11	0.2922
Serve_With_Other_Country	0.40	0.07	28.83	< 0.0001*
Assigned_Simultaneously	−0.07	0.04	2.78	0.0953
Assigned_JTF_HQ	0.04	0.04	0.79	0.3738
Assigned_JTF_Sub_Org	−0.07	0.06	1.45	0.2286
Assigned_JTF_Service_Comp	−0.30	0.07	20.24	< 0.0001*
Currently_Serving_At_Home_Base	0.25	0.04	35.73	< 0.0001*
Currently_Receiving_FSA	−0.47	0.06	58.00	< 0.0001*
Currently_Receiving_Hostile_Pay	0.13	0.08	2.48	0.1155
Currently_Receiving_Hardship_Pay	−0.12	0.06	3.74	0.0530
Currently_Receiving_Tax_Excl	−0.29	0.08	13.54	0.0002*
Import_Strategic	0.02	0.03	0.47	0.4948
Import_Dev_Joint_Doctrine	−0.10	0.07	2.35	0.1251
Import_Dev_Joint_Policies	0.03	0.06	0.36	0.5487
Import_Foster_Complex_Relations	0.28	0.05	38.56	< 0.0001*
N_Monthly_Interact_Orgs	0.00	0.00	0.50	0.4775

**Table 3.10—Continued**

Independent Variables	Coefficient	Standard Error	Wald Chi-Square	p-value
N_Monthly_Interact_Personnel	0.06	0.01	22.29	< 0.0001*
Billet_Gives_Exp_Multiservice	0.02	0.03	0.47	0.4919
Billet_Gives_Exp_Multinational	0.10	0.02	14.79	0.0001*
Billet_Gives_Exp_Interagency	-0.32	0.03	125.68	< 0.0001*
Position_Success_JPME2	0.35	0.02	282.81	< 0.0001*
Position_Success_Prior_Joint	-0.19	0.04	19.61	< 0.0001*

\* Indicates statistically significant coefficients with p-values  $\leq 0.05$ .

to be distinguished by performance of such tasks as developing joint doctrine; the task of fostering complex relations being important to the billet; involving strategic or operational work rather than tactical; providing significant multinational experience; and requiring JPME II for successful performance. In contrast, incumbents in non-JDAL billets were more likely to be performing the task of fostering complex relations, currently receiving family separation allowance, and reporting that prior joint duty experience was important for successfully undertaking the duties of the billet. Some variables, such as number of non-own-service supervisors, greater number of frequent interactions with non-own-service organizations, and substitutability of civilians in the job, were important in distinguishing JDAL from service-nominated billets. Serving with other countries, substitutability of other service members in the job, serving at home base, and a higher number of different types of knowledge as required for and provided by the job distinguished JDAL billets from non-JDAL, non-service billets.

This model did not perform as well as the first model that compared JDAL with service-nominated billets. The discordant or misclassification rate for the estimating sample was high—about one-quarter of the cases were misclassified based on the regression model.

As before, we estimated the model on ten different 90 percent samples and then fit the model to the 10 percent validation samples. The “error rate,” i.e., the percentage of cases for which the predicted

membership did not agree with the actual membership, was around 30 percent. Of these, about 65 percent of the cases were non-JDAL billets in external organizations that were classified as JDAL billets, and the remaining 35 percent were JDAL billets that were classified as non-JDAL billets in external organizations.

### **Service-Nominated Billets Classified as JDAL Billets**

Table 3.11 shows the distribution of the service-nominated billets that were classified as JDAL billets by the regression model. Of the 10,588 billets in the survey, about 12 percent ( $n = 1,281$ ) had characteristics similar to those of the JDAL billets in the survey. Looking first at the Army, one-fifth or more of the billets in the Army Materiel Command, Intelligence and Security Command, Criminal Investigation Command, Space and Missile Defense Command, and Training and Doctrine Command reported experiences, duties, and/or prerequisites for successful performance that ranked them closer to JDAL billets than other service-nominated billets. In the Navy, 36 percent of billets in Space and Naval Warfare Systems Command were classified as JDAL billets, as were 20–24 percent of billets in Security Group Command and Naval Network Warfare Command. Among Air Force billets, 46 percent of Air Force Elements billets resembled JDAL billets, as did 28 percent of Air Training Command billets. Of the 74 Marine Corps billets responding to the survey, seven were classified as JDAL billets.

Selected comments from survey respondents give insight into the classification as a JDAL billet.

#### **Air Force.**

##### ***Air Training Command***

In the Joint Strike Fighter Program Office [JSF] and in this billet in particular, we work with the US Navy, USMC, and USAF on a daily basis. As well as with 8 partner nations [Australia, Canada, Denmark, Italy, the Netherlands, Norway, Turkey, and the United Kingdom] and their Navies and Air Forces. We also interact with OSD, State Dept and DSCA [Defense Security Cooperation Agency] on a daily or weekly basis. This is a multi-

Table 3.11

## Service-Nominated Billets Classified as JDAL Billets, by Service and Subordinate Organization

Service and Subordinate Organizations	Billets Responding to Survey		Billets Classified as JDAL Billets by Regression Model		
	Number of Billets	Percentage of Service Total	Number of Billets Classified as JDAL Billets	Percentage of Service Total	Percentage of Billets in Subordinate Organization
<i>Grand Total</i>	<i>10,588</i>		<i>1,281</i>		<i>12.1</i>
<b>Army</b>					
Army Materiel Command	52	1.3	13	3.6	25.0
Intelligence and Security Command	245	6.2	58	15.9	23.7
Special Operations Command	769	19.5	15	4.1	2.0
Criminal Investigation Command	38	1.0	21	5.8	55.3
Corps of Engineers	9	0.2	0	0.0	0.0
U.S. Army Europe	424	10.7	21	5.8	5.0
Forces Command	1,344	34.0	49	13.5	3.6
8th U.S. Army	319	8.1	29	8.0	9.1
Military District of Washington	18	0.5	2	0.5	11.1
U.S. Army Pacific	163	4.1	8	2.2	4.9
Space and Missile Defense Command	14	0.4	3	0.8	21.4
Training and Doctrine Command	301	7.6	98	26.9	32.6
Headquarters	80	2.0	15	4.1	18.8
Other	177	4.5	32	8.8	18.1
<i>Total</i>	<i>3,953</i>	<i>100.0</i>	<i>364</i>	<i>100.0</i>	<i>9.2</i>

Table 3.11—Continued

Service and Subordinate Organizations	Billets Responding to Survey		Billets Classified as JDAL Billets by Regression Model		
	Number of Billets	Percentage of Service Total	Number of Billets Classified as JDAL Billets	Percentage of Service Total	Percentage of Billets in Subordinate Organization
Navy					
Naval Staff	128	6.3	19	4.9	14.8
Naval Intelligence	40	2.0	3	0.8	7.5
Naval Sea Systems Command	203	9.9	35	9.1	17.2
Space and Naval Warfare Systems Command	177	8.7	63	16.3	35.6
Atlantic and Europe Fleet	134	6.5	17	4.4	12.7
Security Group Command	250	12.2	61	15.8	24.4
Pacific Fleet	304	14.9	27	7.0	8.9
Network Warfare Command	719	35.1	145	37.6	20.2
Other	91	4.4	16	4.1	17.6
<i>Total</i>	<i>2,046</i>	<i>100.0</i>	<i>386</i>	<i>100.0</i>	<i>18.9</i>
Air Force					
Air Forces, Europe	53	1.2	9	1.7	17.0
Air Training Command	239	5.3	67	12.8	28.0
Air Force Reserve	14	0.3	0	0.0	0.0

Table 3.11—Continued

Service and Subordinate Organizations	Billets Responding to Survey		Billets Classified as JDAL Billets by Regression Model		
	Number of Billets	Percentage of Service Total	Number of Billets Classified as JDAL Billets	Percentage of Service Total	Percentage of Billets in Subordinate Organization
Headquarters	158	3.5	8	1.5	5.1
Pacific Air Forces	249	5.5	16	3.1	6.4
Electronic Security Command	126	2.8	26	5.0	20.6
AF Special Operations Command	278	6.2	6	1.1	2.2
Air Combat Command	1,088	24.1	46	8.8	4.2
Air Mobility Command	241	5.3	11	2.1	4.6
Air Force Materiel Command	863	19.1	53	10.1	6.1
Air Force Space Command	590	13.1	42	8.0	7.1
Air Force Elements (Other)	501	11.1	231	44.1	46.1
Other	115	2.5	9	1.7	7.8
<i>Total</i>	<i>4,515</i>	<i>100.0</i>	<i>524</i>	<i>100.0</i>	<i>11.6</i>
Marine Corps					
<i>Total</i>	<i>74</i>	<i>100.0</i>	<i>7</i>	<i>100.0</i>	<i>9.5</i>

NOTE: Percentages may not sum to 100 due to rounding.

service, multinational and interagency job and this billet as well as all JSF military billets should be considered joint if possible. Thank you.

### ***Air Force Elements***

This is an extraordinary position and challenges me daily to integrate the cultures, traditions, systems, and resources of multiple services and civilian agencies.

### ***Air Force Materiel Command***

The Joint Single Integrated Air Picture System Engineering Organization provides a unique construct in DoD as a hybrid of Service administrative functions for personnel and manpower policies featured in a fully Joint perspective with an Army Acquisition Executive, Air Force Director and Navy Technical Director . . . the position reflected in this survey is for the Air Force Deputy Director that serves a rotating Service Flag Officer as Director (previously Navy, now Air Force).

## **Army.**

### ***Forces Command***

I work with the Marines daily on issues of ammunition, fuel, and Add-on-Armor/UAH [Up-Armored HMMWV] support. I work with the Air Force daily on coordinating movements of logistics. The Navy works surface movements, our main resupply is by ship . . . they also work customs, and the head of DLA [Defense Logistics Agency] here happens to be Navy. What is most needed is the ability to be flexible, to think on your feet, make decisions and the fortitude to stand-up to the criticism of others until your plan is finally embraced and working, THEN the ability to adjust it as the situation changes. Finally a sense of humor as the other services will let you down over and over again. . . .



### ***Criminal Investigation Command***

This is my third assignment to a Joint organization. When I complete this assignment, I will have zero credit for Joint service. I will soon assume command of this temp JTF, moving up from a staff position. It is a great organization, with Joint and inter-agency representation in key billets. I do not require Joint certification/qualification for career progression (sci/tech waiver branch and I am not competitive to be a [general officer], regardless), but it frequently amazes me that some of the best joint experiences derive no Joint credit. Incredible system we have built!

### ***Training and Doctrine Command***

My job is not a joint billet, but is very joint. I have four O-6 [Program Managers] that work for me of which two are Marine Corps. I would say in the acquisition business there could be a lot more jointness.

## **Navy.**

### ***Naval Air Systems Command***

My Billet is a [Naval Air Systems Command] Billet from PAX River Maryland, that is ADD DUTY to the Joint Strike Fighter (JSF) Program Office, in Crystal City, VA. I am currently the JSF Chief of Staff and JSF Operations Director. I have also served as the JSF Air Vehicle Integration Lead. This should be a Joint Duty Credit Billet. Day in and Day out . . . the issues I deal with are Joint in nature as we are designing and building a JSF for the USN, USAF, USMC, and Eight (8) International Partner Countries [Australia, Canada, Denmark, Italy, the Netherlands, Norway, Turkey, and the United Kingdom].

### ***Naval Sea Systems Command***

This is an acquisition billet that requires frequent coordination with Air Force, Army, and USMC commands and staffs. Highly recommend it be coded a joint billet.

### ***Naval Staff***

I am involved in joint/multinational matters almost continually. For example, policy staffing and alignment between USAF/USN on Airborne Electronic Attack, JADO [Joint Air Defense Operation], etc. in support of formal multi-service talks. I also serve as the service rep for personnel recovery (and other issues)—developing policy with JPRA [Joint Personnel Recovery Agency]/OSD and the other services, writing joint and allied doctrine, etc.

### **JDAL Billets Classified as Service Billets**

Table 3.12 presents the distribution of JDAL billets that were classified as service billets by the regression model. The table shows the total number of JDAL billets in each organization and the number that appeared to share the characteristics of service billets rather than JDAL billets. Overall, of the 6,308 JDAL billets that responded to the survey, about 20 percent were classified as service billets. Both the actual numbers and percentages are important in telling the story. In terms of numbers, U.S. Pacific Command, U.S. Strategic Command, U.S. Central Command, and U.S. Special Operations Command each had more than 100 billets that, according to the model, resembled service billets.

Of the more than 700 billets in the Joint Staff, 93, or 13 percent, were classified as service billets. About 20 percent of billets in the Defense Intelligence Agency ( $n = 95$ ) were also ranked by the model as resembling service billets. These six agencies accounted for close to 60 percent of all misclassified cases.

Again, comments from survey respondents give insight into the classification:

This billet should not be classified as joint duty billet or a military member assigned to it. This position does not allow me to use my 16+ years experience (Air Force O-4, Defense Intelligence Agency).

**Table 3.12****JDAL Billets Classified as Service Billets, Regression Model**

<b>Billet ID Prefix</b>	<b>Total Number of Billets on Survey</b>	<b>Total Number of JDAL Billets</b>	<b>Number of JDAL Billets Misclassified as Service Billets</b>	<b>Number Misclassified, as a Percentage of JDAL Billets in Organization</b>
American Forces Information Service	38	1	0	0.0
CENTCOM JTFs	710	0	0	NA
Defense Acquisition University	37	0	0	NA
Defense Advanced Research Projects Agency	23	0	0	NA
Defense Contract Management Agency (CSA)	199	6	4	66.7
Defense Finance and Accounting Service	41	0	0	NA
Defense Information Systems Agency (CSA)	441	56	21	37.5
Defense Intelligence Agency (CSA)	861	481	95	19.8
Defense Legal Services Agency	16	0	0	NA
Defense Logistics Agency (CSA)	265	80	22	27.5
Defense Prisoner of War/ Missing Personnel Office	29	9	1	11.1
Defense Security Cooperation Agency	43	14	1	7.1
Defense Technology Security Administration	13	3	0	0.0
Defense Threat Reduction Agency (CSA)	455	228	45	19.7
DoD Human Resources Activity	6	0	0	NA
DoD Inspector General	33	1	1	100.0
Inter-American Defense Board	17	15	1	6.7
Joint Requirements Office Chemical, Biological, Radiological, Nuclear	10	3	0	0.0
The Joint Staff	812	703	93	13.2

**Table 3.12—Continued**

<b>Billet ID Prefix</b>	<b>Total Number of Billets on Survey</b>	<b>Total Number of JDAL Billets</b>	<b>Number of JDAL Billets Misclassified as Service Billets</b>	<b>Number Misclassified, as a Percentage of JDAL Billets in Organization</b>
Joint Theater Air and Missile Defense Organization	21	17	4	23.5
Missile Defense Agency	110	27	4	14.8
National Defense University	202	137	13	9.5
National Geospatial- Intelligence Agency	229	0	0	NA
National Security Agency	248	63	16	25.4
North American Aerospace Defense Command	123	95	22	23.2
North Atlantic Treaty Organization	239	187	75	40.1
Office of Economic Adjustment	2	0	0	NA
OSD	267	217	18	8.3
Pentagon Force Protection Agency	4	0	0	NA
TRICARE Management Activity	50	1	1	100.0
U.S. Central Command	642	522	122	23.4
U.S. European Command	684	521	82	15.7
U.S. Joint Forces Command	530	332	63	19.0
U.S. Northern Command	394	296	55	18.6
U.S. Pacific Command	973	747	167	22.4
U.S. Southern Command	321	246	34	13.8
U.S. Special Operations Command	564	501	110	22.0
U.S. Strategic Command	709	602	129	21.4
U.S. Transportation Command	236	190	31	16.3
Washington Headquarters Services	28	7	1	14.3
<i>Total</i>	<i>10,625</i>	<i>6,308</i>	<i>1,231</i>	<i>19.5</i>

This is a NATO position at an operational NATO unit. I do not rely on any prior technical training to fulfill the duties of this position because our daily duties are done IAW [in accordance with] NATO directives. Although I'm a 21R, I've only served in Supply and Air Trans. This position is a Logistics Plans position. However, there is little relation to USAF logistics plans functions (Air Force O-4, NATO).

This position is currently a civilian position. Many of the questions were written as if was a military position making it somewhat difficult to provide clear answers (questions on how long person spends in position and how long they should probably have a NA (Civilian Position) option (O-4, The Joint Staff)).<sup>24</sup>

This billet is Joint in name only. It involves no substantive interaction with other services. Because of the specific technical nature of the job, no one on the [Joint Staff] is qualified to evaluate the work. . . . No other organization depends on the output of this organization for its success or failure. . . . (Army O-4, The Joint Staff).

I do not work in my assigned billet. I should not get credit for a joint billet. The individual filling the true billet should get the credit (Navy O-4, U.S. Joint Forces Command).

In some cases, somewhat surprisingly, respondents serving in JDAL billets displayed a lack of knowledge that their billet was coded as a JDAL billet.

Recommend that these billets be made 'hard' Joint Billets and that JPME I/II be mandatory requirements for these billets.

### **Non-JDAL Billets in External Organizations and JDAL Billets**

We report on the misclassified cases from the second model (JDAL versus non-JDAL billets in external organizations) together because it

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<sup>24</sup> Service data were missing for this respondent.

is helpful to combine the information in one table. This allows us to compare the percentage of non-JDAL and JDAL billets in an organization and to look at the percentage of billets of each type that was misclassified by the regression model. One point to keep in mind is that the model did not appear to discriminate well between the two types of billets—recall that the misclassification rate for the estimating sample was 30 percent. Table 3.13 presents the distribution of non-JDAL and JDAL billets by billet organization and the percentage of misclassified cases for each type of billet. As with the first model (JDAL versus service-nominated billets), about 20 percent of JDAL billets were classified as non-JDAL billets, and the pattern reflects what we saw earlier, with the largest numbers of misclassifications being in the geographic commands, the force provider billets, the Joint Staff, and the Defense Intelligence Agency. Many of these were the same billets that earlier had been classified as service billets, suggesting that the duties and experiences of these billets differed significantly from that of other JDAL billets. In fact, of the 1,255 reassignments from JDAL to external in this model, 701, or 56 percent, were also reclassified from JDAL to service-nominated billets in the JDAL/service model.

Many of these same agencies that had JDAL billets that were classified as non-JDAL billets also had several billets for which the reverse was true, i.e., non-JDAL billets that resembled JDAL billets. Overall, of the 4,317 non-JDAL, non-service billets, about 46 percent had characteristics that were similar to those of JDAL billets. Well over half of the billets in the geographic commands and in the force providers shared characteristics of JDAL billets. Close to 200 non-JDAL billets in the Defense Information Systems Agency and Defense Intelligence Agency each were classified as JDAL billets—these represented 46 percent and 52 percent of the non-JDAL billets in these agencies, respectively.

Comments from survey respondents are again provided. Here we focus on comments from respondents in non-JDAL billets that were classified as JDAL billets.

Being a medical person, I believe Joint Credit should go for medical positions as well as line positions. I'll be finishing this Joint Staff assignment (total of 4 years, 1 yr internship, 3 permanent)

Table 3.13

## JDAL and Non-JDAL External Organization Billets

BilletID Prefix	Total Number of Billets on Survey	JDAL Billets in Organization			Non-JDAL Billets in Organization		
		Total Number of JDAL Billets	Number Misclassified as External Organization Billet	Number Misclassified as a Percentage of JDAL Billets in Organization	Total Number of Non-JDAL Billets	Number Misclassified as JDAL Billets	Number Misclassified as a Percentage of Non-JDAL Billets in Organization
American Forces Information Service	38	1	1	100.0	37	22	59.5
CENTCOM JTFs	710	0	NA	NA	710	55	7.7
Defense Acquisition University	37	0	NA	NA	37	12	32.4
Defense Advanced Research Projects Agency	23	0	NA	NA	23	14	60.9
Defense Contract Management Agency (CSA)	199	6	3	50.0	193	53	27.5
Defense Finance and Accounting Service	41	0	NA	NA	41	7	17.1
Defense Information Systems Agency (CSA)	441	56	21	37.5	385	180	46.8
Defense Intelligence Agency (CSA)	861	481	130	27.0	380	199	52.4

Table 3.13—Continued

BilletID Prefix	Total Number of Billets on Survey	JDAL Billets in Organization			Non-JDAL Billets in Organization		
		Total Number of JDAL Billets	Number Misclassified as External Organization Billet	Number Misclassified as a Percentage of JDAL Billets in Organization	Total Number of Non-JDAL Billets	Number Misclassified as JDAL Billets	Number Misclassified as a Percentage of Non-JDAL Billets in Organization
Defense Legal Services Agency	16	0	NA	NA	16	8	50.0
Defense Logistics Agency (CSA)	265	80	20	25.0	185	86	46.5
Defense Prisoner of War/Missing Personnel Office	29	9	1	11.1	20	15	75.0
Defense Security Cooperation Agency	43	14	1	7.1	29	19	65.5
Defense Technology Security Administration	13	3	0	0.0	10	4	40.0
Defense Threat Reduction Agency (CSA)	455	228	64	28.1	227	119	52.4
DoD Human Resources Activity	6	0	NA	NA	6	3	50.0
DoD Inspector General	33	1	1	100.0	32	18	56.3
Inter-American Defense Board	17	15	0	0.0	2	2	100.0



Table 3.13—Continued

BilletID Prefix	Total Number of Billets on Survey	JDAL Billets in Organization			Non-JDAL Billets in Organization		
		Total Number of JDAL Billets	Number Misclassified as External Organization Billet	Number Misclassified as a Percentage of JDAL Billets in Organization	Total Number of Non-JDAL Billets	Number Misclassified as JDAL Billets	Number Misclassified as a Percentage of Non-JDAL Billets in Organization
Joint Requirements Office Chemical, Biological, Radiological, Nuclear	10	3	0	0.0	7	6	85.7
The Joint Staff	812	703	99	14.1	109	92	84.4
Joint Theater Air and Missile Defense Organization	21	17	4	23.5	4	2	50.0
Missile Defense Agency	110	27	3	11.1	83	63	75.9
National Defense University	202	137	5	3.6	65	59	90.8
National Geospatial-Intelligence Agency	229	0	NA	NA	229	121	52.8
National Security Agency	248	63	15	23.8	185	78	42.2
North American Aerospace Defense Command	123	95	16	16.8	28	17	60.7

Table 3.13—Continued

BilletID Prefix	Total Number of Billets on Survey	JDAL Billets in Organization			Non-JDAL Billets in Organization		
		Total Number of JDAL Billets	Number Misclassified as External Organization Billet	Number Misclassified as a Percentage of JDAL Billets in Organization	Total Number of Non-JDAL Billets	Number Misclassified as JDAL Billets	Number Misclassified as a Percentage of Non-JDAL Billets in Organization
North Atlantic Treaty Organization	239	187	22	11.8	52	44	84.6
Office of Economic Adjustment	2	0	NA	NA	2	1	50.0
OSD and OSD Staff	267	217	36	16.6	50	35	70.0
Pentagon Force Protection Agency	4	0	NA	NA	4	2	50.0
TRICARE Management Activity	50	1	1	100.0	49	12	24.5
U.S. Central Command	642	522	152	29.1	120	64	53.3
U.S. European Command	684	521	74	14.2	163	95	58.3
U.S. Joint Forces Command	530	332	55	16.6	198	132	66.7
U.S. Northern Command	394	296	52	17.6	98	66	67.3
U.S. Pacific Command	973	747	138	18.5	226	111	49.1

Table 3.13—Continued

BilletID Prefix	Total Number of Billets on Survey	JDAL Billets in Organization			Non-JDAL Billets in Organization		
		Total Number of JDAL Billets	Number Misclassified as External Organization Billet	Number Misclassified as a Percentage of JDAL Billets in Organization	Total Number of Non-JDAL Billets	Number Misclassified as JDAL Billets	Number Misclassified as a Percentage of Non-JDAL Billets in Organization
U.S. Southern Command	321	246	41	16.7	75	55	73.3
U.S. Special Operations Command	564	501	138	27.5	63	34	54.0
U.S. Strategic Command	709	602	130	21.6	107	58	54.2
U.S. Transportation Command	236	190	30	15.8	46	29	63.0
Washington Headquarters Services	28	7	2	28.6	21	10	47.6
<i>Total</i>	<i>10,625</i>	<i>6,308</i>	<i>1,255</i>	<i>19.9</i>	<i>4,317</i>	<i>2,002</i>	<i>46.4</i>

with no 'on-paper' 'JOINT' credit, while line colleagues who serve far less time, and work no harder, get Joint credit on their records. I am a strong believer in Joint assignments. I've learned a lot from my Army, Navy and Marine counterparts. Many of them have far more experience and relevant training than I do. Of all the Services, the USAF does the worst in preparing officers for Joint assignments. The USAF is too committed to its own doctrine and philosophy, and has a reputation of 'not playing well with others' that is common knowledge in the Joint Community. I believe the USAF should commit more strongly to being part of the Joint Community (Air Force O-5, The Joint Staff).

I am currently serving on the Joint Staff as a Legislative Affairs officer. This is a unique position and previous experience as a legislative liaison is a must (Army O-5, The Joint Staff).

This billet deals primarily with the assessment of Combat Support Agencies; therefore, knowledge of DOD and Joint doctrine and guidance, COCOM responsibilities, and agency areas of expertise are very desirable (Navy O-6, The Joint Staff).

Everyone assigned to a JTF should receive joint credit (Army O-6, CENTCOM JTF).

The current rules regarding joint credit do not reflect the SECDEF's intent or the current operational environment. All billets in a joint organization should be recognized with joint credit, regardless of rank or duty title. It is common, in a joint environment, for people to gain/lose responsibility based on capabilities and experience vice rank and position. I was a captain in a permanent joint HQ, not receiving joint credit but doing the work of an O-4/5 because of my background, experience, and ability (Army O-4, CENTCOM JTF).

Joint Management needs to be reviewed . . . we need to treat INTERAGENCY skills and experience the same way. Review GNA and perhaps legislate a certain amount of interagency experience for Sr. Officers. THEY ARE NOT the same thing (joint and interagency) . . . (Army O-6, CENTCOM JTF).

This has been a great assignment for learning how the different nations work and how militaries procure new technologies for military use. As a Captain we do not receive Joint credit but this is an outstanding assignment for us to learn the tactical level of military execution in the Joint arena (Air Force O-3, NATO).

This is a unique position supporting the foreign counterpart visits of the SECDEF, DepSECDEF, CJCS [Chairman of the Joint Chiefs of Staff] and VCJCS [Vice Chairman of the Joint Chiefs of Staff]. There is one officer from each service performing this duty and the service specific knowledge provided by each individual is instrumental to the success of the others. The main skill to bring to this job is broad service knowledge but I will leave with a deep understanding of my sister services, the interagency environment, the National military structure and international affairs. The main focus is to craft programs for visiting dignitaries which fuse current events, National Military and Security strategy with OSD/JCS [Joint Chiefs of Staff] specific goals and objects. I routinely interact with Senior Leaders (and others) from OSD, JCS, multiple Government agencies, Component Commands, Foreign Government Officials and many other bases/commands from all the military services (Navy O-5, Defense Intelligence Agency).

Joint experience a must—should be coded accordingly (Navy O-5, Defense Intelligence Agency).

My position requires constant interaction between ALL services on a daily basis. I interact with outside agencies and DoD components regularly. Joint Credit is essential for this billet (Air Force O-4, Defense Information Systems Agency).

All of our military jobs are going joint. We sometimes wear purple suits showing jointness. Give us joint credit whenever possible. If your job interacts with other services on a daily basis you should get joint credit. Also don't hold it against being a junior officer. Some jobs are the same but do not count as joint credit until you are an O-4 or senior. If you do the job give the credit (Navy O-3, Defense Logistics Agency).

## Summary

As we mentioned in the introduction to this chapter, our main purpose in undertaking the analysis was to examine and identify the characteristics of joint billets, with a view to developing criteria that could be used to classify future billets as suitable for the JDAL. These analyses were largely exploratory, and we used a number of different classification methods to try to identify clusters of variables that appeared to characterize “joint” billets; to check the robustness of these findings across different samples and different techniques; and to identify “misclassified” cases, in particular, groups of non-JDAL billets in external organizations and service-nominated billets that appeared to share the attributes of JDAL billets. We started with one major underlying presumption—that certain Joint Staff JDAL billets characterize “joint” billets, so non-JDAL billets that rank high on similar characteristics might be billets that could qualify their incumbents for joint duty credit.

We explored three main avenues in our research: (1) classification techniques, such as CART and nonparametric kernel classification, to identify variables that offer some ability to discriminate among groups; (2) exploration of correlations among the data to see if characteristics could be pared down to some smaller subset of underlying attributes or “factors” through factor analysis; and (3) logistic regression models to identify factors that appeared to distinguish JDAL billets from non-JDAL billets and to use these factors to identify a set of non-JDAL billets that were “closer” to JDAL billets than to non-JDAL billets.

The variables used in the analyses included (1) types of tasks performed; (2) substitutability of civilians or other service members in a given billet; (3) types of knowledge, education, and experience required for or provided by the billet; (4) interactions and service with organizations and personnel outside of own service; and (5) other characteristics of the billets in terms of assignment, location, and pays.

Table 3.14 identifies the variables that were significant in classifying and distinguishing among the three types of billets—JDAL, external organization, and service-nominated. Because the factor analysis had identified natural groupings of the variables, we grouped these

**Table 3.14**  
**Summary of Variables Selected by Various Analyses as Important in**  
**Classification of Billets, Organized by Factor**

Variable	CART	Heuristic Approach	Logistic Regression (JDAL Versus Service-Nominated Billets)	Logistic Regression (JDAL Versus Non-JDAL External Organization Billets)
<b>Deployment</b>				
Currently serving at home base			√	√
Currently receiving family separation allowances			√	√
Currently receiving hostile pay				
Currently receiving hardship pay			√	
Currently receiving combat tax exclusion				√
<b>Joint tasks</b>				
Perform "develop joint doctrine" task			√	√
Perform "develop joint policies" task				
Task of developing joint doctrine important to job				
Task of developing joint policies important to job			√	
<b>Job assessment</b>				
Billet gives significant experience in multiservice matters	√	√	√	
Billet gives significant experience in multinational matters			√	√
Billet gives significant experience in interagency matters		√	√	√

Table 3.14—Continued

Variable	CART	Heuristic Approach	Logistic Regression (JDAL Versus Service-Nominated Billets)	Logistic Regression (JDAL Versus Non-JDAL External Organization Billets)
Prior joint experience desired or required for job performance			√	√
Civilian could perform billet duties effectively			√	√
Billet summary (primarily tactical, operational, or strategic in nature)	√		√	√
Number of knowledge elements required for job				√
Number of knowledge elements in which job incumbent will gain proficiency by serving in job	√			√
Number of Level 1 or Level 2 non-own-service supervisors			√	
Job does not require unique knowledge of own service	√			√
Billet involves serving full-time with members from another military department	√	√	√	
Number of types of personnel with whom incumbent interacts frequently	√		√	√
Organizational interactions				
Perform “foster complex relations” task			√	√
Task of fostering complex relations is important to job			√	√



Table 3.14—Continued

Variable	CART	Heuristic Approach	Logistic Regression (JDAL Versus Service-Nominated Billets)	Logistic Regression (JDAL Versus Non-JDAL External Organization Billets)
Perform "strategic direction and integration" task			√	
Task of providing strategic direction and integration important to job			√	
Serving in a JTF Headquarters Staff billet	√		√	
Serving in a JTF subordinate organization billet				
Serving in a JTF service component billet			√	√
Multinational assignment				
Billet involves full-time service with armed forces of another country or international military/treaty organization				√
Assigned simultaneously to own service and joint, combined, or multinational organization			√	
Other variables				
JPME II desired or required for job performance			√	√
Number of non-own-service organizations with whom incumbent interacts frequently	√		√	

variables according to the nine factors identified by the factor analysis. Some variables were robust across the different techniques in discriminating billets. These included (1) whether the billet involved serving with other military departments; (2) whether the billet was primarily tactical, operational, or strategic in nature; (3) the types of experiences provided by the billet, especially multiservice and interagency experience; (4) whether the billet involved having frequent interactions with different types of non-own-service personnel; and (5) whether the billet involved frequent interactions with non-own-service organizations.

The table does not make an attempt to rank the relative importance of the variables across the various methods. Each method, of course, uses a different criterion for determining significance. For example, CART uses cross-validation and pruning, whereas logistic regression uses traditional significance testing. Ranking the variables in order of importance could be done through simulation methods, which were outside the scope of the project. Our purpose here was more limited. We were interested in identifying characteristics that appeared to discriminate “more-joint” billets from “less-joint” billets across a variety of statistical classification methods. The objective was to present policymakers with a robust range of characteristics that they could use to identify positions for which joint duty credit should be awarded or which were good candidates for the JDAL. Policymakers may choose to assign different weights to these variables in determining jointness, something we were not able to do in our analyses.

The analyses were exploratory, and much more work remains to be done. Nonetheless, there was a good deal of consistency in the variables identified by the various methods as important discriminators of billets that resemble JDAL billets. As an example of how these analyses could be used, we used the logistic regression results to identify subsets of external organization and service-nominated billets that appeared to be good candidates for the JDAL, i.e., billets that ranked high on such characteristics as the ones listed above.

The list of variables may also prove useful in developing guidelines and criteria for evaluating individual billets as well as in identifying characteristics on which DoD may want to collect systematic data on an ongoing basis. Currently, officers receive joint credit for serving

in positions on the JDAL. One frequent criticism of the current system is that officers are serving in non-JDAL assignments that provide a rich joint experience but do not grant the officer joint credit. Likewise, there are officers serving in assignments on the JDAL that may not provide what some would consider a joint experience, either because of the content of their work or because of limited interaction with other services, nations, or agencies. Our analysis has provided evidence to support both these assertions.

Nonetheless, as noted in preceding works, there are likely management efficiencies in treating billets in the same organization similarly when managing billets deemed to provide officers with valid joint experience.<sup>25</sup> This would result in a billet-based system that was easier to manage than the current JDAL. Additionally, such a billet-based system that was supplemented by an individual qualifications system would be most responsive to the changing nature of some jobs, such as during military conflict and to the short, intensive joint experience gained in other positions, such as on JTFs. Consistent with this, DoD has now adopted a point system, in which individuals can petition to receive credit for joint duty assignments not currently included on the JDAL by developing portfolios to be evaluated by officer boards. The variables identified above would provide a good start at outlining the guidelines for putting together such portfolios and criteria for evaluating them.

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<sup>25</sup> Thie et al., 2005; Harry J. Thie, Margaret C. Harrell, Sheila Nataraj Kirby, Al Crego, Roland J. Yardley, and Sonia Nagda, *Framing a Strategic Approach for Reserve Component Joint Officer Management*, Santa Monica, Calif.: RAND Corporation, MG-517-OSD, 2006.



## **Determining Whether There Are Sufficient Joint-Experienced Officers to Meet the Demand for Them**

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### **Background and Approach**

In order to assess whether there are, or will be, sufficient joint officers to satisfy the need for officers with joint experience, this chapter considers the demand for joint officers, the supply of joint officers, and the likely management of and resulting behavior of joint officers. As the following sections will explain in greater detail, we make varying assumptions about both the demand and supply of joint officers, basing excursions on (1) the current GNA demand and supply definitions and (2) a broader view of demand and supply based on survey responses indicating the jobs that officers perceive to need prior joint experience (demand) and to provide joint experience (supply). We consider these different analytical excursions in the context of four different groups of officers: Army Infantry officers, Navy Surface Warfare officers, Air Force Space and Missile officers, and Marine Corps ground officers. Our method would lead to similar results for comparably structured occupations with similar ratios of billets that require or provide joint experience. We also employ different management frameworks. For example, will the management of Army Infantry officers treat those officers as future leaders, thus minimizing their time in joint organizations but retaining and promoting them at high rates, or will some portion of Army Infantry officers become part of a “joint cadre” having considerably longer and repetitive joint assignments? The combination of different supply and demand assumptions and different management and behavioral assumptions contributes to an understanding of

whether there will be sufficient joint officers to satisfy the need for such officers. The following sections discuss the management frameworks, the supply and demand of joint officers, and the modeling that permits an understanding of whether there will be sufficient joint officers.

## Management Frameworks for Joint Officers

Any projection of future joint officers must consider how officers will be managed and how they will respond. Thus, we refer to management frameworks to link management practices to the projected sufficiency of joint officers. We describe three management frameworks that have been developed in prior RAND research.<sup>1</sup> These frameworks provide input to the analysis in the form of policy decisions, management choices, and anticipated individual behavior.

### Managing Leader Succession

Managing leader succession is a career management system that, in this context, would emphasize providing future leaders with joint experience. This system would feature relatively shorter joint assignments, consistent with a pattern of developing officers. The presumption is that the best officers would be sent to joint jobs, but that they would not remain in those jobs for long. There would be only a minimal number of instances in which these officers served in a second joint assignment before promotion to general or flag officer. In particular, a few officers would have “key” second joint assignments at the O-6 pay grade. This system would also suggest relatively higher promotion rates of officers who have served in joint assignments, higher retention rates of those officers, and a greater likelihood that those officers most likely to be prospective general and flag officers have gained joint experience earlier in their career. This system is likely most appropriate to the service line communities, from which most future leaders are being developed.

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<sup>1</sup> Thie et al., 2005; Harry J. Thie, Margaret C. Harrell, and Robert M. Emmerichs, *Inter-agency and International Assignments and Officer Career Management*, Santa Monica, Calif.: RAND Corporation, MR-1116-OSD, 2000.

### Managing Competencies

A managing competencies system would place emphasis on developing officers who are intensely experienced in joint matters and would result in something that might be considered a joint cadre. Essentially, officers selected to serve in a joint assignment would be highly likely to serve repeatedly in joint assignments, and they could serve in longer, more stable joint assignments. While fewer officers overall would have exposure to jointness, those who did would have very deep joint experience. This joint experience, however, could come at the cost of maintaining service expertise, depending on the nature of the officers' occupational specialty.<sup>2</sup> These officers would likely remain at a rate roughly equal to their field grade peers, but would not promote quite as well to O-6, nor would they have the same promotion probability as their peers to general and flag officer ranks. This system is likely most appropriate to occupations that are already highly joint, such as special operations, in which officers complete repeated joint tours but maintain their occupational expertise because their occupation is inherently joint.

### Managing Skills

A managing skills system would be designed to distribute joint experience throughout the officer corps. In this framework, there would be less emphasis on exposing the highest-quality officers to joint experiences and more emphasis on maximizing the number of officers who have joint experience. Given that premise, there would be more attrition of officers with joint experience. While a managing leader succession model attempts to send high-quality officers to joint assign-

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<sup>2</sup> This option has many merits that have been explored in other research, such as Don M. Snider and Jeffrey Peterson's work espousing a joint cadre ("Opportunity for the Army: Defense Transformation and a New Joint Military Profession," in Don M. Snider and Lloyd J. Matthews, *The Future of the Army Profession*, New York: McGraw-Hill, 2005). However, this system limits joint experience to a selected cadre of officers who focus on joint matters. In so doing, this option seems to conflict with the Chairman's stated goals to "produce the largest possible body of fully qualified and inherently joint officers suitable for joint command and staff responsibilities" and to "ensur[e] that *all* colonels and captains are skilled joint warfighters who are also strategically minded, critical thinkers" (Joint Chiefs of Staff, *CJCS Vision for Joint Officer Development*, Washington, D.C., November 2005, p. 3; italics added).

ments and then retains and promotes them at a high rate, this model sends more average officers to joint assignments and then retains and promotes them, accordingly, at the average rate. This system infuses joint experience more widely throughout the officer corps but does not develop any depth of joint experience, as officers are unlikely to return to a second joint assignment, given the objective of maximizing the number of officers who obtain joint experience. One weakness of this system is the greater likelihood of sending weaker candidates to represent the service in joint venues. Another weakness of this system is the less purposeful development of prospective future leaders with joint experience.

The policy decisions and likely behavioral responses of the three management frameworks are summarized in Table 4.1. The symbols indicate a comparison with the average and typical outcomes for the overall service. For example, officers in a leader succession framework are slightly more likely to promote to O-5, slightly more likely to promote to O-6, and considerably more likely to promote from O-6 to O-7 than the average officer. In each case, the results for joint officers in that management framework are contrasted with the results for average, non-joint officers. We note that real-world practice might employ all of these frameworks for different communities of officers or within communities of officers, e.g., picking some line officers to manage with a leadership succession model, and others to manage under different frameworks. For analysis purposes, we model each of these frameworks individually for the selected communities, to demonstrate the most extreme demand and supply outcomes.

## The Demand for Joint Officers

As discussed in our prior work, there is currently only very limited acknowledged need for officers with prior joint experience; critical billets on the JDAL are the only assignments for field grade officers that are presumed to require prior joint experience.<sup>3</sup> However, acknowledg-

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<sup>3</sup> Thie et al., 2005.



**Table 4.1**  
**Summary of Differences Between Promotion and Retention in**  
**Management Frameworks Relative to Average, Non-Joint Officers**

	Managing Leader Succession	Managing Competencies	Managing Skills
Promotion to O-5	>	>	=
Promotion to O-6	>	<	=
Promotion to O-7	>>	<<	=
Retention at O-4	>	=	=
Retention at O-5	>	<	=
Retention at O-6	>>	>>	=
Likelihood of second joint job at or before O-4	<<<	>	<
Likelihood of second joint job at or before O-5	<<	>>	<
Likelihood of second joint job at or before O-6	<	>>>	<
Tour length	<	>>	=

NOTE: Symbols indicate a comparison with the average and typical outcomes for the overall service.

ing a need for officers with joint experience and determining where officers with prior jointness are required is a vital step to implementing a strategic approach to joint officer management. This analysis considers three different statements of need for joint officers. The first of the three reflects the current GNA system, in which only critical billets are considered to need officers with joint experience. The other two are based on survey results. The survey asked incumbents of a billet whether prior joint experience should be required, or would be desired, for someone in that billet.<sup>4</sup> We used the survey responses to construct the second two demand statements. Thus, the three demand cases used for this analysis are as follows:

<sup>4</sup> Question 60 of the survey specifically asked incumbents of billets, "In order to perform my duties successfully, I have found prior experience in a joint environment. . . ." Respondents were provided with three choices: "Required," "Desired," or "Not helpful."

1. Officers with prior joint experience are needed only to fill critical billets on the JDAL.
2. Officers with prior joint experience are needed to fill billets that survey respondents identified as requiring prior joint experience.
3. Officers with prior joint experience are needed to fill billets that survey respondents identified as either requiring or desiring prior joint experience.

## The Supply of Joint Officers

In order to determine the future supply of joint officers, it is important to determine the assignments that currently provide officers with valid joint experience, and then project that inventory forward by modeling outcomes consistent with the management frameworks discussed previously. Within the current joint officer management system, only those officers who have been assigned to a job on the JDAL receive joint credit. Thus, we include an excursion that accredits officers the same way; only those officers who have served in JDAL assignments are presumed to have joint experience. We also consider a case that ascribes joint experience to officers serving in those billets that survey respondents described as providing a valid multiservice, international, or interagency experience.<sup>5</sup> Thus, we include two different supply definitions, both based on the jobs that individuals fill, and we consider officers who have gained valid joint experience as those who are either (1) accruing joint experience as currently defined by law, i.e., are assigned to JDAL billets, or (2) accruing joint experience from an assignment to a billet judged by survey respondents to provide significant joint experience.

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<sup>5</sup> Specifically, officers were asked to respond to the following statements: Q54, "This position gives me significant experience in multiservice matter"; Q55, "This position gives me significant experience in multinational matters"; and Q56, "This position gives me significant experience in interagency matters." For the purposes of our analysis, we included all billets for which officers agreed or strongly agreed with at least one of these statements.

## Case Studies

Our analytical effort explored the prospective demand and supply of joint officers in four officer communities: Army Infantry, Navy Surface Warfare, Air Force Space and Missile, and Marine Corps ground officers.

Table 4.2 shows the analytical cases examined in the modeling. The three demand statements are considered against both of the possible supply alternatives. For example, Analyses 1, 2, and 3 each use the current JDAL list as the supply of joint officers, whereas Analyses 4 through 6 assume that officers gain joint experience if they are assigned to the billets indicated by survey responses as providing significant joint experience. Analyses 1 and 4 explore whether the different supply assumptions can satisfy the need for joint officers as expressed in the current GNA system. Analyses 2 and 5 consider whether there can be sufficient officers, given different supply assumptions, to fill those billets that “require” an officer with prior joint experience, and Analyses 3 and 6 explore whether there might be sufficient officers for all the billets that “require” or “desire” an officer with prior joint experience.

**Table 4.2**  
**Supply and Demand Assumptions of Modeled Analyses**

Analysis #	Demand	Supply
Analysis 1	joint experience required as mandated by law	joint experience provided as mandated by law
Analysis 2	joint experience required as indicated by survey	joint experience provided as mandated by law
Analysis 3	joint experience required <i>or desired</i> as indicated by survey	joint experience provided as mandated by law
Analysis 4	joint experience required as mandated by law	joint experience provided as indicated by survey
Analysis 5	joint experience required as indicated by survey	joint experience provided as indicated by survey
Analysis 6	joint experience required <i>or desired</i> as indicated by survey	joint experience provided as indicated by survey

**Demand and Supply Inputs to the Modeled Analyses**

The modeling, which is described in more detail in Appendix B, considered the available supply of joint officers, the demand for joint officers, and the management policies and resulting behavior of joint officers, all of which have been briefly discussed in this chapter. This section is intended to explain the inputs—those billets that provide joint experience to officers and those billets that need officers with prior joint experience—for each of the modeled communities.

Table 4.3 provides the input numbers of billets that supply and demand joint experience for infantry officers. The analyses are those that were previously listed in Table 4.1, and they are now tailored for infantry field grade officers. For example, Analysis A1 is the first listed. The table title includes the total number of billets at each pay grade for this community. The “Joint Billets/Other Billets” column divides that total number of billets into two numbers. The first number indicates the number of billets at that pay grade that either require or provide joint experience in that case. This is the sum of the rightmost three columns. The second number indicates the non-joint, or all other, billets for that community at that pay grade. The “Billets That Only Supply Joint Experience” column indicates the number of billets, for each pay grade, that provide (i.e., supply) but do not require joint experience. The source of this information varies for the different cases. In some instances, such as Analyses A1 through A3, the source of this information is law (i.e., these cases rely on the current JDAL to indicate which positions provide officers with joint experience). The remaining three analyses (A4 through A6) rely on survey responses to indicate which billets provide joint experience. The rightmost column indicates how many billets require as a prerequisite, but do not provide, joint experience. Once again, the source of that information is either law (i.e., the current JDAL) or the survey responses. The “Billets That Supply and Demand Joint Experience” column for each of the cases indicates the intersection: those billets that both supply joint experience and also demand prerequisite joint experience.

Analysis A2, the second listed, shows the inputs for the analysis that considers whether there will be sufficient joint officers to fill billets that were considered by survey respondents to “require” joint

**Table 4.3**  
**Joint Supply and Demand for Army Infantry Case Analyses**  
**(671 O-4 billets; 607 O-5 billets; 300 O-6 billets)**

Pay Grade	Joint Billets/ Other Billets	Billets That Only Supply Joint Experience	Billets That Supply and Demand Joint Experience	Billets That Only Demand Joint Experience
Analysis A1: Joint experience provided as mandated by law; joint experience required as mandated by law				
O-4	58/613	58	0	0
O-5	98/509	87	11	0
O-6	44/256	34	10	0
Analysis A2: Joint experience provided as mandated by law; joint experience required as indicated by survey				
O-4	75/596	55	3	17
O-5	195/412	80	18	19
O-6	81/209	29	15	11
Analysis A3: Joint experience provided as mandated by law; joint experience required <i>or desired</i> as indicated by survey				
O-4	215/456	9	49	157
O-5	208/399	18	80	110
O-6	91/209	4	40	47
Analysis A4: Joint experience provided as indicated by survey; joint experience required as mandated by law				
O-4	188/483	188	0	0
O-5	192/415	181	11	0
O-6	89/211	79	10	0
Analysis A5: Joint experience provided as indicated by survey; joint experience required as indicated by survey				
O-4	191/480	171	17	3
O-5	195/412	158	34	3
O-6	91/209	65	24	2
Analysis A6: Joint experience provided as indicated by survey; joint experience required <i>or desired</i> as indicated by survey				
O-4	236/435	30	158	48
O-5	217/390	27	165	25
O-6	91/209	4	85	2

experience, if officers gain joint experience only from JDAL billets. As the second column of the table indicates, there are 75 O-4 billets that either supply or demand joint experience, leaving 596 non-joint billets for infantry O-4s. As the next columns indicate, there are 58 JDAL billets for infantry O-4s. Of these O-4 JDAL billets, 3 billets also “require” prior joint experience, according to survey respondents, and thus these 3 JDAL billets are presumed to both supply and demand joint experience. There were also 17 other, non-JDAL O-4 billets that were judged by survey respondents to demand prior joint experience. Because these billets are not on the JDAL, they do not provide joint experience in this analysis; they only demand joint experience. The remaining table entries of analyses inputs can be interpreted similarly. Tables 4.4 through 4.6 provide similar inputs for the other communities considered: Navy Surface Warfare officers, Air Force Space and Missile officers, and Marine Corps ground officers.

### **Management Frameworks Input to the Modeled Analyses**

The preceding discussion has quantified the number of billets that require, supply, or both require and supply joint experience among officers for each of the case study populations. The modeling also considered different ways to manage officers in each of these communities. For example, each of the Army Infantry officer analyses (A1 through A6) were conducted using each of the three management frameworks. These different management assumptions will be apparent in the modeling outcomes, discussed in the next section (and summarized earlier in Table 4.1). For example, when managed in a leader succession framework, infantry officers with joint experience were assumed to promote better to pay grades O-5 and O-6 than were the rest of the infantry officers. Relative to infantry officers without joint experience, they were also assumed to retain at higher rates at O-4 and O-5, and to retain at much higher rates at O-6 (because the opportunity to promote to general officer was higher). In contrast, when joint infantry officers were managed using a competency framework, officers with joint experience promoted at higher rates to O-5 (compared with officers without joint experience), but at lower rates to O-6. In addition, joint officers managed in a competency framework had retention rates similar to their

**Table 4.4****Joint Supply and Demand for Navy Surface Warfare Case Analyses  
(1,331 O-4 billets; 1,111 O-5 billets; 552 O-6 billets)**

Pay Grade	Joint Billets/ Other Billets	Billets That Only Supply Joint Experience	Billets That Supply and Demand Joint Experience	Billets That Only Demand Joint Experience
Analysis N1: Joint experience provided as mandated by law; joint experience required as mandated by law				
O-4	59/1,272	59	0	0
O-5	164/947	151	13	0
O-6	57/495	42	15	0
Analysis N2: Joint experience provided as mandated by law; joint experience required as indicated by survey				
O-4	60/1,271	54	5	1
O-5	184/927	150	14	20
O-6	72/480	44	13	15
Analysis N3: Joint experience provided as mandated by law; joint experience required <i>or desired</i> as indicated by survey				
O-4	87/1,244	5	54	28
O-5	228/883	22	142	64
O-6	104/448	3	54	47
Analysis N4: Joint experience provided as indicated by survey; joint experience required as mandated by law				
O-4	85/1,246	85	0	0
O-5	219/892	206	13	0
O-6	98/454	83	15	0
Analysis N5: Joint experience provided as indicated by survey; joint experience required as indicated by survey				
O-4	85/1,246	79	6	0
O-5	221/890	187	32	2
O-6	100/452	72	26	2
Analysis N6: Joint experience provided as indicated by survey; joint experience required <i>or desired</i> as indicated by survey				
O-4	91/1,240	9	76	6
O-5	230/881	24	195	11
O-6	192/360	91	7	94

**Table 4.5**  
**Joint Supply and Demand for Air Force Space and Missile Officers Case**  
**Analyses (951 O-4 billets; 462 O-5 billets; 87 O-6 billets)**

Pay Grade	Joint Billets/ Other Billets	Billets That Only Supply Joint Experience	Billets That Supply and Demand Joint Experience	Billets That Only Demand Joint Experience
Analysis AF1: Joint experience provided as mandated by law; joint experience required as mandated by law				
O-4	181/770	181	0	0
O-5	103/359	87	16	0
O-6	34/53	27	7	0
Analysis AF2: Joint experience provided as mandated by law; joint experience required as indicated by survey				
O-4	192/759	172	9	11
O-5	114/348	93	10	11
O-6	39/48	23	11	5
Analysis AF3: Joint experience provided as mandated by law; joint experience required <i>or desired</i> as indicated by survey				
O-4	265/686	49	132	84
O-5	302/160	17	86	199
O-6	63/24	3	31	29
Analysis AF4: Joint experience provided as indicated by survey; joint experience required as mandated by law				
O-4	260/691	260	0	0
O-5	144/318	128	16	0
O-6	54/33	47	7	0
Analysis AF5: Joint experience provided as indicated by survey; joint experience required as indicated by survey				
O-4	260/691	240	20	0
O-5	144/318	123	21	0
O-6	54/33	38	16	0
Analysis AF6: Joint experience provided as indicated by survey; joint experience required <i>or desired</i> as indicated by survey				
O-4	280/671	64	196	20
O-5	298/164	13	131	154
O-6	62/25	2	52	8



**Table 4.6**  
**Joint Supply and Demand for Marine Corps Ground Case Analyses**  
**(2,871 O-4 billets; 1,581 O-5 billets; 570 O-6 billets)**

Pay Grade	Joint Billets/ Other Billets	Billets That Only Supply Joint Experience	Billets That Supply and Demand Joint Experience	Billets That Only Demand Joint Experience
Analysis M1: Joint experience provided as mandated by law; joint experience required as mandated by law				
O-4	116/2,755	116	0	0
O-5	131/1,450	116	15	0
O-6	43/527	25	18	0
Analysis M2: Joint experience provided as mandated by law; joint experience required as indicated by survey				
O-4	120/2,751	102	14	4
O-5	152/1,429	114	17	21
O-6	64/506	31	12	21
Analysis M3: Joint experience provided as mandated by law; joint experience required <i>or desired</i> as indicated by survey				
O-4	182/2,689	20	96	66
O-5	187/1,394	28	103	56
O-6	69/501	5	38	26
Analysis M4: Joint experience provided as indicated by survey; joint experience required as mandated by law				
O-4	185/2,686	185	0	0
O-5	191/1,390	176	15	0
O-6	64/506	46	18	0
Analysis M5: Joint experience provided as indicated by survey; joint experience required as indicated by survey				
O-4	185/2,686	167	18	0
O-5	205/1,376	167	24	14
O-6	77/493	44	20	13
Analysis M6: Joint experience provided as indicated by survey; joint experience required <i>or desired</i> as indicated by survey				
O-4	190/2,681	28	157	5
O-5	195/1,386	36	155	4
O-6	69/501	5	59	5

non-joint peers at O-4, but lower retention rates at O-5. Because this framework builds a relatively small joint cadre, those officers who were promoted to O-6 tended to remain in the service. This cadre of joint officers were much more likely to have repetitive joint assignments. This results in fewer officers who have had the opportunity to obtain joint experience, coupled with a higher loss rate for O-5s but a lower loss rate for the more senior (O-6) of these joint officers.

**Output of the Analyses: Can There Be Sufficient Numbers of Joint-Experienced Officers?**

The different sizes of these communities, the relative proportion of billets in each of the pay grades, and the proportions of joint to non-joint billets all contribute to the likelihood that these communities can develop sufficient numbers of joint officers to meet demand in each of the different analyses. Another important determinant of the likelihood that there will be sufficient numbers of joint-experienced officers is the kind of management framework that is applied to the community. Thus, we present the output from the analyses in the context of different management frameworks.

Table 4.7 displays the modeling output for the Army Infantry community. For each of the analyses defined earlier, this table indicates the ratio of joint-experienced officers available to fill positions that need such an officer. The table is organized by analysis, with a shortened description of each case. For example, Analysis A1 is the Army Infantry exploration of whether there will be sufficient joint-experienced officers if the supply of officers is based on the current JDAL (law) and the demand for officers is also based on the current JDAL (law), and Analysis A2 is the Army Infantry case that considers whether there will be sufficient joint-experienced officers if the supply is based on the current JDAL and the demand is based on survey responses indicating that such experience should be required for some billets.

The rightmost three columns of the table provide the results, or the ratio of officers available for each billet that needs a joint-experienced officer, based on the different management frameworks. These find-

**Table 4.7**  
**Ratios of Joint-Experienced Officers to Billets Needing Such Officers**  
**(Army Infantry)**

Pay Grade	Joint Billets	Managing Leadership Succession	Managing Competencies	Managing Skills
Analysis A1: Joint experience provided as mandated by law; joint experience required as mandated by law				
O-4	0	165:0	89:0	132:0
O-5	11	32:1	20:1	24:1
O-6	10	26:1	20:1	17:1
Analysis A2: Joint experience provided as mandated by law; joint experience required as indicated by survey				
O-4	20	8:1	4:1	6:1
O-5	37	9:1	6:1	7:1
O-6	26	9:1	7:1	6:1
Analysis A3: Joint experience provided as mandated by law; joint experience required <i>or desired</i> as indicated by survey				
O-4	206	1:4	1:8	1:5
O-5	190	1:2	1:2	1:1
O-6	87	1:1	1:1	1:1
Analysis A4: Joint experience provided as indicated by survey; joint experience required as mandated by law				
O-4	0	534:0	289:0	428:0
O-5	11	84:1	53:1	63:1
O-6	10	66:1	51:1	43:1
Analysis A5: Joint experience provided as indicated by survey; joint experience required as indicated by survey				
O-4	20	24:1	13:1	19:1
O-5	37	22:1	14:1	17:1
O-6	26	23:1	17:1	14:1
Analysis A6: Joint experience provided as indicated by survey; joint experience required <i>or desired</i> as indicated by survey				
O-4	206	1:1	1:2	1:1
O-5	190	1:1	1:1	1:1
O-6	87	2:1	1:1	1:1

ings are expressed in simplified ratios to support the comparison across analyses and across communities.<sup>6</sup> The number of billets at each grade is shown in the second column. For example, in Analysis A1, there are no O-4 billets, 11 O-5 billets and 10 O-6 billets requiring an officer with prior joint experience. The analysis results indicate that, for example in Analysis A1, for each of those 11 O-5 billets requiring joint experience, there will be 32 infantry officers with joint experience if they are managed in a leadership succession model; 20 officers if the policies, practices, and behavior are those of a managing competencies framework; and 24 if they are managed by a skills framework. The greater number of officers available in the leadership succession model reflects the higher rate of promotion of O-4s that served in a joint billet and the higher retention rate of officers that have served in a joint billet. However, this case is one that has a relatively small number of billets that require prior joint experience, because only critical JDAL billets are assumed to require prior joint experience. In contrast, Analysis A2 examines a similar case. Like A1, officers who have served in a JDAL billet are acknowledged to have received prior joint experience. However, the demand for joint experience is much greater. In this case, there are 37 O-5 billets that require prior joint experience. Although there are still more O-5s with prior joint experience when they are managed with a leadership succession model, there are only 9 such officers for every O-5 billet requiring prior joint experience, and officers managed by the leadership succession model are much less likely to serve in repeated joint assignments than officers managed in a managing competencies model.

Tables 4.8 through 4.10 provide similar inputs for the other communities considered: Navy Surface Warfare officers, Air Force Space and Missile officers, and Marine Corps ground officers.

### **Sufficiency of Joint-Experienced Officers Depends on Demand**

Whether or not there are sufficient numbers of joint-experienced officers depends considerably more on demand than on supply conditions

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<sup>6</sup> All findings were reduced to a ratio based on 1, except for those cases that involved either 0 officers or 0 billets requiring a joint-experienced officer.

**Table 4.8**  
**Ratios of Joint-Experienced Officers to Billets Needing Such Officers**  
**(Navy Surface Warfare)**

Pay Grade	Joint Billets	Managing Leadership Succession	Managing Competencies	Managing Skills
Analysis N1: Joint experience provided as mandated by law; joint experience required as mandated by law				
O-4	0	168:0	91:0	134:0
O-5	13	35:1	23:1	27:1
O-6	15	22:1	17:1	14:1
Analysis N2: Joint experience provided as mandated by law; joint experience required as indicated by survey				
O-4	6	26:1	14:1	20:1
O-5	34	13:1	8:1	10:1
O-6	28	11:1	9:1	8:1
Analysis N3: Joint experience provided as mandated by law; joint experience required <i>or desired</i> as indicated by survey				
O-4	82	1:2	1:3	1:2
O-5	206	1:1	1:2	1:2
O-6	101	1:1	1:1	1:1
Analysis N4: Joint experience provided as indicated by survey; joint experience required as mandated by law				
O-4	0	242:0	131:0	203:0
O-5	13	49:1	31:1	40:1
O-6	15	32:1	26:1	24:1
Analysis N5: Joint experience provided as indicated by survey; joint experience required as indicated by survey				
O-4	6	37:1	20:1	30:1
O-5	34	17:1	11:1	12:1
O-6	28	16:1	13:1	9:1
Analysis N6: Joint experience provided as indicated by survey; joint experience required <i>or desired</i> as indicated by survey				
O-4	82	1:1	1:2	1:1
O-5	206	1:2	1:2	1:1
O-6	101	2:1	2:1	2:1

**Table 4.9**  
**Ratios of Joint-Experienced Officers to Billets Needing Such Officers**  
**(Air Force Space and Missile)**

Pay Grade	Joint Billets	Managing Leadership Succession	Managing Competencies	Managing Skills
Analysis AF1: Joint experience provided as mandated by law; joint experience required as mandated by law				
O-4	0	531:0	285:0	425:0
O-5	16	31:1	20:1	21:1
O-6	7	21:1	10:1	12:1
Analysis AF2: Joint experience provided as mandated by law; joint experience required as indicated by survey				
O-4	20	25:1	14:1	20:1
O-5	21	23:1	15:1	16:1
O-6	16	9:1	4:1	5:1
Analysis AF3: Joint experience provided as mandated by law; joint experience required <i>or desired</i> as indicated by survey				
O-4	216	1:1	1:2	1:1
O-5	285	1:2	1:2	1:2
O-6	60	1:1	1:2	1:2
Analysis AF4: Joint experience provided as indicated by survey; joint experience required as mandated by law				
O-4	0	762:0	410:0	610:0
O-5	16	45:1	29:1	31:1
O-6	7	31:1	16:1	18:1
Analysis AF5: Joint experience provided as indicated by survey; joint experience required as indicated by survey				
O-4	20	35:1	19:1	28:1
O-5	21	32:1	21:1	22:1
O-6	16	12:1	6:1	7:1
Analysis AF6: Joint experience provided as indicated by survey; joint experience required <i>or desired</i> as indicated by survey				
O-4	216	1:1	1:1	1:1
O-5	285	1:1	1:2	1:2
O-6	60	1:1	1:2	1:2

**Table 4.10**  
**Ratios of Joint-Experienced Officers to Billets Needing Such Officers**  
**(Marine Corps Ground)**

Pay Grade	Joint Billets	Managing Leadership Succession	Managing Competencies	Managing Skills
Analysis M1: Joint experience provided as mandated by law; joint experience required as mandated by law				
O-4	0	344:0	184:0	275:0
O-5	15	355:1	23:1	26:1
O-6	8	18:1	13:1	11:1
Analysis M2: Joint experience provided as mandated by law; joint experience required as indicated by survey				
O-4	18	17:1	9:1	13:1
O-5	38	12:1	8:1	9:1
O-6	33	8:1	6:1	5:1
Analysis M3: Joint experience provided as mandated by law; joint experience required <i>or desired</i> as indicated by survey				
O-4	162	1:1	1:2	1:1
O-5	159	1:1	1:1	1:1
O-6	64	1:1	1:1	1:1
Analysis M4: Joint experience provided as indicated by survey; joint experience required as mandated by law				
O-4	0	549:0	294:0	439:0
O-5	15	51:1	34:1	37:1
O-6	18	24:1	18:1	14:1
Analysis M5: Joint experience provided as indicated by survey; joint experience required as indicated by survey				
O-4	18	27:1	15:1	22:1
O-5	38	19:1	12:1	14:1
O-6	33	12:1	9:1	7:1
Analysis M6: Joint experience provided as indicated by survey; joint experience required <i>or desired</i> as indicated by survey				
O-4	162	1:1	1:2	1:1
O-5	159	1:1	1:1	1:1
O-6	64	1:1	1:1	1:1

or management policies. In short, there is not generally any problem developing sufficient numbers of joint officers to satisfy the current legal requirement for officers with prior joint experience—critical billets on the JDAL (Analyses 1 and 4). For instance, there are no critical O-4 billets and relatively small numbers of O-5 and O-6 billets in the communities examined. The Marine Corps may have more difficulty than the other analyzed communities filling its critical billets for O-6s, and even the Marine Corps have somewhere between 11 and 18 officers for every such billet in the first Marine Corps case (M1), which acknowledges only JDAL billets as providing joint experience. Thus, it should not be difficult for any of the analyzed communities to satisfy the need for joint-experienced officers if the demand is defined by the current legal requirement.

At the other extreme, it does not appear feasible to satisfy the demand for joint officers if that demand consists of all billets deemed by survey respondents as either requiring or benefiting from prior joint experience (Analyses 3 and 6). In those cases, regardless of whether the supply is defined by the current JDAL or by those billets judged to provide significant joint experience, the communities typically have only one or fewer joint-experienced officers for each billet requiring such experience. The problem is that so many of the billets that could provide joint experience also require it, so that a smaller number of officers are gaining the experience for the first time; the pool of newly accredited joint officers is not growing very quickly. The tradeoff is between using officers where currently needed or developing officers for future use. These findings suggest that if a large number of billets are determined to require prior joint experience, there are currently insufficient opportunities for officers to gain joint experience through assignments, given the parameters of our analysis. Even if the length of assignments were significantly reduced, it would be difficult.<sup>7</sup>

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<sup>7</sup> The *CJCS Vision for Joint Officer Development* (Joint Chiefs of Staff, 2005) states several aspirational goals. For example, the key objective is “to produce the largest possible body of fully qualified and inherently joint officers suitable for joint command and staff responsibilities.” The *CJCS Vision for Joint Officer Development* sees fully qualified and inherently joint colonels and captains as the specific focal point of development. In other places, the goal is to ensure



When the demand for joint-experienced officers is greater than the status quo, but more specific than the broad-brush parameters of Analyses 3 and 6, it is possible to satisfy that demand for joint officers. Specifically, in Analyses 2 and 5, the demand for prior joint experience is based on survey respondents indicating that prior joint experience should be required for their position. When only JDAL positions provide joint experience to officers, it is somewhat difficult to satisfy this demand (Analysis 2). It appears most difficult in the Army Infantry and Marine Corps. Nonetheless, even those communities are able to provide sufficient joint-experienced officers to satisfy this need, depending on the management framework applied to these officers. The leadership succession model provides the highest ratio of officers to billets. However, the managing competencies framework might require the lowest ratio, as those officers are intended to serve multiple joint assignments, and thus there may be fewer competing opportunities for each individual officer. In other words, it may be sufficient to have six officers (or even four officers) for every billet in the managing competencies framework, whereas it may be more desirable to have a higher ratio in the leadership succession framework, in which the officers are assumed to be future leaders and thus to each have many organizations vying for their assignment service.

It is easier to satisfy the need for joint-experienced officers if officers can obtain that joint experience from any billet that was identified by survey respondents as providing a significant joint experience (Analysis 5). Given that the only difference between Analyses 2 and 5 is the kind or number of billets that provide officers with joint experience, the higher ratios for Analysis 5, compared with Analysis 2, indi-

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that all colonels and captains are skilled joint warfighters who are also strategically minded, critical thinkers. Attaining the rank of colonel and captain will signify that an officer fundamentally thinks in a joint context at the operational and strategic levels of war and thereby possesses an unprecedented ability to integrate capabilities across the depth and width of the joint force.

Our analysis suggests that a larger pool than the current pool of joint-experienced officers could be produced, but not all colonels and captains could be given joint experience because of the limited experiential assignments compared with the overall size of the officer corps across the services.

cate this difference. Thus, if the services acknowledged positions that clearly require prior joint experience (in this case, determined by survey) and aimed to fill them with officers who have served in billets judged to provide a significant joint experience (again, in this case, determined by survey), then they should be able to, without considerable difficulty, produce a sufficient number of joint-experienced officers.

It will always be easier to satisfy the need for joint-experienced officers if officers are managed in a leadership succession framework than in a managing skills framework, because the former emphasizes breadth of experience while the latter balances breadth and depth. A managing competencies framework that emphasizes depth of experience may also suffice, as a lower ratio of officers to billets is acceptable in this framework. The findings described in this chapter generally illustrate the differences between the three management frameworks: The leadership succession model produces (promotes and retains) more joint-experienced officers than the other two frameworks. This difference is especially marked by the pay grade of O-6. However, noting the extent to which the leadership succession model would produce joint-experienced officers for O-4 and O-5 billets is somewhat misleading, as the leadership model would not support sending officers with joint experience to second joint tours as O-4s or O-5s, and would send only a few officers to a second joint tour as O-6s. Nonetheless, we have modeled the ability to satisfy the need for joint officers within this model. Where there is a need for O-4 and O-5 officers with joint experience, that need suggests that the entire community cannot be managed in a leadership succession model.

## Billets Dealing with Acquisition Matters

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We were asked to examine the subset of billets that deal with acquisition matters to see whether and how the experiences and work assignments of these billets differ from those of other billets. Acquisition billets are of special interest due to the requirements for acquisition experience and concern regarding whether acquisition officers could also satisfy joint experience requirements, if the latter were imposed on the acquisition community. This chapter focuses on two main questions:

- How do acquisition billets compare with other JDAL billets in terms of work, experiences, and requirements for joint education and prior experience?
- Are there substantive differences among acquisition billets that are on the JDAL and those not on the JDAL (i.e., non-JDAL billets in external organizations or internal service billets) in terms of work, experiences, and prerequisites?

### Defining Acquisition Billets

We defined acquisition<sup>1</sup> and non-acquisition billets in two ways:

1. Definition A used information from the 2005 survey on whether respondents were working in a Joint Program Office (JPO)

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<sup>1</sup> We could not explicitly identify Acquisition Corps officers in the survey, so we use the term *acquisition* in a general sense as defined above.

- ( $n = 754$ ). The comparison group consisted of all JDAL billets that did not meet this criterion ( $n = 5,970$ ).
2. Definition B was based on function and certification information on billets from the master billet file. As with the billets identified by Definition A and as shown in Table 5.1, this set of acquisition billets was grouped into three categories: JDAL billets, billets in external organizations, and service-nominated billets. Overall, 2,055 billets were identified as acquisition billets, of which 366 were JDAL billets, 559 were external organization billets, and 1,130 were internal service billets. The comparison set of billets is the 5,834 JDAL billets that did not meet the criteria for acquisition billets, using Definition B.

Both these sets of billets were further categorized into whether they were JDAL billets, external organization billets, or internal service billets. The analysis was further limited to officers in grades O-4 through O-6. All non-acquisition billets that were in external organizations or were internal service billets were excluded from the analysis.

Tables 5.1 and 5.2 show the distribution of O-4 to O-6 acquisition billets by JDAL category using the two definitions, respectively. For example, of the 754 acquisition billets shown in Table 5.1, 230 are already included on the JDAL, 239 are in external organizations but are not on the JDAL, and 285 are service billets (i.e., billets that are on service manning documents regardless of their location) that the services nominated for further consideration as being potentially joint. Table 5.3 examines the overlap between the two definitions.

Table 5.1 shows that the 754 billets assigned to JPOs were almost evenly distributed across the three JDAL categories. Table 5.2 shows that Definition B, which used a mix of function and certification billet information, identified a much larger set of billets as acquisition billets, with the largest increase being among service-nominated billets, of which over 1,100 billets were identified as acquisition billets, compared with 285 identified by using the JPO billet definition (Definition A). Of the 2,055 billets identified by Definition B, over half were service-nominated billets, 27 percent were external organization billets, and the remaining 18 percent were JDAL billets.

**Table 5.1**  
**Distribution of Acquisition Billets Using Definition A, by JDAL**  
**Category and Comparison Group of Non-Acquisition JDAL**  
**Billets**

Billet Category	Number of Billets	Percentage of Total
JDAL billets	230	3.5
External organization billets	239	3.6
Service-nominated billets	285	4.3
Non-acquisition JDAL billets	5,970	88.5

**Table 5.2**  
**Distribution of Acquisition Billets Using Definition B, by JDAL**  
**Category and Comparison Group of Non-Acquisition JDAL**  
**Billets**

Billet Category	Number of Billets	Percentage of Total
JDAL billets	366	4.6
External organization billets	559	7.1
Service-nominated billets	1,130	14.3
Non-acquisition JDAL billets	5,834	73.9

Of the over 21,000 billets that responded to the survey, about 15,000 were coded as O-4–O-6 billets. Of these, about 7,000 were excluded as non-acquisition, non-JDAL billets by both definitions. However, there is little remaining overlap between the two definitions. For example, only 15 billets were identified as acquisition JDAL billets by both definitions, 59 billets as acquisition external organization billets, and 171 as acquisition service-nominated billets. Thus, of the 2,579 billets identified by either definition as acquisition billets, only 230 (9 percent) were identified as acquisition under both definitions. Thus, we are really looking at two different communities when we examine these two sets of billets.

**Table 5.3**  
**Overlap Between Acquisition Billets Defined Using Definitions A and B, by JDAL Category**

Definition A	Definition B					Total
	Non-Acquisition JDAL Billets	Acquisition Billets			Excluded Billets	
		JDAL Billets	External Organization Billets	Service-Nominated Billets		
JDAL billets	215	15	0	0	0	230
External organization billets	0	0	59	0	180	239
Service-nominated billets	0	0	0	171	114	285
Non-acquisition JDAL billets	5,619	351	0	0	0	5,970
Excluded billets	0	0	500	959	6,927	8,386
Total	5,834	366	559	1,130	7,221	15,110

**Analysis of Acquisition Billets Using Definition A (Joint Program Office Billets)**

This section examines the experience and job characteristics of the billets identified as acquisition billets based on whether the billet was a JPO billet or not. Before doing so, however, we present some descriptive data on the billets and on the officers serving in these billets to set the context for the later analysis that examines how these billets rank on some typical metrics of jointness.

**Descriptive Profile of Acquisition/Non-Acquisition Billets**

Table 5.1 showed that 754 billets were identified using this definition, along with a comparison group of 5,970 non-acquisition JDAL billets. We find that a lower percentage of acquisition billets are coded for higher grades compared with other JDAL billets. For example, 13 percent of acquisition JDAL billets are coded as O-4 billets compared with 17 percent of non-acquisition JDAL billets. The distribu-

tion of acquisition and non-acquisition JDAL billets across the major billet organizations is shown in Table 5.4. The largest percentages of JDAL billets—both acquisition and non-acquisition—are assigned to the geographic commands, but the percentage is higher for acquisition billets (57 percent versus 45 percent). Another 11–14 percent of non-acquisition JDAL billets and 7–10 percent of acquisition JDAL billets are assigned to the CSAs, functional commands, and the Joint Staff. Non-JDAL acquisition billets in external organizations are largely to be found in CSAs (27 percent), other non-OSD defense agencies (25 percent), or CENTCOM JTFs (18 percent). Among the service-nominated billets, the largest share of acquisition billets—56 percent—was in the

**Table 5.4**  
**Distribution of Billets, as a Percentage of Total, by Major Billet Organization and Acquisition/JDAL Category**

Major Billet Organization	Non-Acquisition JDAL Billets	Acquisition Billets		
		JDAL Billets	External Organization Billets	Service-Nominated Billets
Army	0.0	0.0	0.0	14.7
Navy	0.0	0.0	0.0	28.1
Air Force	0.0	0.0	0.0	55.8
Marine Corps	0.0	0.0	0.0	1.4
The Joint Staff	11.0	7.4	2.5	0.0
OSD	3.6	1.7	0.4	0.0
CENTCOM JTFs	0.0	0.0	18.0	0.0
International organizations	3.2	3.0	0.0	0.0
CSAs	13.6	10.4	27.2	0.0
Other non-OSD defense agencies	3.6	5.2	24.7	0.0
OSD defense agencies	0.2	0.0	5.9	0.0
Educational agencies	2.2	0.9	0.8	0.0
Geographic commands	44.6	57.0	14.2	0.0
Force providers	5.3	3.9	5.4	0.0
Functional commands	12.7	10.4	0.8	0.0

Air Force (largely in the Air Force Materiel Command, Air Force Elements [Other], and Air Force Space Command), while the Navy and Army accounted for 28 and 15 percent, respectively. Only four acquisition billets were identified as Marine Corps billets.

Table 5.5 shows the distribution of officers serving in these various billets by occupation.<sup>2</sup> There are some interesting but not surprising differences. For example, while 40 percent of officers serving in non-acquisition JDAL billets were tactical officers, this was true of only one-quarter of those in acquisition JDAL billets and between 17 and 18 percent of officers in acquisition non-JDAL billets. Not unexpectedly, supply and procurement officers were much more likely to be staffing acquisition billets than non-acquisition billets—for example, among acquisition billets, 26 percent of JDAL billets, one-third of external organization billets, and 45 percent of internal service billets were staffed by supply officers, compared with 15 percent of non-acquisition

**Table 5.5**  
**Distribution of Incumbents, as a Percentage of Total, Serving in Acquisition and Non-Acquisition JDAL Billets, by Occupation**

Occupation	Non-Acquisition JDAL Billets	Acquisition Billets		
		JDAL Billets	External Organization Billets	Service-Nominated Billets
Tactical operations officers	40.0	24.6	16.8	18.1
Intelligence officers	14.8	12.1	9.1	5.2
Engineering and maintenance officers	12.9	8.7	17.3	12.5
Scientists and professionals	9.7	15.5	10.7	5.6
Health care officers	0.2	1.0	6.6	11.2
Administrators	7.5	12.1	7.6	2.0
Supply and procurement officers	15.1	26.1	32.0	45.4

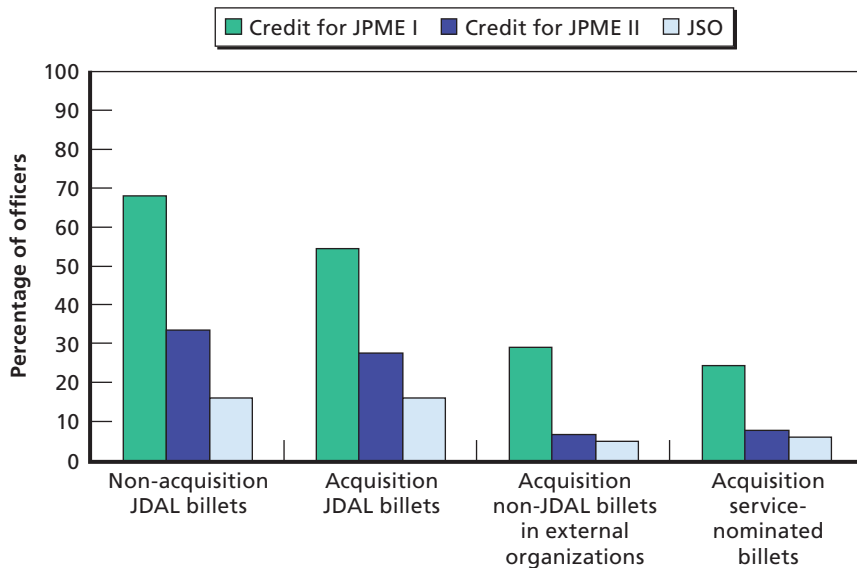
<sup>2</sup> Only incumbents were asked this question on the survey, so the number of officers responding to this question was between 82 and 87 percent of the 6,724 responses used in this analysis.



JDAL billets. Scientists and professionals were more prevalent among the acquisition JDAL billets, while engineering and maintenance officers were somewhat overrepresented in acquisition external organization billets. Intelligence officers were much less likely to be found in acquisition billets than in non-acquisition JDAL billets, and this was particularly true of external organization and service-nominated billets.

When we examine the education and prior joint experience of officers serving in these billets, we see marked differences between officers serving in JDAL billets and those in non-JDAL billets (Figure 5.1). For example, while 55–68 percent of those in JDAL billets reported receiving credit for Phase I (JPME I), less than 30 percent of officers serving in non-JDAL billets did so. Between 28 and 34 percent of the former had received credit for JPME II, compared with 7–8 percent of officers in non-JDAL billets. Not surprisingly, the percentage of Joint Specialty

**Figure 5.1**  
**Percentage of Officers Receiving Credit for JPME I, JPME II, and JSO Status,**  
**by Acquisition/JDAL Billet Category (Definition A)**



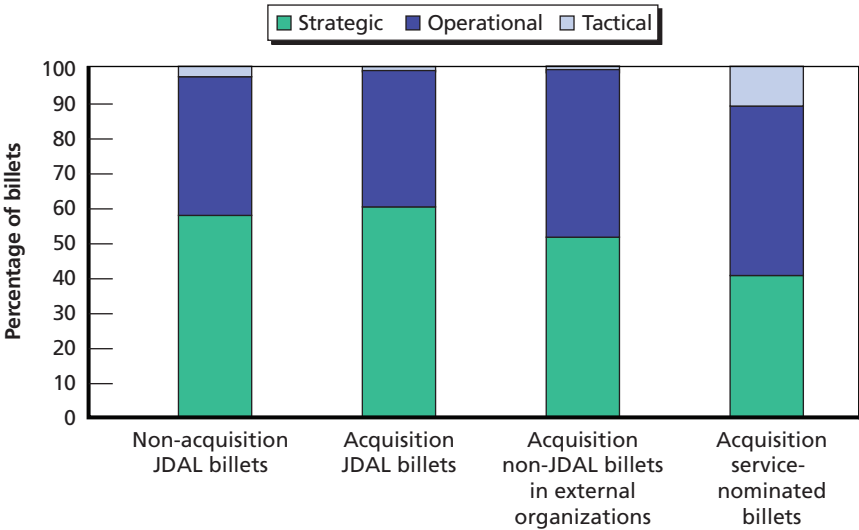
Officers (JSOs) assigned to JDAL billets was much larger than the percentage serving in non-JDAL billets (16 percent versus 5–6 percent).

**Typical Metrics of Jointness**

In Chapter Two, we defined some typical metrics of jointness, including billet characteristics and tasks performed; frequent interactions with different organizations and personnel; types of education, training, and knowledge required, desired, or considered important for carrying out the assignment; and types of joint experience afforded by the billet (multiservice, multinational, interagency).

**Categorization of Jobs, Supervision of Billets, and Tasks.** Figure 5.2 shows the percentages of billets in each category that were described as primarily strategic, operational, or tactical. Close to 60 percent of JDAL billets were described as primarily strategic, compared with 50 percent of acquisition billets in external organizations and 40 percent of service-nominated billets. The remainder of

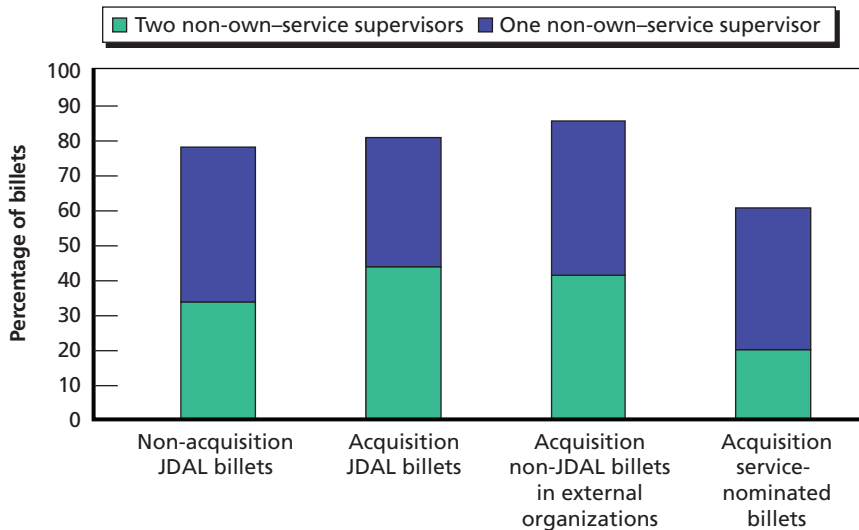
**Figure 5.2**  
**Categorization of Billets by Primary Focus of Job, by Acquisition/JDAL Billet Category (Definition A)**



the billets were described as primarily operational, with a little over 10 percent of acquisition service-nominated billets described as primarily dealing with tactical matters. This is very different from other non-acquisition internal service billets in the survey, of which only 25 percent were described as primarily strategic and another 25 percent were described as primarily tactical. In this respect, acquisition internal service billets appear to be more similar to JDAL billets than to other service-nominated billets.

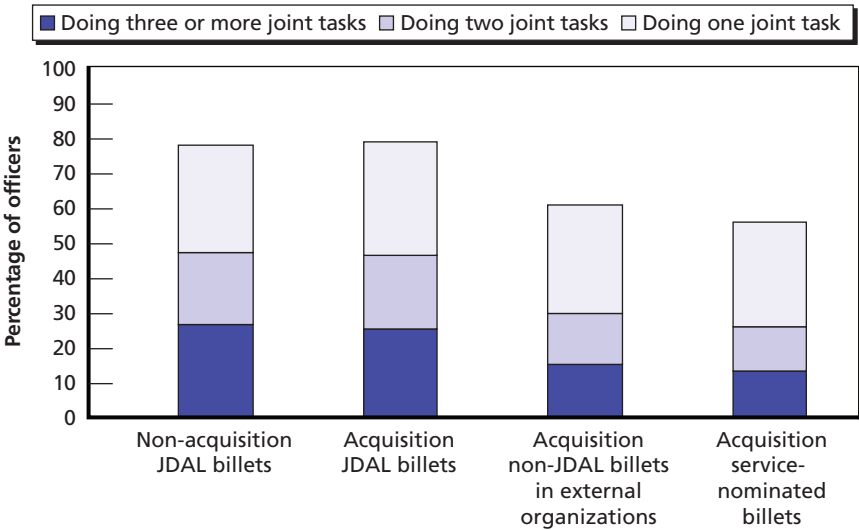
Figure 5.3 speaks to the question of supervision of billets by non-own-service personnel, including civilians. Eighty percent of JDAL billets—both non-acquisition and acquisition—are supervised by non-own-service supervisors, as are 85 percent of acquisition billets in external organizations. About 60 percent of internal service billets are supervised by non-own-service personnel; this is considerably higher than the 20 percent of all service-nominated billets that are supervised by non-own-service supervisors.

**Figure 5.3**  
**Percentage of Billets Supervised by One or Two Non-Own-Service Supervisors, by Acquisition/JDAL Billet Category (Definition A)**



There is little difference in the median number of tasks performed during a typical work week among the different types of acquisition billets, although this is higher than the median number reported by non-acquisition JDAL billets. However, there are large differences in the types of tasks performed. For example, Figure 5.4 shows the percentage of officers in the various kinds of billets who are performing one or more “highly joint” tasks. These include providing strategic direction and integration; developing/assessing joint policies; developing or assessing joint doctrine; and fostering multinational, interagency, or regional relations. Overall, we find that over three-quarters of officers assigned to JDAL billets, and 70 percent of those in acquisition billets in external organizations, reported performing one or more of these highly joint tasks. Fifty-five percent of those in internal service acquisition billets were performing at least one of these tasks, compared with 45 percent of all officers in service-nominated billets.

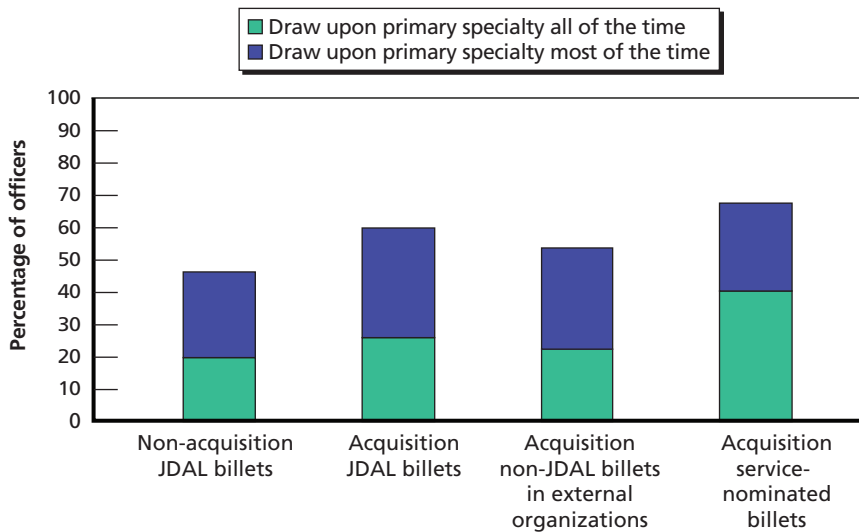
**Figure 5.4**  
**Percentage of Officers Performing One or More “Highly Joint” Tasks, by Acquisition/JDAL Billet Category (Definition A)**



**Interactions with Organizations and Personnel.** Officers were asked about interactions with different organizations and types of personnel. If we examine the median number of organizations with which officers reported interacting monthly or more frequently, we find that acquisition JDAL billets appear to have the largest number of frequent interactions (six), compared with five for non-acquisition JDAL billets and acquisition external organization billets and four for internal service billets. This is also true for frequent interactions with types of personnel, where acquisition JDAL billets appear to interact frequently with seven different types of personnel, compared with six for non-acquisition JDAL billets, five for acquisition billets in external organizations, and 3.5 for internal service billets.

**Importance of Specialty, Expertise, Service Competencies, Education, and Experience.** Respondents were asked a series of questions about what was needed to carry out the responsibilities of the assignment successfully. Figure 5.5 shows the percentage of officers report-

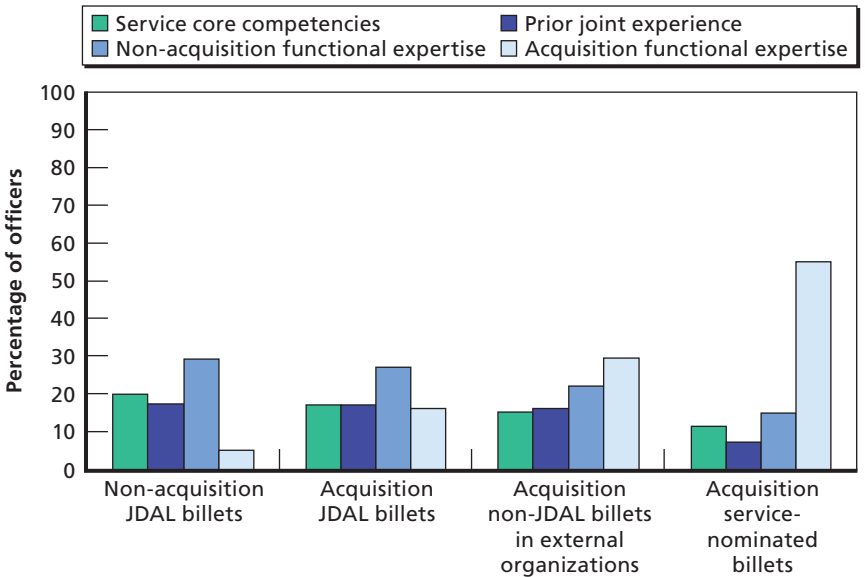
**Figure 5.5**  
**Percentage of Officers Reporting That They Drew on Their Primary Specialty Most or All of the Time in Carrying Out Assignment, by Acquisition/JDAL Billet Category (Definition A)**



ing that they drew on their primary specialty most or all of the time. Officers in acquisition billets tended to rely on their primary specialty to a larger degree than officers in non-acquisition JDAL billets. For example, 55–68 percent of officers in acquisition billets reported relying on their primary specialty most or all of the time, compared with 45 percent of those in non-acquisition JDAL billets.

Officers were also asked to rank the skill, education, expertise, or experience most important to them in successfully carrying out their billet duties. Figure 5.6 shows these responses. Across all groups, functional expertise in both non-acquisition and acquisition matters was rated the most important, but the relative importance of these two kinds of expertise varied across the groups. For example, 25 percent of officers in non-acquisition JDAL billets reported that functional expertise in non-acquisition areas was the most important to their assignment, while 5 percent specifically reported that acquisition expertise

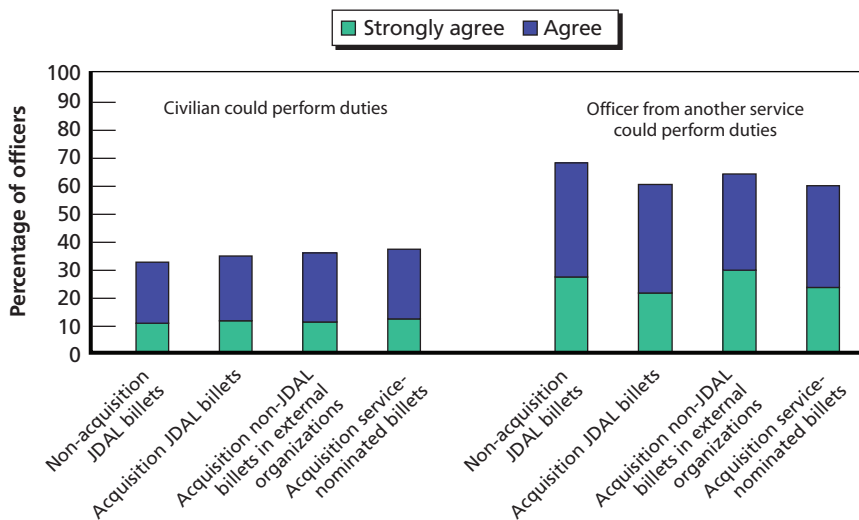
**Figure 5.6**  
**Percentage of Officers Ranking Service Competencies, Joint Experience, and Functional Expertise as “Most Important” in Carrying Out Assignment, by Acquisition/JDAL Billet Category (Definition A)**



was the most important. Thirty percent of officers working in JDAL billets in the JPOs rated non-acquisition expertise as the most important, and 16 percent ranked acquisition expertise as the most important. In contrast, 55 percent of those serving in acquisition billets in the services ranked expertise in acquisition matters as the most important, and 15 percent reported that non-acquisition functional expertise was the most important.

If jobs require specialized service expertise, then the substitutability of civilians or officers from another service is likely to be severely limited. Figure 5.7 examines the responses of officers to questions regarding the ability of civilians or officers from another service to carry out the assignment. Between 30 and 38 percent believed that civilians could carry out their duties just as effectively, while 60–65 percent reported that officers from another service could do so. This agrees with what we saw above, where service core competencies were not as important as functional expertise in carrying out billet duties.

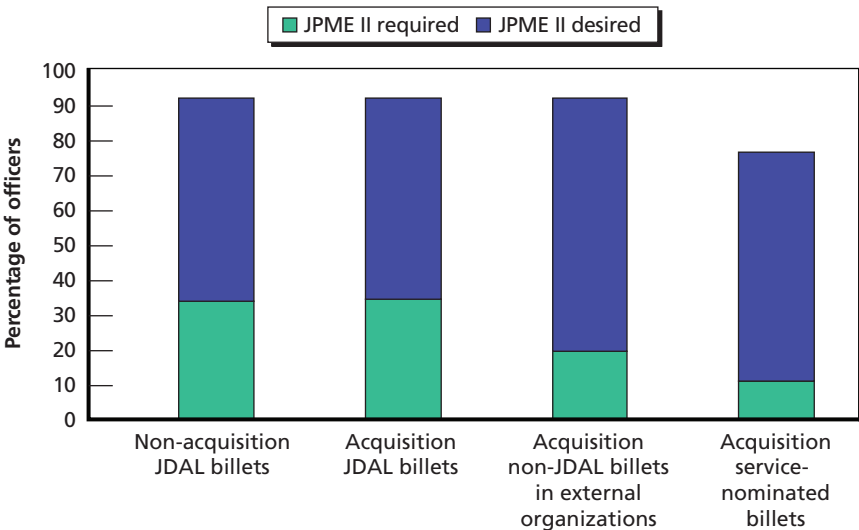
**Figure 5.7**  
**Percentage of Officers Agreeing or Strongly Agreeing That Civilians or Officers from Another Service Could Carry Out Assignment Effectively, by Acquisition/JDAL Billet Category (Definition A)**



Figures 5.8 and 5.9 examine officers’ responses with respect to the desirability of prior joint education or experience for the billet. This information is useful for understanding the need for such education and experience and whether enough officers will be available to meet the demand. Officers in acquisition billets believe that both prior joint education and experience would be useful in carrying out their assignments. About 90 percent of officers in acquisition JDAL and external organization billets reported that JPME II and prior joint experience were either required or desired for officers serving in these billets. The percentage of officers in acquisition internal service billets reporting that JPME II or prior joint experience was useful was somewhat lower (75 and 85 percent, respectively).

In addition to these questions, officers were presented with a list of several different categories of knowledge (drawn largely from the JPME curriculum) and asked to rate these in terms of whether the specific knowledge was required for the billet and also whether it was pro-

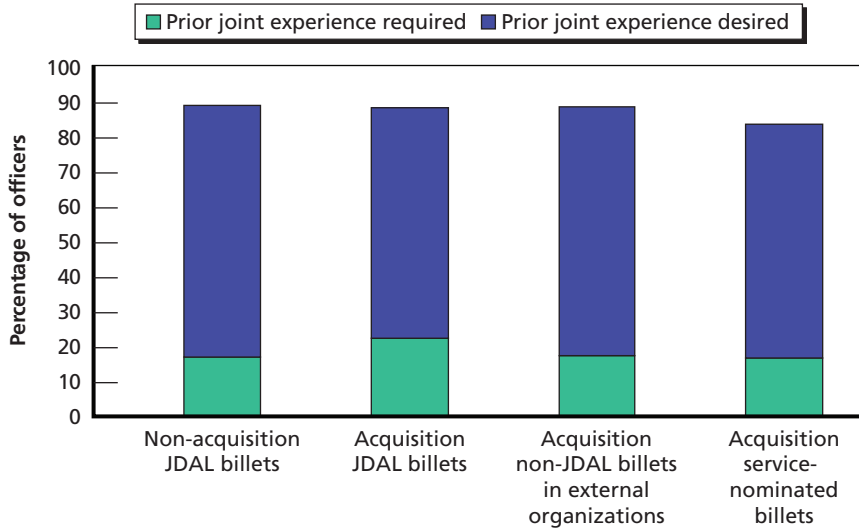
**Figure 5.8**  
**Percentage of Officers Reporting That JPME II Was Required or Desired for the Billet, by Acquisition/JDAL Billet Category (Definition A)**





**Figure 5.9**

**Percentage of Officers Reporting That Prior Joint Experience Was Required or Desired for the Billet, by Acquisition/JDAL Billet Category (Definition A)**



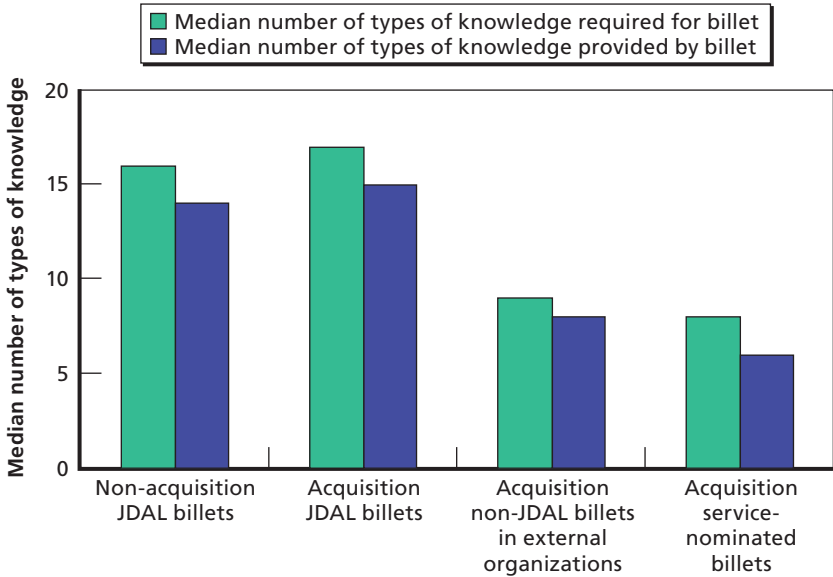
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vided by the billet. Figure 5.10 shows the median number of different knowledge types that were required and provided by the billet.

It is clear that the two JDAL categories are similar, requiring about 15–16 types of knowledge on average. This is much higher than the 7–8 knowledge types required for non-JDAL billets. Billets also appear to provide most but not all the knowledge required for the billet, pointing to the likely need for some further on-the-job training or additions to the JPME curriculum. Moreover, since these assessments were made as end-of-assignment estimates, it appears that joint education provided prior to the start of an assignment could help officers start higher on the learning curve and make up the gap.

**Types of Experience Provided by the Billet.** Current criteria for becoming a joint specialty officer include completion of JPME II and serving in a JDAL billet. It is important to identify billets that provide joint experience to see whether these would qualify to be on an

**Figure 5.10**  
**Median Number of Types of Knowledge Required and Provided by the Billet, by Acquisition/JDAL Billet Category (Definition A)**

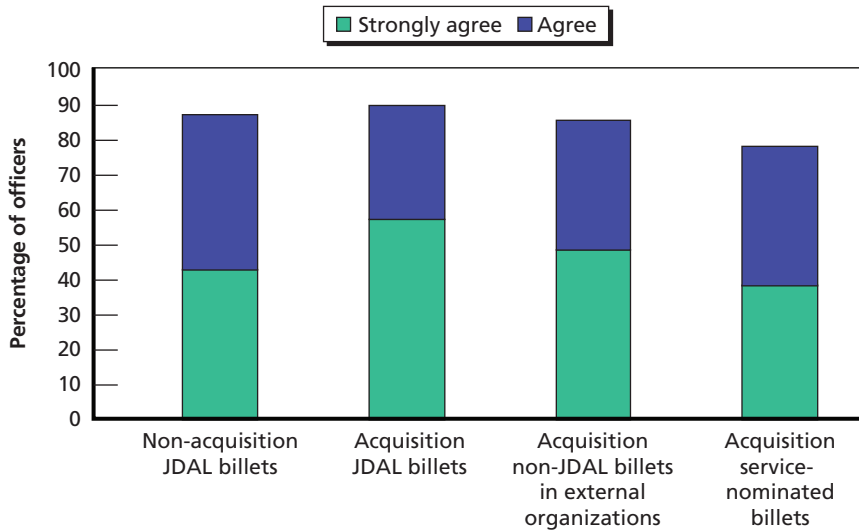


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expanded JDAL and thus allow officers serving in them to get joint duty credit.

An important finding from the survey is that the ability to obtain a variety of types of joint experience is not limited to JDAL billets. That this is particularly true of acquisition billets is amply demonstrated by Figures 5.11–5.13, which present officers’ responses about whether these billets provide them with multiservice, multinational, and interagency experience. For example, 40–60 percent of officers “strongly agreed” that the billet provided them with multiservice experience—if we include those who “agreed,” the percentage increases to 80–85 percent. The percentages of billets providing significant multinational experience were somewhat lower—65–70 percent of JDAL billets and 45–50 percent of other acquisition billets. In terms of interagency experience, there was little difference between non-acquisition and acquisition billets, regardless of whether they were on the JDAL or not. Three-quarters

**Figure 5.11**  
**Percentage of Officers Agreeing or Strongly Agreeing That the Billet Provides Significant Multiservice Experience, by Acquisition/JDAL Billet Category (Definition A)**



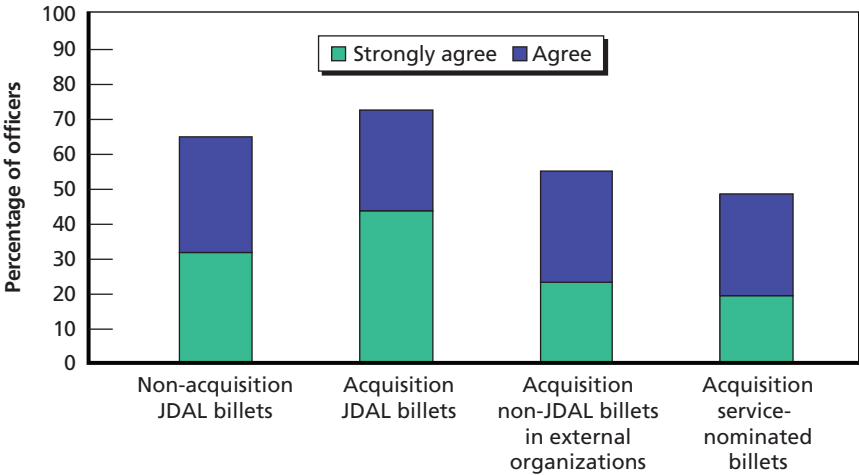
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or more of all these billets provided significant interagency experience. In contrast, only 50 percent of all service-nominated billets provided significant multiservice experience, and 40–44 percent provided significant experience in multinational and interagency matters.

### Summary of Findings: Definition A

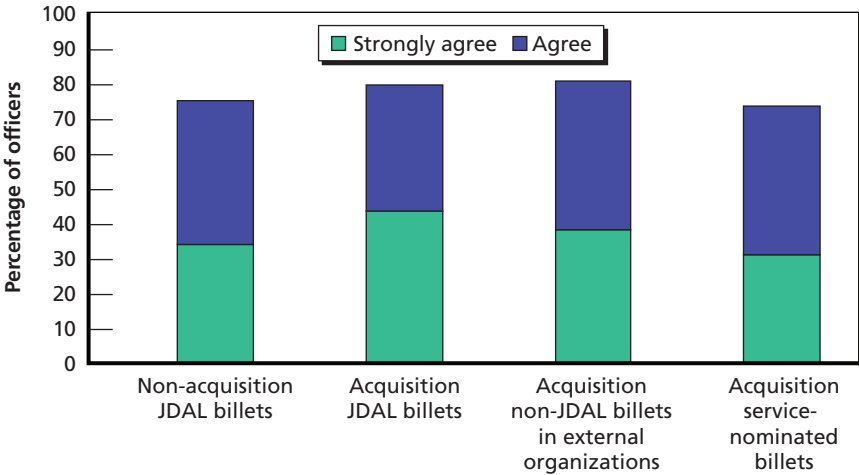
Compared with other billets, acquisition billets, defined here as billets in the JPOs, appear to rank high on several metrics of jointness, particularly with respect to the kinds of joint experiences they provide and the usefulness of joint education and experience for the billet. In particular, acquisition internal service billets appear to rank much higher on “jointness” than other service-nominated billets.

**Figure 5.12**  
**Percentage of Officers Agreeing or Strongly Agreeing That the Billet Provides Significant Multinational Experience, by Acquisition/JDAL Billet Category (Definition A)**



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**Figure 5.13**  
**Percentage of Officers Agreeing or Strongly Agreeing That the Billet Provides Significant Interagency Experience, by Acquisition/JDAL Billet Category (Definition A)**



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## **Analysis of Acquisition Billets Using Definition B (Based on Billet Functions and Required Certification Information)**

The second definition used to identify acquisition billets was based on function and certification information on billets from the master billet file. As with the billets identified by Definition A and as shown in Table 5.2, this set of acquisition billets was grouped into three categories: JDAL billets (366), billets in external organizations (559), and service-nominated billets (1,130). The comparison set of billets is the 5,834 JDAL billets that did not meet the criteria for acquisition billets, using Definition B.

### **Descriptive Profile of Acquisition/Non-Acquisition Billets**

Unlike what we saw earlier with the JPO acquisition billets, the percentage of higher-graded acquisition billets was similar across JDAL billets, both acquisition and non-acquisition (16 versus 17 percent). The distribution of acquisition billets across the major billet organizations was quite different from the distribution seen earlier for the JPO acquisition billets. This is clearly shown in Table 5.6. As before, the largest percentage of non-acquisition JDAL billets (48 percent) is assigned to the geographic commands; but, whereas the geographic commands accounted for the largest share (57 percent) of JPO JDAL billets, there are no JDAL acquisition billets in the geographic commands under Definition B. The CSAs, functional commands, and Joint Staff are each assigned between 10 and 13 percent of non-acquisition billets, and these percentages are comparable what we found under the JPO definition. However, in sharp contrast with non-acquisition JDAL billets and JPO JDAL billets, acquisition JDAL billets and those in external organizations are largely to be found in CSAs (68–69 percent) and other non-OSD defense agencies (19–29 percent). Recall that 45 percent of JPO JDAL billets were in the geographic commands and only about 10 percent were in CSAs.

Among the service-nominated billets, the largest share of acquisition billets—71 percent—was in the Air Force. This was larger than for JPO service-nominated billets, of which 56 percent were in the Air

**Table 5.6**  
**Distribution of Billets, as a Percentage of Total, by Major Billet Organization and Acquisition/JDAL Category**

Major Billet Organization	Non-Acquisition JDAL Billets	Acquisition Billets		
		JDAL Billets	External Organization Billets	Service-Nominated Billets
Army	0.0	0.0	0.0	1.2
Navy	0.0	0.0	0.0	27.5
Air Force	0.0	0.0	0.0	71.3
Marine Corps	0.0	0.0	0.0	0.0
Joint Staff	11.4	2.7	0.0	0.0
OSD	3.5	3.8	0.0	0.0
CENTCOM JTFs	0.0	0.0	0.0	0.0
International organizations	3.4	0.0	0.0	0.0
CSAs	10.1	68.3	69.4	0.0
Other non-OSD defense agencies	2.7	19.4	29.0	0.0
OSD defense agencies	0.2	0.0	0.4	0.0
Educational agencies	2.3	0.0	0.0	0.0
Geographic commands	47.9	0.0	0.0	0.0
Force providers	5.6	0.0	0.0	0.0
Functional commands	13.0	5.7	0.0	0.0

Force. The Air Force acquisition billets were again largely in the Air Force Materiel Command, Air Force Elements [Other], and Air Force Space Command. The Navy accounted for 28 percent of acquisition billets. Very few acquisition billets were identified in the Army and none in the Marine Corps.

Table 5.7 shows the distribution of officers serving in these various billets by occupation.<sup>3</sup> The percentage of tactical officers serving in acquisition JDAL billets is higher than that seen earlier in JPO JDAL

<sup>3</sup> Recall that only incumbents were asked this question on the survey, so the number of officers responding to this question was between 75 and 89 percent of the 7,889 responses used in this analysis, depending on category.

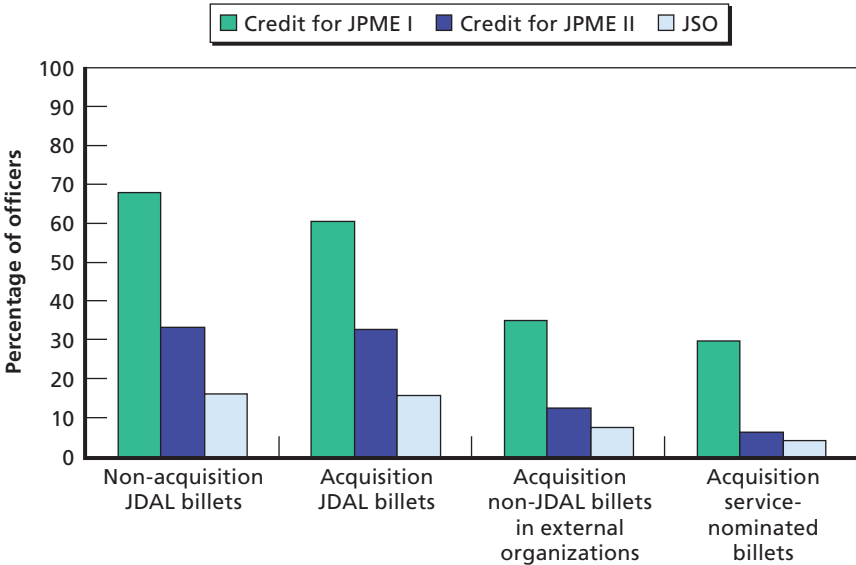
**Table 5.7**  
**Distribution of Incumbents, as a Percentage of Total, Serving in**  
**Acquisition and Non-Acquisition JDAL Billets, by Occupation**

Occupation	Non-Acquisition JDAL Billets	Acquisition Billets		
		JDAL Billets	External Organization Billets	Service-Nominated Billets
Tactical operations officers	39.8	31.9	14.5	16.3
Intelligence officers	14.6	16.1	9.2	3.0
Engineering and maintenance officers	12.5	17.2	19.0	21.0
Scientists and professionals	9.4	19.0	15.2	3.9
Health care officers	0.2	0.4	1.0	0.2
Administrators	8.0	1.5	1.4	1.0
Supply and procurement officers	15.6	13.9	39.5	55.7

billets (32 percent compared with 25 percent). As before, the percentages of supply and procurement officers staffing acquisition billets in external organizations and the services were high—40 and 55 percent, respectively. About 15 percent of those serving in JDAL billets were intelligence officers. Scientists and professionals were more prevalent in acquisition JDAL and external organization billets, while engineering and maintenance officers were much more likely to be serving in acquisition billets.

When we examine the education and prior joint experience of officers serving in these billets, we see marked differences between officers serving in JDAL billets and those in non-JDAL billets (Figure 5.14). For example, while 60–68 percent of those in JDAL billets reported receiving credit for JPME I, only 30–35 percent of officers serving in non-JDAL billets did so. About one-third of officers in JDAL billets had received credit for JPME II, compared with 11 percent of officers in non-JDAL external organization billets and 6 percent of those in internal service billets. As we saw earlier, the percentage of JSOs assigned to JDAL billets was much larger than the percentage serving in non-JDAL billets (16 percent versus 4–8 percent).

**Figure 5.14**  
**Percentage of Officers Receiving Credit for JPME I, JPME II, and JSO Status, by Acquisition/JDAL Billet Category (Definition B)**



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### Typical Metrics of Jointness

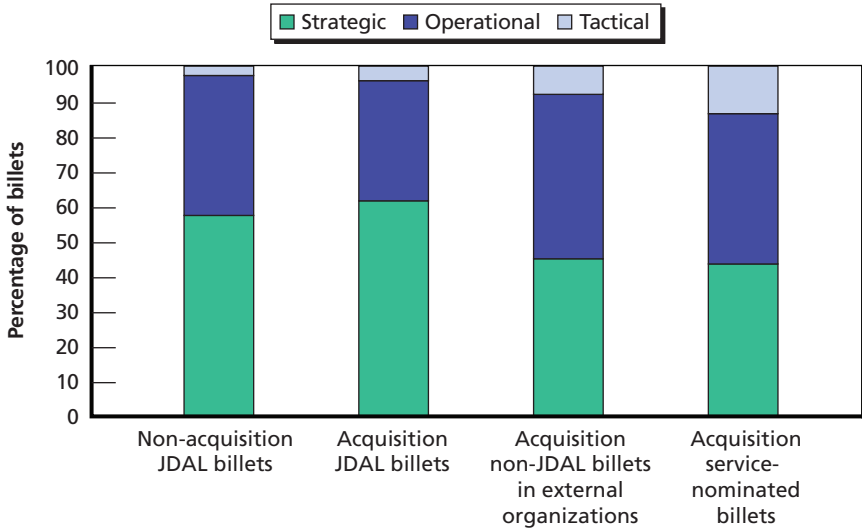
Once again, we examine differences among the billets in terms of selected typical metrics of jointness.

#### **Categorization of Jobs, Supervision of Billets, and Tasks.**

Figure 5.15 shows the percentages of billets in each category that were described as primarily strategic, operational, or tactical. Close to 60 percent of JDAL billets were described as primarily strategic, compared with 45 percent of acquisition billets in external organizations and service-nominated billets. Most of the remaining billets were described as primarily operational, although about 15 percent of acquisition service-nominated billets primarily deal with tactical matters. As we pointed out earlier, this contrasts sharply with other non-acquisition internal service billets in the survey, 25 percent of which were described as primarily strategic and another 25 percent of which were described as primarily tactical. At least in this respect, acquisition internal service



**Figure 5.15**  
**Categorization of Billets by Primary Focus of Job, by Acquisition/JDAL Billet Category (Definition B)**



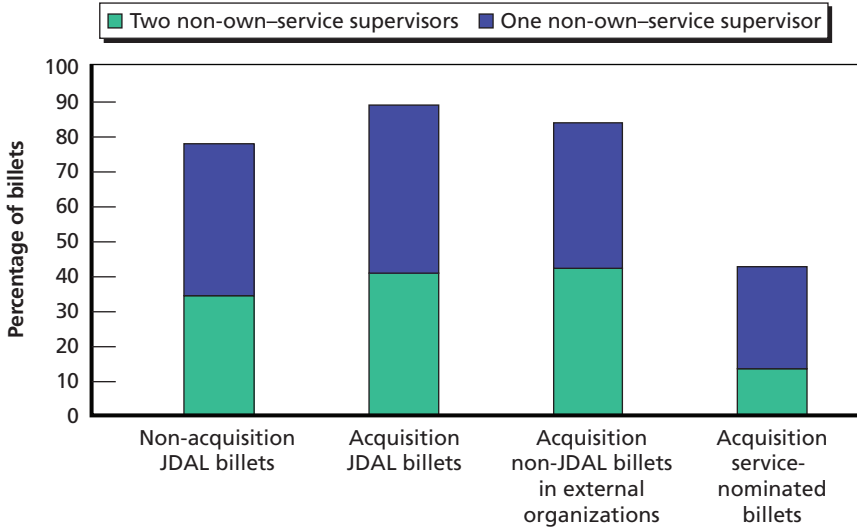
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billets appear to be more similar to JDAL billets than to other service-nominated billets.

When we look at supervision of billets by non-own-service personnel, including civilians, we find that between 83 and 88 percent of acquisition billets on the JDAL and in external organizations are supervised by non-own-service supervisors, as are 78 percent of non-acquisition billets in external organizations (Figure 5.16). A little over 40 percent of internal service billets—much lower than the 60 percent of internal service JPO billets—are supervised by non-own-service supervisors. However, this is higher than the 20 percent of all service-nominated billets that have non-own-service supervisors.

Although, on average, officers in all these billets reported performing about four tasks during a typical work week, the percent-

**Figure 5.16**  
**Percentage of Billets Supervised by One or Two Non-Own-Service Supervisors, by Acquisition/JDAL Billet Category (Definition B)**

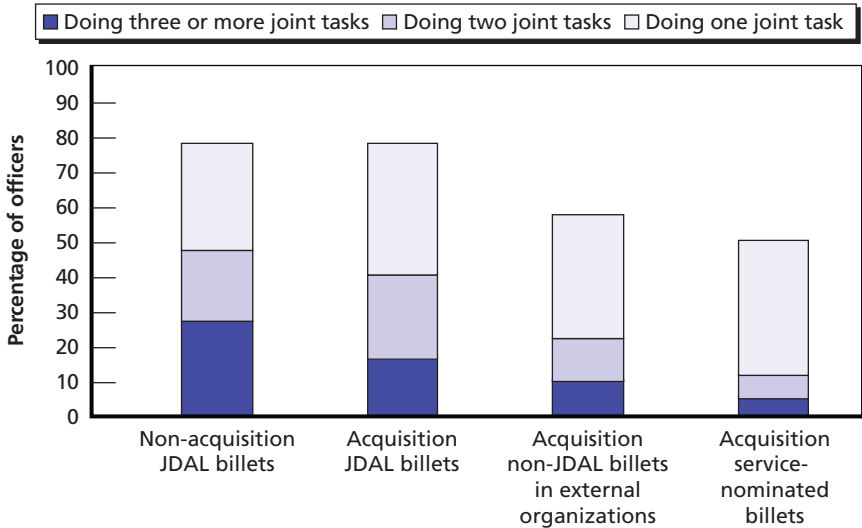


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ages performing “highly joint” tasks<sup>4</sup> varied by category (Figure 5.17). Overall, we find that close to 80 percent of officers assigned to JDAL billets, and about 60 percent of those in acquisition billets in external organizations, reported performing one or more of these highly joint tasks. About half of those in internal service acquisition billets were performing at least one of these tasks, compared with 45 percent of all officers in service-nominated billets. However, compared with officers serving in JPOs, officers in acquisition billets in external organizations and the services were much less likely to report that they were doing more than one joint task. For example, 12 percent of officers in acquisition internal service billets reported that they performed more than one joint task, compared with 26 percent of officers serving in JPOs in internal service billets.

<sup>4</sup> These include providing strategic direction and integration, developing or assessing joint policies, developing or assessing joint doctrine, and fostering multinational, interagency, or regional relations.

**Figure 5.17**  
**Percentage of Officers Performing One or More “Highly Joint” Tasks, by Acquisition/JDAL Billet Category (Definition B)**



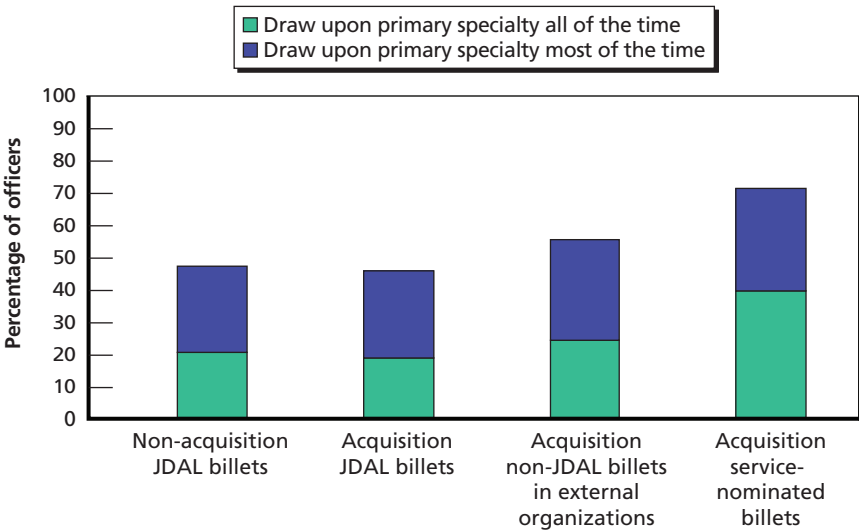
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**Interactions with Organizations and Personnel.** Officers were asked about interactions with different organizations and types of personnel. If we examine the median number of organizations with which officers reported interacting monthly or more frequently, we find that JDAL billets appear to have the largest number of frequent interactions (five), compared with four for acquisition external organization billets and only two for internal service billets. Non-acquisition JDAL billets reported frequent interactions with six different types of personnel compared with four for acquisition JDAL and external organization billets and two for internal service billets. These are lower than what we saw for JPO acquisition billets.

**Importance of Specialty, Expertise, Service Competencies, Education, and Experience.** Officers in acquisition external organization and internal service billets tended to rely on their primary specialty to a much larger degree than did officers in JDAL billets (Figure 5.18). For example, over 70 percent of officers in acquisition billets and 56 percent

**Figure 5.18**

**Percentage of Officers Reporting That They Drew on Their Primary Specialty Most or All of the Time in Carrying Out Assignment, by Acquisition/JDAL Billet Category (Definition B)**

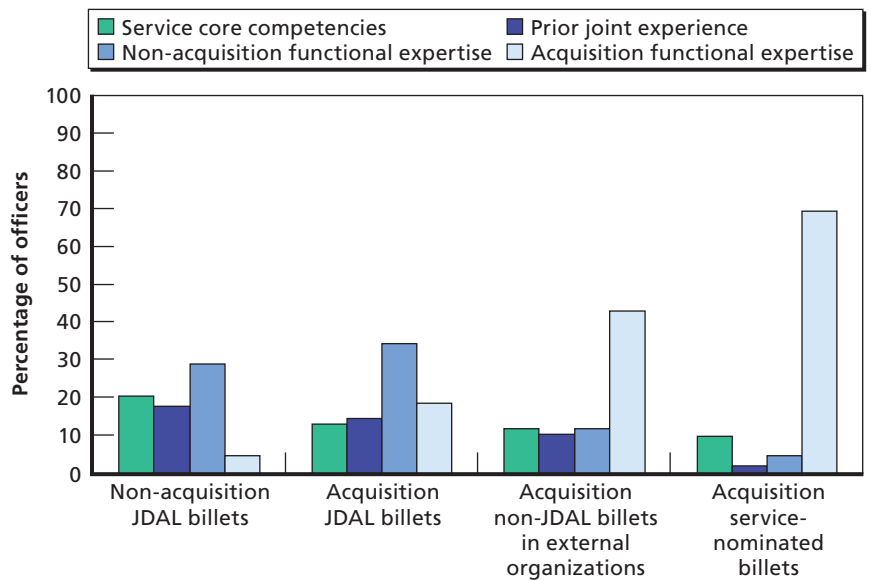


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of officers in external organization billets reported relying on their primary specialty most or all of the time, compared with 45 percent of those in JDAL billets (both acquisition and non-acquisition). This is different from the JPO JDAL billets, where about 60 percent of officers reported that they drew on their primary specialty most or all of the time.

Figure 5.19 shows officers' responses regarding the skill, education, expertise, or experience most important to them in successfully carrying out their billet duties. Across all groups, combined functional expertise in non-acquisition and acquisition matters was rated the most important, but, as we saw earlier, the relative weight given to the two kinds of expertise varied across the groups. For example, officers in JDAL billets tended to rank functional expertise in non-acquisition areas as the most important to their assignment (29–34 percent) while 5–19 percent specifically reported that acquisition expertise was the most important. In contrast, 43 percent of officers in acquisition exter-

**Figure 5.19**  
**Percentage of Officers Ranking Service Competencies, Joint Experience, and Functional Expertise as “Most Important” in Carrying Out Assignment, by Acquisition/JDAL Billet Category (Definition B)**

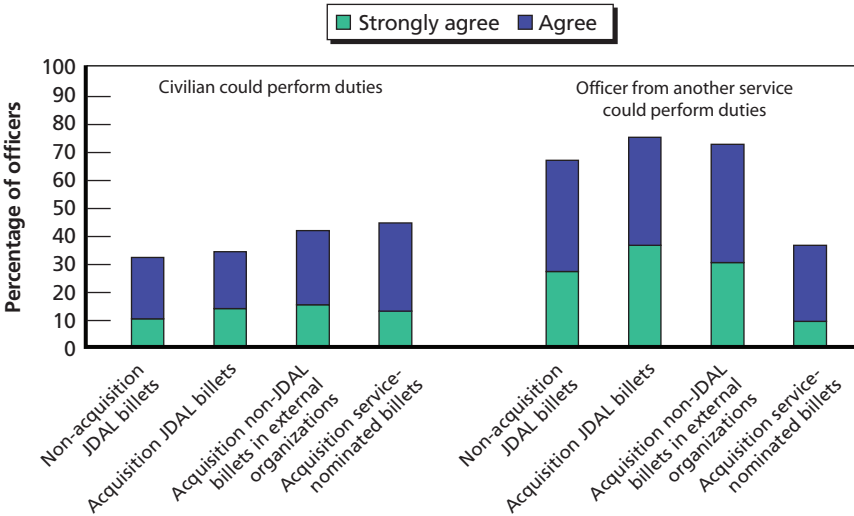


RAND MG886-5.19

nal organization billets rated functional expertise in acquisition matters as the most important, as did 70 percent of those in internal service billets. Only 5–12 percent of officers in these non-JDAL billets reported that functional expertise in areas other than acquisition was important.

Figure 5.20 shows the percentage of officers who agree or strongly agree that civilians or officers from another service could carry out the assignment. While 32–44 percent believed that civilians could carry out their duties, the percentage reporting that officers from another service could do so was much higher—66–74 percent, with one notable exception. Whereas 44 percent of officers assigned to internal service billets agreed that a civilian could do their job, only 36 percent believed that an officer from another service could do so, which runs somewhat counter to the fact that less than 10 percent ranked service

**Figure 5.20**  
**Percentage of Officers Agreeing or Strongly Agreeing That Civilians or Officers from Another Service Could Carry Out Assignment Effectively, by Acquisition/JDAL Billet Category (Definition B)**



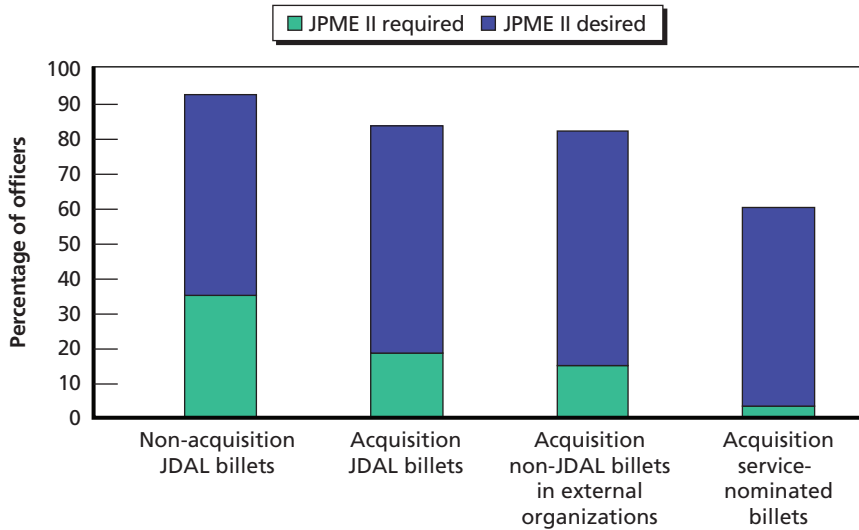
RAND MG886-5.20

core competencies as most important to the assignment. This is also substantially different from what officers in JPO internal service billets reported: 60 percent of them agreed that an officer from another service could perform their jobs as effectively.

In terms of the usefulness of prior joint education or experience for the billet, officers in acquisition billets believe that both prior joint education and experience would be useful in carrying out their assignments (Figures 5.21 and 2.22). About 80 percent of officers in acquisition JDAL and external organization billets reported that JPME II and prior joint experience were either required or desired for officers serving in these billets. Between 60 and 65 percent of acquisition internal service billets reported that JPME II or prior joint experience was useful (lower than the 75–85 percent of JPO internal service billet officers who ranked JPME II and prior joint experience as desired or required for the assignment and lower than the 70 percent of all officers in service-nominated billets in the survey).

**Figure 5.21**

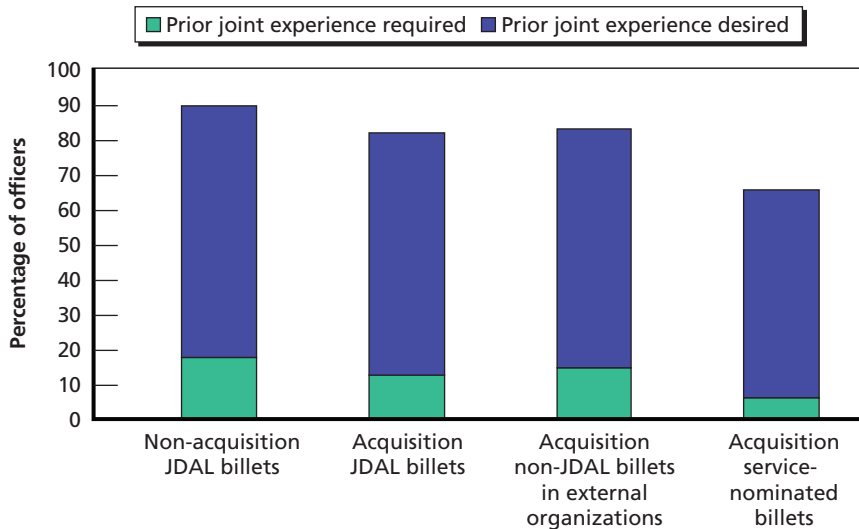
**Percentage of Officers Reporting That JPME II Was Required or Desired for the Billet, by Acquisition/JDAL Billet Category (Definition B)**



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**Figure 5.22**

**Percentage of Officers Reporting That Prior Joint Experience Was Required or Desired for the Billet, by Acquisition/JDAL Billet Category (Definition B)**

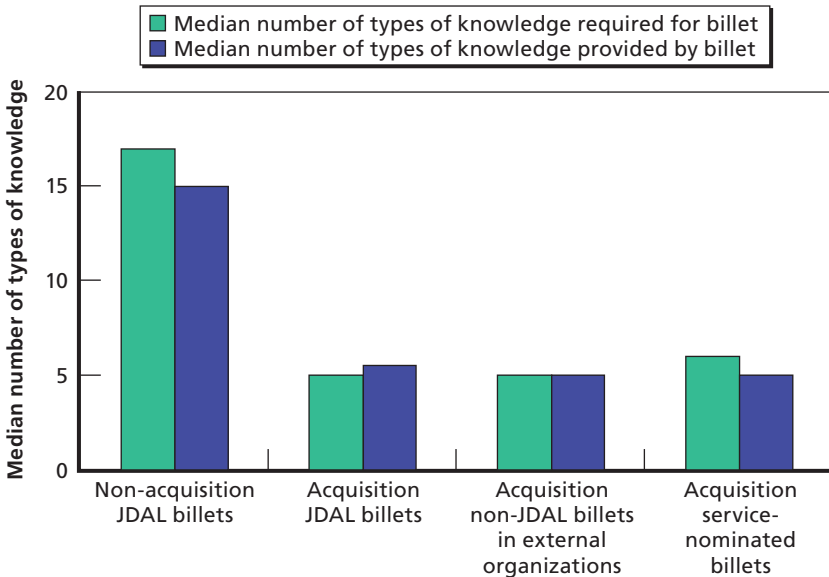


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As we mentioned earlier, officers were asked about the types of knowledge required for the billet and whether it was provided by the billet. Figure 5.23 shows the median number of different knowledge types that were required and provided by billets, categorized by acquisition/JDAL billet category. Officers in acquisition billets reported that 5–6 different types of knowledge were required and provided by these billets. These answers differ markedly from those of JPO officers, where those serving in acquisition JDAL billets reported requiring 17 types of knowledge and being provided 15 of those on the job. Officers in non-JDAL billets serving in JPOs also reported their billets required 8–9 types of knowledge.

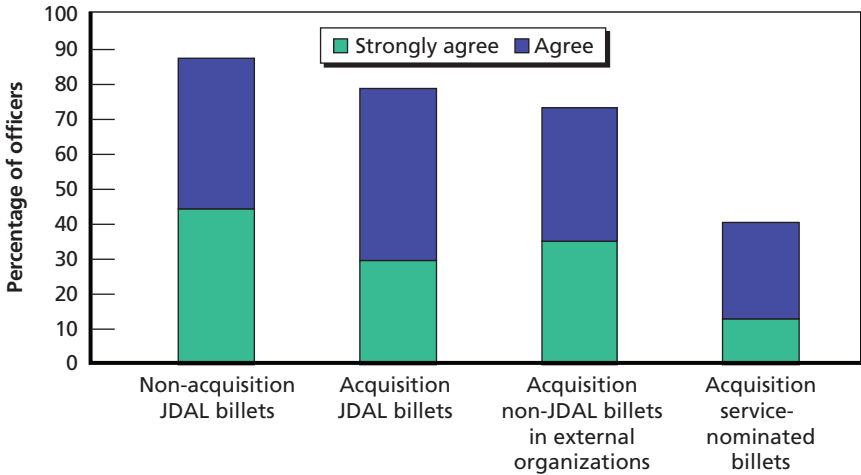
**Types of Experience Provided by the Billet.** Figures 5.24 through 5.26 present officers’ responses about whether their billets provided them with multiservice, multinational, and interagency experience. Between 30 and 35 percent of officers in acquisition JDAL and external organization billets “strongly agreed” that the billet provided them

**Figure 5.23**  
**Median Number of Types of Knowledge Required and Provided by the Billet, by Acquisition/JDAL Billet Category (Definition B)**



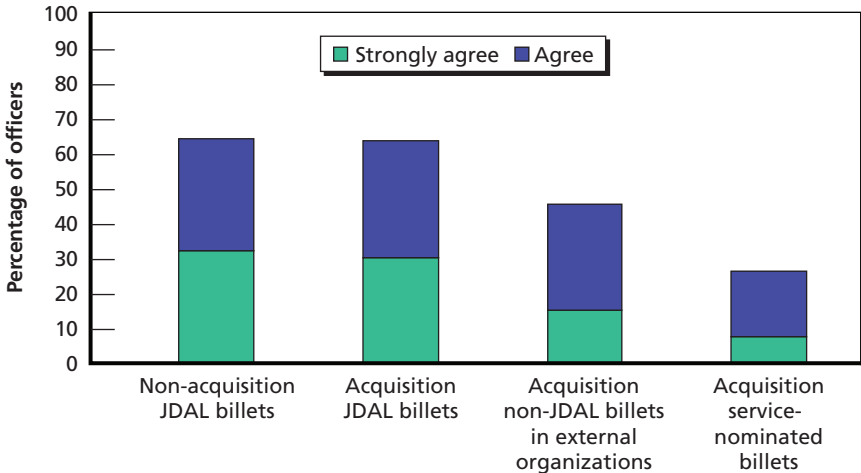


**Figure 5.24**  
**Percentage of Officers Agreeing or Strongly Agreeing That the Billet Provides Significant Multiservice Experience, by Acquisition/JDAL Billet Category (Definition B)**



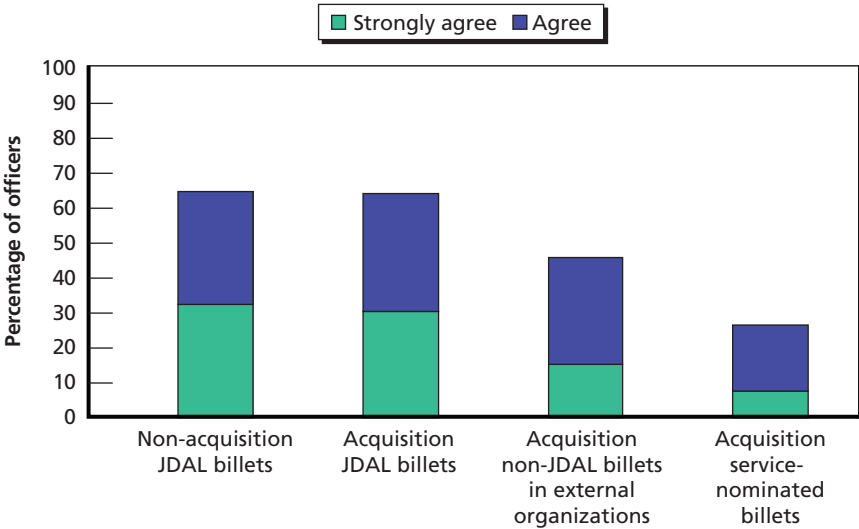
RAND MG886-5.24

**Figure 5.25**  
**Percentage of Officers Agreeing or Strongly Agreeing That the Billet Provides Significant Multinational Experience, by Acquisition/JDAL Billet Category (Definition B)**



RAND MG886-5.25

**Figure 5.26**  
**Percentage of Officers Agreeing or Strongly Agreeing That the Billet Provides Significant Interagency Experience, by Acquisition/JDAL Billet Category (Definition B)**



RAND MG886-5.26

with multiservice experience—if we include those who “agreed,” the percentage increases to 74–80 percent. Only 40 percent of internal service billets provided significant multiservice experience, compared with close to 80 percent of JPO internal service billets. The percentages of billets providing significant multinational experience were somewhat lower—64 percent of JDAL billets and 45 percent of acquisition billets in external organizations. Only about one-quarter of internal service billets were rated as providing significant multinational experience. About 75–80 percent of non-acquisition and non-service acquisition billets provided significant interagency experience. This was true of a little over half of the service-nominated billets.

These acquisition internal service billets appear to be less likely to provide significant multiservice and multinational experience compared with all internal service billets.

**Summary of Findings: Definition B**

We used a combination of function codes and needed certifications to define acquisition billets. On the whole, acquisition billets defined in this manner that are on the JDAL or located in external organizations appear to have many of the characteristics of JDAL billets and tend to rank high on several metrics of jointness, especially in terms of the joint experiences they provide and the usefulness of joint education and experience for the billet. However, acquisition internal service billets defined in this manner rank lower on most “jointness” indicators than JPO service-nominated billets and all non-acquisition internal service billets.



## Other Considerations

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This chapter briefly reviews other considerations associated with assessing joint qualifications.

Work-related variables are used by job analysts to differentiate jobs. The JOM survey was designed to elicit information about such variables, e.g., the importance of a task or knowledge, the frequency of performing a task, the level of knowledge needed to perform a task, and time spent interacting with other organizations or personnel. The prior assessments examined these variables. One could also look at environmental or worker characteristics affecting performance. Among these variables are acculturation (inculcation of different values, attitudes, beliefs), duration (tenure in environment, organization, or job), recency (time since last experience), and intensity of the experience (length of workday or workweek and the nature of the environment). We briefly review these below. We also discuss the value of joint military education.

### Acculturation

Acculturation—values, attitudes, and beliefs that affect behaviors—is an important part of the joint experience, perhaps even the most important. Acculturation is different from job content—what an officer does. Acculturation is not time-based. Some officers are acculturated in the joint or enterprise environment quickly through single, unique experiences or over longer periods of time through multiple interactions. Some officers never “get it.” Acculturation by itself is hard to measure or assess directly.

## **Duration (Tenure)**

Tenure is more easily measured and ultimately is used as the basis for many types of measurement/accreditation systems. Length of time doing a joint activity adds up in one form or another to accredited joint experience. However, tenure in job serves a more useful purpose: to improve organizational effectiveness. Organizations do not exist simply to provide experience to joint officers. Such experience is a by-product of organizational mission accomplishment. Organizations are better when there is not turnover after one or two years in an assignment. Efforts to increase the number of joint-experienced officers through shorter assignments must be balanced by consideration of effectiveness in organizations that use the officers. “Jointness” is not just about development of officers but also about having effective joint organizations.

## **Recency**

Data and anecdotal evidence (e.g., interviews, open-ended survey questions) suggest that some junior officers do gain joint acculturation and experience early in their careers. An argument can be made that such experience may no longer be “valid” 20 years later if not refreshed. But early joint exposure serves another purpose—acculturation. The inculcation of values, attitudes, and beliefs early in careers is useful. While junior officers must learn the domain knowledge areas of their occupational specialty skill groups and the context of their services early in their careers, there is also room for beginning to develop an understanding of the other military services and organizations that can have long lasting effects.

## **Intensity**

Data also show that intense experiences lead to becoming comfortable in a joint environment more quickly. For example, one could assume

that certain work associated with Operation Iraqi Freedom/Operation Enduring Freedom, as defined by service in a CENTCOM JTF, is more intense. The survey used a variable called “time to become comfortable in a joint environment,” and we examined whether increased work intensity reduced the length of time needed to attain “comfort.”

To test this, we compared responses from those officers serving in a CENTCOM JTF (nonpermanent positions typically filled with individual augmentees) with all other officers on the JDAL (excluding CENTCOM JTFs). In general, the two groups of positions were similar in terms of need for JPME and prior joint experience. Not surprisingly, those serving in a CENTCOM JTF got more multinational experience. Another difference was that more of the JDAL jobs were at the strategic level and more of the CENTCOM JTF positions were at the operational level. Also, those in CENTCOM JTFs drew on their primary occupational specialty and their own-service capabilities somewhat more and had own-service supervisors more frequently than did their JDAL counterparts. Both groups performed the same number of critical joint tasks, but the CENTCOM JTF group required fewer knowledges and gained fewer knowledges than their counterparts. Those in CENTCOM JTF positions had more interactions with non-own-service personnel but fewer interactions with other organizations than those in JDAL billets.

Those in the JDAL positions reported taking six months (median) to become comfortable in a joint environment, while those assigned to a CENTCOM JTF reported one month (median). Is it plausible that one can gain the same joint experience in a shorter time? One explanation might be that some jobs are not as complex (for example, they require fewer tasks to be done), draw from other learned experience, or have fewer organizational interactions. Our observations are as follows:

- JTF work is more intense but less complex:
  - relies on service capabilities and primary specialty
  - more operational
  - fewer organizational interactions
  - provides and requires fewer knowledges.

- JTF work appears to need similar levels of prior education and experience as JDAL work.
- JTF work appears to provide as much experience as the JDAL work but in different areas.
- Officers in JTF work acculturate and gain joint proficiency faster than officers on the JDAL.
- Officers in intense environments gain joint experience at a faster rate than officers in less intense environments.

Thus, intensity appears to interact with duration in gaining joint acculturation and experience. In other words, equal joint experience credit could be given for a shorter but more intense assignment.

## **Depth of Understanding**

Approximately 3,800 officers took the time during the survey to provide open-ended comments. We read those comments, and the views of those officers are compelling. At the enterprise and policy levels, personnel managers debate qualitative and quantitative measures of outputs and outcomes; at the billet level, there is much more “jointness” going on than is easily measured at the enterprise level. Any joint officer management system put in place should be periodically reviewed, and such reviews should take account of the voices of the officers affected by the system.

## **Expanding Joint Experience Credit**

We examined three clusters of billets: those on the JDAL, those in organizations external to the military services with some positions on the JDAL, and those nominated by the services as likely to be needing or providing joint experience. In order to meet the demand for officers with prior joint experience, it is necessary to expand supply of officers with the experience. One way to do this is to expand the current JDAL by including all positions external to the military services (an organi-



zational look rather than an individual billet look). Another way to do this would be to accredit the experiences of individual officers independent of the organizational location of the billet(s) in which the officer is serving. We assessed different systems for doing this in an earlier work and recommend that an interested reader review that analysis.<sup>1</sup> That report stated that a “point” system useful in documenting periods of experience for reserve active status list officers would also be adaptable for active duty list officers. DoD has since implemented such an individual-based system.

## The Value of Joint Professional Military Education

The bulk of this report is focused on issues dealing with joint experience. However, the survey responses allow us to analyze the views of respondents with respect to JPME.<sup>2</sup> The survey asked respondents about gaining joint knowledge through experience in their billet as well as the need for such joint knowledge in their billet. The joint knowledge areas listed in the survey were derived from the JPME curriculum contained in the Chairman’s Officer Professional Military Education Memorandum.<sup>3</sup> There were 65 questions dealing with particular knowledges grouped under 15 broad areas.

We examined the response from each billet, aggregated the individual responses for each of the 65 separate knowledges, and then averaged them by broad knowledge areas. In essence, the aggregated responses represent whether officers thought they received sufficient knowledge in each area through experience, received more than enough knowledge in each area through experience (a surplus of knowledge), or did not receive sufficient knowledge in each area through experience (a knowledge deficit). The latter gap ostensibly could be closed through JPME.

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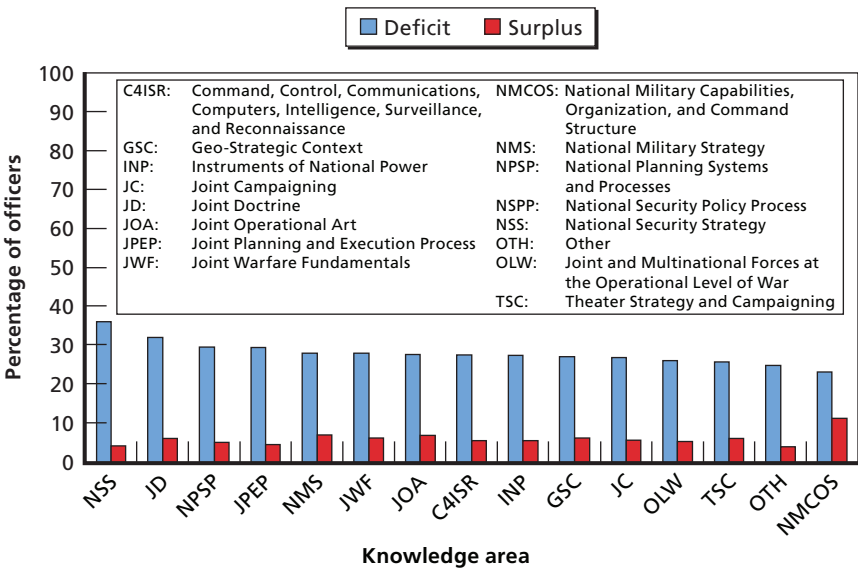
<sup>1</sup> Thie et al., 2006.

<sup>2</sup> All of the responses with respect to JPME are reported in Kirby et al. (2006).

<sup>3</sup> Joint Chiefs of Staff, *Officer Professional Military Education Policy*, Washington, D.C., Chairman of the Joint Chiefs of Staff Instruction 1800.01C, August 7, 2007.

Figure 6.1 shows the results of the analysis, aggregated by broad knowledge area. We show the proportion of respondents indicating a deficit or a surplus. The respondents not represented in these bars indicated sufficient knowledge gained through experience. Approximately one-third of all billets never receive enough knowledge through experience to be proficient in their jobs. This varies by knowledge area, with national security strategy knowledge at the high end and knowledge of capabilities, organizations, and command structures at the low end. Slightly more than 5 percent of all billets gained more knowledge than they needed, but this surplus does not offset any of the deficit because the data are analyzed billet by billet. Besides its value in helping officers ease more quickly into a joint assignment, JPME has real value in making up a knowledge deficit that cannot be overcome solely by experience.

**Figure 6.1**  
**Knowledge Surplus and Deficit**



## Conclusions and Recommendations

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Our report focused on three areas related to joint officer management: (1) analyzing the characteristics that measure “jointness” of a billet and using that analysis to identify billets that could be recommended for inclusion in the JDAL; (2) determining whether sufficient numbers of officers with joint education, training, and experience are likely to be available to satisfy DoD’s needs; and (3) exploring whether and how the experiences of selected communities of officers—for example, those assigned to billets dealing with acquisition matters—differ from those of their peers. In this chapter, we summarize our major conclusions drawn from the analyses reported in earlier chapters.

### Conclusions

#### Characteristics That Measure Jointness

We used different statistical techniques to examine the characteristics of joint billets with a view to developing criteria that could be used to classify future billets as suitable for the JDAL.

Factor analysis identified natural groupings of potential variables. These groupings are deployment, joint tasks, job assessment, depth and breadth of knowledge, interactions with other services, organizational interactions, strategic work, and JTF service. Within these factors, some variables were robust across the different techniques in discriminating billets. These included (1) whether the billet involved serving with other military departments; (2) whether the billet was primarily tactical, operational, or strategic in nature; (3) the types of experiences

provided by the billet, especially multiservice and interagency experience; (4) whether the billet involved having frequent interactions with different types of non-own-service personnel; and (5) whether the billet involved frequent interactions with non-own-service organizations.

The analyses were exploratory, but there was a good deal of consistency in the variables identified by the various methods as important discriminators of non-JDAL billets that resemble JDAL billets. Some non-JDAL billets appeared to be good candidates for the JDAL, i.e., billets that ranked high on such characteristics as the ones listed above. The list of variables may also prove useful in developing guidelines and criteria for evaluating the service of officers in individual billets that are not on the JDAL.

### **Meeting Demand for Joint-Experienced Officers**

Can enough officers be given a joint experience at some point in their career to meet the demand for such officers? Can all officers accrue joint experience by the grade of O-6? In the first case, the answer is yes, given reasonable statements of demand and purposeful management of officers. The answer to the second question is no.

There is little stated demand for joint experience in the current joint environment, so it is easily met through any system for providing officers with experience in joint matters. At the other extreme, it is infeasible to place joint-experienced officers in all positions for which such experience is desirable (as indicated by the JOM survey<sup>1</sup>), or to provide joint experience to the entire officer corps. Enough officers cannot be produced through any system that uses experiential service, because ultimately there are not enough such developmental opportunities. On the other hand, if the goal becomes to place joint-experienced officers in all positions for which joint experience is required (as indicated by the JOM survey), then either a current or expanded JDAL system or a modified accrediting system could meet the demand. However, the current JDAL system requires much more careful attention to match officers to billets, because there are fewer joint-experienced officers for

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<sup>1</sup> See Kirby et al. (2006) for a more detailed analysis of the likely number of positions for which prior joint experience would be required or desired.

each billet that needs them. Moreover, the current JDAL system does not recognize as valid joint experience gained in other than approved billets.

For officer communities with grade structures similar to those we modeled, how those officers are managed does not make a significant difference. Using only a competency or skills framework requires slightly more-purposeful management, but either would provide enough officers. Moreover, in our analysis, the different frameworks used different tour lengths, and tour length by itself did not significantly change outcomes. All of the frameworks can exist within the joint officer management system and provide enough officers to meet required demand.

### **Functional Categorizations**

We used acquisition billets to understand how particular occupational groupings might differ from traditional JDAL billets on the variables that the statistical techniques showed as characterizing jointness.

Billets in JPOs rank high on several variables, particularly on the kinds of joint experiences they provide and the usefulness of prior joint education and experience. Billets whose primary function includes procurement or contracting also appear to have many of the characteristics of JDAL billets. We cannot conclude from this one sample whether similar results would obtain for other functional or occupational categorizations, such as intelligence or engineering. However, the similarity of billets in the acquisition community to traditional JDAL billets should warrant an examination of the policy choice to exclude certain billets, such as health services occupations, from inclusion on the JDAL.

### **Recommendations**

Currently, officers receive joint credit for serving in positions on the JDAL. One frequent criticism of the current system is that officers are serving in non-JDAL assignments that provide a rich joint experience but do not grant the officer joint credit. Likewise, there are officers

serving in assignments on the JDAL that may not provide what some would consider a joint experience, either because of the content of their work or because of limited interaction with other services, nations, or agencies. Our analysis has provided evidence to support both these assertions. We have also argued that a point system be considered in which individuals could petition to receive credit for joint duty assignments not currently included on the JDAL by developing portfolios to be evaluated by officer boards, and DoD has now implemented such a system. The variables associated with jointness identified in the statistical analysis in this report would provide a good start at outlining the guidelines for putting together such portfolios and criteria for evaluating them.

The best management system in terms of feasibility, management flexibility, and movement toward the Chairman's vision for joint officer development<sup>2</sup> is to recognize that a larger number of billets require prior experience and to use a modified JDAL system that allows individual officer assessment of joint experience and accredits officers accordingly. Thus, we recommend the following:

- Maintain a billet-based system that is an organization-based system and supplement it with an individual-based system. In other words, judge all the billets within an organization to be equally joint, and supplement this system with an evaluation of individuals' cumulative joint experiences gained elsewhere.
- When implementing an individual-based system, recognize intensity of experience when considering those in either non-JDAL billets or those in JDAL billets with tenure appeals.
- Because they include joint content, consider O-3 billets for inclusion on the JDAL and consider experience in O-3 billets when assessing the joint experience of individuals.
- Consider recency of experience when measuring an individual's experience. Thus, if a senior officer's only joint experience was gained as an O-3, that prior assignment may not provide sufficient prerequisite experience for important senior joint assignments.

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<sup>2</sup> Joint Chiefs of Staff, 2005.

- Consider managing (and tracking relevant experience) separately for multiservice, multinational, and interagency matters.
- Reconsider the exclusion of certain occupational groups from the JDAL.
- When determining tenure restrictions for joint credit, recognize that it is in the best interest of the joint organization to have longer-tenured personnel, but that the average individual gains acculturation and joint experience quickly. Thus, tenure restrictions may benefit the organization more than they are relevant to determining who has received a valid joint experience.

Findings from the analyses were provided to the sponsor and used in developing DoD's new *Strategic Plan for Joint Officer Management and Joint Professional Military Education*, issued in April 2006,<sup>3</sup> and the implementation plan for the new joint officer qualification system, issued in March 2007.<sup>4</sup> Many of these recommendations have been incorporated into the new joint officer qualification system.

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<sup>3</sup> DoD, 2006.

<sup>4</sup> DoD, 2007.





# Incumbent and Non-Incumbent Questionnaires, 2005 Joint Officer Management Census Survey

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## Incumbent Questionnaires, 2005 Joint Officer Management Census Survey

REPORT CONTROL SYMBOL (RCS): DD-P&R(OT)2196

### JOINT OFFICER MANAGEMENT (JOM) CENSUS

#### PRIVACY ACT STATEMENT

**AUTHORITY.** 10 U.S.C. 136; 10 U.S.C. 1782; 10 U.S.C. 2358; 10 USC 531.

**PRINCIPAL PURPOSE(S).** TO CAPTURE DATA REQUIRED FOR A BILLET-LEVEL ANALYSIS OF JOINT CHARACTERISTICS. THE INFORMATION OBTAINED IN THIS CENSUS WILL BE USED TO ASSIST THE OFFICE OF THE SECRETARY OF DEFENSE IN DEVELOPING A STRATEGIC PLAN FOR JOINT OFFICER MANAGEMENT AND JOINT PROFESSIONAL MILITARY EDUCATION THAT LINKS JOINT OFFICER DEVELOPMENT AND ACCOMPLISHMENT TO THE OVERALL MISSION AND GOALS OF THE DEPARTMENT OF DEFENSE.

**ROUTINE USES.** NONE.

**DISCLAIMER.** THIS CENSUS HAS BEEN APPROVED FOR INFORMATION COLLECTION AND HAS BEEN ASSIGNED A REPORT CONTROL SYMBOL (RCS, DD-P&R(OT)2196, IN ACCORDANCE WITH DoD 8910.1-M, "DoD PROCEDURES FOR MANAGEMENT OF INFORMATION REQUIREMENTS." THE EXPIRATION DATE FOR RCS DD-P&R(OT)2196 IS APRIL 30, 2008. THE APPROVED SD FORM 455, "REQUEST FOR APPROVAL OF INFORMATION COLLECTION" HAS BEEN PROCESSED IN THE OFFICIAL FILE.

**DISCLOSURE.** VOLUNTARY. HOWEVER, FAILURE TO PROVIDE THE INFORMATION MAY RESULT IN YOUR VIEWS NOT BEING REPRESENTED IN THE FINAL RESULTS AND OUTCOMES.



Enter your ID and Password forwarded to you by your organization's point of contact. Your census key is **not** your ID or your Password; instead it will be entered later in order to identify your particular billet.

ID:

Password:

Enter Census

For login-census key tips, click --> here  
This census is best viewed using Internet Explorer.



**Welcome Statement  
from the Honorable David S. C. Chu**

*There have been great strides in the joint arena since the enactment of the Goldwater-Nichols Act of 1986; but we must improve how we manage the joint officer force. Congress, the General Accountability Office and our own independent reviews all argue for this improvement.*

*In partnership with the Joint Staff/J-1, my office is undertaking a "clean slate" strategic review of joint officer management. It includes an assessment of the characteristics of joint positions; a comprehensive exploration of the full set of needs for joint experience; and how we refresh and expand our understanding of jobs that provide joint experience. The census you are about to take is a cornerstone for the review.*

*I ask you to take the next 15 minutes to focus on this census. I also ask that you encourage those in your organization who are asked to complete the census to do the same. In order to achieve meaningful results, we need close to 100 percent return. The time you invest will provide input and direction to significant legislative and policy decisions in the near future.*

*Thank you for your help & and your service.*

*David S. C. Chu  
Under Secretary of Defense  
(Personnel and Readiness)*

[Next▶](#)

Q-1

Please enter census key below:

Census Key:

◀Previous

For login-census key tips, click here

Next▶

**Confirm billet**

Q-2 Is this the billet you have been asked to evaluate?

Billet Key : ZZZZZZZ  
 Organization : Navy  
 Organization Sub-Element : UNKNOWN  
 Unit Identification : 00019  
 Unit Identification Clear Text : COMNAVAIRSYSCOM  
 Organization Position Identifier : 0002305  
 Other Billet Specific Information Text : ZZZZZZZ  
 Major Command : UNKNOWN  
 Work Center Name : ZZZZZZZZ  
 Work Center Identifier : ZZZZZZZZZZ  
 Work Center Position Name : Commander, Naval Air Systems Command  
 Work Center Position Identifier : 00300  
 Position GEOLOC Code : ZZZZ  
 Position GEOLOC : UNKNOWN

*Note: some data for your billet may be unavailable and, therefore, may be represented by "ZZZZZZZZZ", "NO DATA FOUND" or a blank return. Please disregard these entries and review the data that is available to make an assessment that you were given the correct census key for your billet.*

- ☐ Yes  
☐ No

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Q-3 Are you the:

Select **one** answer

- ☒ Person occupying the billet? Please ensure that you answer all of the following questions based on the confirmed billet, to include any TAD/TDY experiences during your service in the billet. If your billet is a temporary joint task force (JTF) billet, answer all questions based solely on your JTF experience unless instructed otherwise.  
☐ Supervisor of the billet?  
☐ Another person designated to complete the survey?

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Q-4 How many MONTHS have you been assigned to this billet?

Please enter a **whole** number

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Q-5 Is the billet you have been asked to evaluate a temporary JTF billet?

Select **one** answer

- ☐ Yes  
☐ No

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Q-6	Please enter the total number of <b>WEEKS</b> you have spent on TDY / TAD (NOT including training and education) during this assignment.
Please enter a <b>whole</b> number	
<input type="text" value="0"/>	

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Q-7	Please enter the total number of <b>WEEKS</b> you have spent on TDY / TAD due to training or education during this assignment:
Please enter a <b>whole</b> number	
<input type="text" value="0"/>	

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**Questions 9 through 11 are optional. Answers will not be used for the JOM study.**

Q-8	What is your pay grade?
Select <b>one</b> answer	
<input type="text" value="Please Select"/>	
Q-9	What is your gender?
Select <b>one</b> answer	
<input type="radio"/> Male	
<input type="radio"/> Female	
Q-10	Are you Spanish/Hispanic/Latino?
Select <b>one</b> answer	
<input type="radio"/> No, not Spanish/Hispanic/Latino	
<input type="radio"/> Yes, Mexican, Mexican-American, Chicano, Puerto Rican, Cuban, or other Spanish/Hispanic/Latino	
Q-11	What is your race?
Mark one or more races to indicate what you consider yourself to be.	
<input type="checkbox"/> White	
<input type="checkbox"/> Black or African-American	
<input type="checkbox"/> Native American or Alaska Native	
<input type="checkbox"/> Asian (for example: Asian Indian, Chinese, Filipino, Japanese, Korean, or Vietnamese)	
<input type="checkbox"/> Native Hawaiian or other Pacific Islander (for example: Samoan, Guamanian, or Chamorro)	
<input type="checkbox"/> Other	
Q-12	How many <b>YEARS</b> have you been a commissioned officer?
Please enter a <b>whole</b> number.	
<input type="text"/>	

Q-13	Are you:
Select <b>one</b> answer	
<input type="radio"/> Active Duty List Officer	
<input type="radio"/> Reserve Component Officer	

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Q-14 Of the following list, what intermediate or senior level schools have you completed? Next to each school that you have completed, note your paygrade at time of completion.

SELECT ONLY IF COMPLETED	
<b>JOINT AND COMBINED SCHOOLS</b>	
National War College	-- Please Select --
Industrial College of the Armed Forces	-- Please Select --
School of Information Warfare and Strategy	-- Please Select --
Joint Forces Staff College	-- Please Select --
Joint and Combined Staff Officer School	-- Please Select --
Joint and Combined Warfighting School	-- Please Select --
<b>US ARMY SERVICE SCHOOLS</b>	
US Army War College (resident)	-- Please Select --
US Army War College (non-resident)/Dept. of Distance Education	-- Please Select --
Army Command and General Staff College (resident)	-- Please Select --
Army Command and General Staff College (non-resident)	-- Please Select --
<b>US NAVY SERVICE SCHOOLS</b>	
College of Naval Warfare	-- Please Select --
College of Naval Command and Staff (resident)	-- Please Select --
College of Distance Education (Navy intermediate-level college non-resident)	-- Please Select --

#### US AIR FORCE SERVICE SCHOOLS

Air War College (resident)	-- Please Select --
Air War College (non-resident)	-- Please Select --
Air Command and Staff College (resident)	-- Please Select --
Air Command and Staff College (non-resident)	-- Please Select --

#### US MARINE CORPS SERVICE SCHOOLS

Marine Corps War College	-- Please Select --
Marine Corps Command and Staff College	-- Please Select --
Marine Corps College of Continuing Education (Marine Corps Command and Staff College non-resident)	-- Please Select --

Q-15 If you have received credit for post-graduate education at another civilian or military institution not listed above (to include international institutions).

Please enter the name of the institution and the pay grade you held when you graduated in the boxes below.

INSTITUTION	Pay Grade
<input type="text"/>	-- Please Select --
<input type="text"/>	-- Please Select --
<input type="text"/>	-- Please Select --
<input type="text"/>	-- Please Select --

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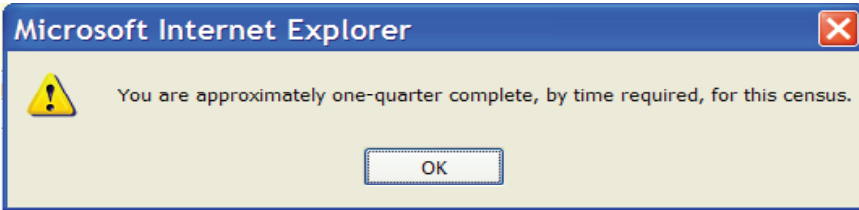
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Q-16	Have you received credit for <u>JPME I</u> ?
Select <b>one</b> answer	
<input type="radio"/> Yes	
<input type="radio"/> No	
<input type="radio"/> Not Sure	
Q-17	Have you received credit for <u>JPME II</u> ?
Select <b>one</b> answer	
<input type="radio"/> Yes	
<input type="radio"/> No	
<input type="radio"/> Not Sure	
Q-18	What is your service and component?
Select <b>one</b> answer	
<input type="radio"/> U.S. Army	
<input type="radio"/> U.S. Army National Guard	
<input type="radio"/> U.S. Army Reserve	
<input type="radio"/> U.S. Navy	
<input type="radio"/> U.S. Naval Reserve	
<input type="radio"/> U.S. Air Force	
<input type="radio"/> U.S. Air National Guard	
<input type="radio"/> U.S. Air Force Reserve	
<input type="radio"/> U.S. Marine Corps	
<input type="radio"/> U.S. Marine Corps Reserve	

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Q-19	Select your primary AFSC, e.g., 11MX (qualified Mobility Pilot) from the following list.
Select <b>one</b> answer	
<input type="text" value="-- Please Select --"/>	

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Q-20	Select your primary Area of Concentration (AOC) code, e.g., 11A (Infantry) from the following list.
<input type="text" value="-- Please Select --"/>	

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Q-21	Select your 4 digit officer designator code, e.g., 111X (Surface Warfare Officer) from the following list.	
<input type="text" value="--Please Select --"/>		

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Q-22	Select your 4 digit Military Occupational Specialty (MOS) code, e.g., 0802 (Field Artillery Officer).	
<input type="text" value="-- Please Select --"/>		

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Q-23	Are you a Joint Specialty Officer (JSO)?
<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure	

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Q-24	Who is your 1st level supervisor (e.g., Rater or Reporting Senior)?	<input type="text" value="-- Please Select --"/>
Q-25	Who is your 2nd level supervisor (e.g., Intermediate Rater, Additional Rater or Reviewing Senior)?	<input type="text" value="-- Please Select --"/>
Q-26	Who is your 3rd level supervisor (e.g., Senior Rater or Reviewer)?	<input type="text" value="-- Please Select --"/>
Q-27	In your current position, do you serve full time with members from another Military Department (i.e., Army, Air Force, Navy/Marine Corps)? [Note: Navy officers who work only with the Navy or Marine Corps, and Marine Corps officers who work only with the Marine Corp or Navy should answer NO to this question.]	
	<input type="radio"/> Yes <input type="radio"/> No	If yes, are you assigned to a billet in that other Military Department? <input type="radio"/> Yes <input type="radio"/> No

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Q-28	Do you typically serve full time with the armed forces of another nation or with an international military or treaty organization (e.g., a US officer assigned to a assignment in the headquarters of NATO; a liaison officer at the headquarters of a foreign military service; an officer assigned full time to an element of the United Nations, etc.)?	
	<input type="radio"/> Yes <input type="radio"/> No	If yes, are you formally assigned to a billet in that organization? <input type="radio"/> Yes <input type="radio"/> No
Q-29	Are you assigned to both your own service and a joint, combined, or international organization? (Example, an officer assigned to a billet in the G3, Eighth US Army while simultaneously assigned to positions in the J3, US Forces Korea, and the C3, Combined Forces Command (ROK/US)). Such assignments are referred to as "Dual Hat Positions."	
Select <b>one</b> answer		
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure	
Q-30	Do you serve in Joint Task Force Headquarters Staff?	
Select <b>one</b> answer		
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure	
Q-31	Do you serve in a Joint Task Force Subordinate Organization?	
Select <b>one</b> answer		
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure	

Q-32	Do you serve in a Joint Task Force Service Component?	
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure	If yes, are you permanently assigned to it? <input type="radio"/> Yes <input type="radio"/> No

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Q-33	Do you work in a Joint Program Office?
Select <b>one</b> answer	
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure
Q-34	Where is the billet located?
Select <b>one</b> answer	
	<input type="radio"/> United States (including Alaska and Hawaii) <input type="radio"/> Iraq <input type="radio"/> Other Middle East <input type="radio"/> South Asia (e.g., Pakistan, Afghanistan) <input type="radio"/> Korea <input type="radio"/> Cuba <input type="radio"/> Europe <input type="radio"/> Other nation outside of the U.S. <input type="radio"/> Afloat at sea
Q-35	Are you currently serving at your home base?
Select <b>one</b> answer	
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure
Q-36	Are you currently receiving <a href="#">Family Separation Allowance (FSA)</a> , or would you collect FSA in this position if you had dependents?
Select <b>one</b> answer	
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure

Q-37	Are you currently receiving special pay for duty subject to <a href="#">Hostile Fire or Imminent Danger</a> ?						
Select <b>one</b> answer							
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure						
Q-38	Are you currently receiving special pay for <a href="#">Hardship Duty</a> ?						
Select <b>one</b> answer							
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure						
Q-39	Is your pay subject to <a href="#">Combat Zone Tax Exclusion</a> ?						
Select <b>one</b> answer							
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure						
Q-40	Please indicate the approximate percent of your work time you spend reviewing or deciding matters yourself, as opposed to preparing others to review or decide matters.						
	<table border="1"> <tr> <td>Reviewing / deciding matters myself</td> <td>0</td> <td>%</td> </tr> <tr> <td>Preparing others to review/decide matters</td> <td>0</td> <td>%</td> </tr> </table>	Reviewing / deciding matters myself	0	%	Preparing others to review/decide matters	0	%
Reviewing / deciding matters myself	0	%					
Preparing others to review/decide matters	0	%					
Q-41	Indicate which one of the following statements best describes the primary focus of your efforts.						
Select <b>one</b> answer							
	<input type="radio"/> The primary focus of my efforts is on operational or supportability matters pertaining to a Combatant Commander's Area of Responsibility (AOR) or several AORs. <input type="radio"/> The primary focus of my efforts is on defense-wide issues or matters that affect one or more Combatant Commander's, Military Departments or Defense Agencies. <input type="radio"/> None of the above						

Q-42 If you could choose only one of the following, which best summarizes the level of your job:

Please click on the hyperlinked choices if you are unsure

- ☐ Strategic
- ☐ Operational
- ☐ Tactical

Q-43 On average, how many **HOURS** per week do you work?

Please enter **whole** numbers only

Q-44 Select the tasks you typically perform.

Please select **ALL** that apply.

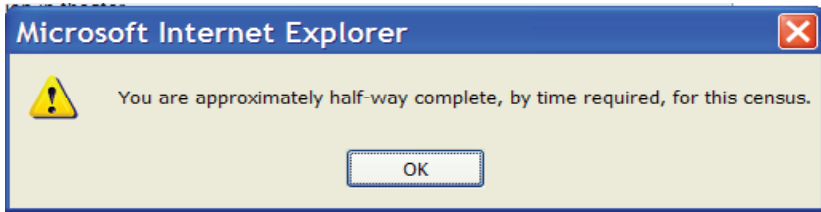
- ☐ Provide strategic direction and integration
- ☐ Legal affairs
- ☐ Inspector General activities
- ☐ Conduct mobilization
- ☐ Provide administrative or technical support
- ☐ Develop, conduct or provide intelligence, surveillance, and reconnaissance
- ☐ Provide or exercise command and control
- ☐ Employ forces
- ☐ Employ firepower or other assets
- ☐ Deploy and maneuver forces
- ☐ Provide or coordinate protection of the force, or protect the force
- ☐ Special operations
- ☐ Conduct deployment, redeployment, movement, or maneuver of forces
- ☐ Counter or manage deterrence of CBRNE weapons, or operate in a CBRNE environment
- ☐ Mapping, charting and geodesy
- ☐ Provide sustainment
- ☐ Provide logistics or combat service support
- ☐ Combat engineering
- ☐ Maintenance
- ☐ Industrial management
- ☐ Engineering
- ☐ Civil affairs and psychological operations
- ☐ Coordinate counter-proliferation in theater
- ☐ Foster multinational, interagency, alliance or regional relations

- ☐ Host nation security
- ☐ Targeting of enemy information systems
- ☐ Sustain theater forces communications, and computers (C4)
- ☐ Develop / assess joint doctrine
- ☐ Develop / assess joint policies
- ☐ Establish theater force requirements and readiness
- ☐ Resource / financial management
- ☐ Medical / health services
- ☐ Research, development, testing, evaluation & simulations
- ☐ Conduct force development
- ☐ Operations other than war
- ☐ Law enforcement
- ☐ Safety
- ☐ Acquisition/or Joint Program Management

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Q-45 The tasks you chose in the previous question will appear below. Enter the number of **HOURS** per week you perform each task.

The tasks you chose in the previous question will appear below. Enter the number of **HOURS** per week you perform each task. (Total work hours answered in question 43 is 50. You may use the 'previous' button to edit the total hours or tasks)

Tasks	Hours
Provide strategic direction and integration	0

Q-46 The tasks you chose in the previous question will appear below. Next to each task is a percentage reflecting the percentage of time during the week you spend performing the task. This is based on your answer to the previous question, as well as your answer to question 43 regarding the total number of hours per week you work. Do the percentages accurately reflect how you spend your time during the week?

Change the values in question 45 to update the percentages.

Tasks	Percentage
Provide strategic direction and integration	NaN %

Q-47 For each of your identified tasks, please select the relative level of importance to your job.

Tasks	Level of Importance
Provide strategic direction and integration	-- Please Select --

Q-48 Please select the level of responsibility you hold for each of the tasks you perform

Select **one** answer

Tasks	Level of Responsibility
Provide strategic direction and integration	-- Please Select --

Q-49 With what organizations do you interact? For each organization that applies, please quantify the frequency of your interaction. **Only select a frequency for those that apply.**

Organization	Frequency of Likely Interaction
DOD - Office of the Secretary of Defense	Please Select If Applicable ▾
DOD - Joint Chiefs of Staff	Please Select If Applicable ▾
DOD - US Army	Please Select If Applicable ▾
DOD - US Army National Guard	Please Select If Applicable ▾
DOD - US Army Reserve	Please Select If Applicable ▾
DOD - US Navy	Please Select If Applicable ▾
DOD - US Naval Reserve	Please Select If Applicable ▾
DOD - US Air Force	Please Select If Applicable ▾
DOD - US Air National Guard	Please Select If Applicable ▾
DOD - US Air Force Reserve	Please Select If Applicable ▾
DOD - US Marine Corps	Please Select If Applicable ▾
DOD - US Marine Corps Reserve	Please Select If Applicable ▾
DOD - CENTCOM	Please Select If Applicable ▾
DOD - EUCOM	Please Select If Applicable ▾
DOD - JFCOM	Please Select If Applicable ▾
DOD - NORTHCOM	Please Select If Applicable ▾
DOD - PACOM	Please Select If Applicable ▾
DOD - SOCOM	Please Select If Applicable ▾
DOD - SOUTHCOM	Please Select If Applicable ▾

DOD - Defense Finance and Accounting Service	Please Select If Applicable ▾
DOD - Defense Legal Services Agency	Please Select If Applicable ▾
DOD - Defense Information Systems Agency	Please Select If Applicable ▾
DOD - DOD Computer Emergency Response Team	Please Select If Applicable ▾
DHS – Bureau of Customs and Border Protection	Please Select If Applicable ▾
DHS - Bureau of Immigration and Customs Enforcement	Please Select If Applicable ▾
DHS - Emergency Preparedness & Response Directorate	Please Select If Applicable ▾
DHS - Federal Emergency Management Agency	Please Select If Applicable ▾
DHS - Federal Law Enforcement Training Center	Please Select If Applicable ▾
DHS - Transportation Security Administration	Please Select If Applicable ▾
DHS - US Coast Guard	Please Select If Applicable ▾
DHS - US Secret Service	Please Select If Applicable ▾
DHS - Other	Please Select If Applicable ▾
Central Intelligence Agency	Please Select If Applicable ▾
Other independent agency or government corporation	Please Select If Applicable ▾
Executive Branch	Please Select If Applicable ▾
Legislative Branch	Please Select If Applicable ▾
Judicial Branch	Please Select If Applicable ▾
Department of Agriculture	Please Select If Applicable ▾
Department of Commerce	Please Select If Applicable ▾
Department of Interior	Please Select If Applicable ▾

Department of Justice	Please Select If Applicable	▼
Department of State	Please Select If Applicable	▼
Department of Transportation	Please Select If Applicable	▼
Department of the Treasury	Please Select If Applicable	▼
Department of Energy	Please Select If Applicable	▼
Department of Health and Human Services	Please Select If Applicable	▼
The United Nations	Please Select If Applicable	▼
Treaty organizations (such as NATO)	Please Select If Applicable	▼
US non-governmental orgs (such as The Red Cross)	Please Select If Applicable	▼
Foreign non-governmental orgs (such as The Red Crescent)	Please Select If Applicable	▼
Non-US military	Please Select If Applicable	▼

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Q-50 We would like to know with whom you interact. Please indicate this information by indicating the frequency of interaction.

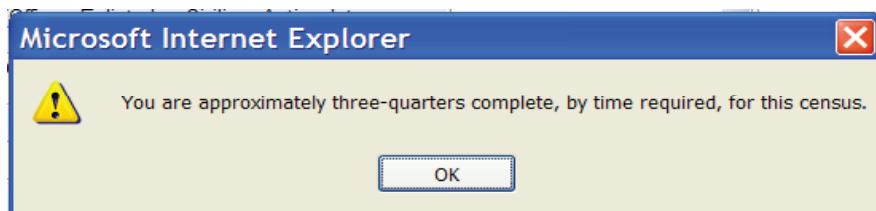
**Only select a frequency for those that apply.**

US Army personnel (Officer, Enlisted, or Civilian; Active duty, Nat'l Guard or Reserve)	Please Select If Applicable	▼
US Navy personnel (Officer, Enlisted or Civilian; Active duty or Reserve)	Please Select If Applicable	▼
US Air Force personnel (Officer, Enlisted or Civilian; Active duty, Nat'l Guard or Reserve)	Please Select If Applicable	▼
US Marine Corps personnel (Officer, Enlisted or Civilian; Active duty or Reserve)	Please Select If Applicable	▼
US Coast Guard Personnel (Officer, Enlisted or Civilian; Active duty or Reserve)	Please Select If Applicable	▼
Other DOD Civilian	Please Select If Applicable	▼
Other US Civilian	Please Select If Applicable	▼
Non-US Civilian	Please Select If Applicable	▼
Non-US Military Officer	Please Select If Applicable	▼

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Q-51 In this section, we would like to know two things:

- What knowledge you feel was required or helpful to a person in this position, and
- In what knowledge a person will gain – or can expect to gain – either familiarity or proficiency while in this position.

*There are two sets of columns by each type of knowledge listed below. The first set of columns permits you to identify the type of knowledge that is either "required" or "helpful" for someone serving in this position. The second set of columns to identify those areas of expertise in which a person will gain either proficiency or familiarity while serving in this assignment.*

*Please select buttons only from each subject row that applies to this position. It is likely that there will be lines or sections from which you do not select any buttons.*

	For this position, I find this knowledge:		My level of expertise at the end of this tour is expected to be:		
National Military Capabilities, Organization and Command Structure	Required / Helpful		Proficient / Familiar		
Roles, relationships, and functions of the NCA, JCS, COCOMs, NSC, JFC, CJCS or the <a href="#">interagency process</a> .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear"/>
Force structure requirements and resultant capabilities and limitations of US military forces	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear"/>
How the US military plans, executes, and trains for <a href="#">joint</a> , <a href="#">interagency</a> , and multinational ops.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear"/>
Service-unique capability, limitation, doctrine, and command structure integration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear"/>

National Military Strategy	Required / Helpful		Proficient / Familiar		
Art and science of developing, deploying, employing, and sustaining the military resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear"/>
Capabilities and limitations of the US force structure and their effect on joint military strategy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear"/>
Concepts of the strategic decision-making and defense planning processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Resource needs, both national and international, for national defense	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Key considerations that shape the development of national military strategy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Current National Military Strategy and other examples of US and foreign military strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
DoD long term and immediate process for strategic planning and assessment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
National Security Strategy	Required / Helpful		Proficient / Familiar		
National security policy process, to include the integration of the instruments of national power	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Impact of defense acquisition and its implications for enhancing our joint military capabilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Relationships between the military, Congress, NSC, DoD agencies, and the public	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Developing, applying, and coordinating the instruments of national power	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
How national policy is turned into executable military strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Capabilities and vulnerabilities of US industry and infrastructure in a global market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
National security technological environment for current and future competitive advantage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>

<b>National Security Policy Process</b>	<b>Required / Helpful</b>		<b>Proficient / Familiar</b>		
Origins, responsibilities, organization, and <a href="#">modus operandi</a> of the <a href="#">NSC</a> system.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
How major governmental and <a href="#">NGO's</a> influence and implement national security policies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
How the US government prioritizes among issues for developing national-level strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
<b>National Planning Systems and Processes</b>	<b>Required / Helpful</b>		<b>Proficient / Familiar</b>		
National security decision-making system and the policy formulation process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Responsibilities and relationships of the interagency and the joint community, Responsibilities and relationships of the interagency and the joint community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
DoD processes by which national ends, ways, and means are reconciled, integrated, and applied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
How time, coordination, policy, politics, doctrine, and national power affect the planning process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>

<b>Command, Control, Communications, Computers, INTELLIGENCE, SURVEILLANCE AND RECONNAISSANCE (C4ISR)</b>	<b>Required / Helpful</b>		<b>Proficient / Familiar</b>		
How C4ISR systems apply at the tactical and operational levels of war	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
How <a href="#">IO</a> is incorporated into both the <a href="#">deliberate</a> and <a href="#">crisis action</a> planning processes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
How opportunities and vulnerabilities are created by increased reliance on IT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Integrating IO and C4 to support the National Military and National Security Strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Integrating IO and C4 into the theater and strategic campaign development process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
<a href="#">IO</a> , <a href="#">IVV</a> , and C4I concepts in joint operations. , Role of the unified commander in developing theater plans, policies, and strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
<b>Theater Strategy and Campaigning</b>	<b>Required / Helpful</b>		<b>Proficient / Familiar</b>		
Role of the unified commander in developing theater plans, policies, and strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Coordination of US military plans/actions with foreign forces, interagency and NGOs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
How joint and multinational campaigns and operations support national objectives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Combatant Commander's perspective of the resources required to support campaign plans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Organization, responsibilities, and capabilities of military forces available to the JFCs, Organization, responsibilities, and capabilities of military forces available to the JFCs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>

Geo-Strategic Context	Required / Helpful		Proficient / Familiar		
Current social, cultural, political, economic, military, technological, and historical issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Roles and influence of international organizations and other non-state actors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Key military, non-military, and transnational challenges to US national security	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Instruments of National Power	Required / Helpful		Proficient / Familiar		
Fundamental characteristics, capabilities, and limitations instruments of national power	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Employment of diplomatic, economic, military, and informational instruments of national power	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Joint Operational Art	Required / Helpful		Proficient / Familiar		
Joint doctrine and the joint operational art	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Integration of Service, joint, interagency, and multinational capabilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Joint Warfare Fundamentals	Required / Helpful		Proficient / Familiar		
Each combatant command's mission, organization, and responsibilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Joint aspects of military operations other than war (MOOTW)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Capabilities of other Services' weapon systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Joint Campaigning	Required / Helpful		Proficient / Familiar		
JTF organization, including who can form a JTF and how and when a JTF is formed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Characteristics of a joint campaign and the relationships of supporting capabilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>

Joint Doctrine	Required / Helpful		Proficient / Familiar		
Current joint doctrine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Factors influencing joint doctrine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Relationship between Service doctrine and joint doctrine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Joint and Multinational Forces at the Operational Level of War	Required / Helpful		Proficient / Familiar		
Considerations for employing joint and multinational forces at the operational level of war	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
How theory and principles of war apply at the operational level of war	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Relationships among national objectives, military objectives, and conflict termination	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Relationships among the strategic, operational, and tactical levels of war	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Joint Planning and Execution Processes	Required / Helpful		Proficient / Familiar		
Relationship between national objectives and means availability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Effect of time, coordination, policy changes, and political developments on the planning process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
How national, joint, and Service intelligence organizations support JFCs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Integrating battle space support systems into campaign/theater planning and operations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>



Others	Required / Helpful		Proficient / Familiar		
Inspector General activities, legal/legislative, law enforcement, physical security or investigations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Special operations, operations other than war, tactical matters (i.e., training exercises, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Manpower / personnel, training, education, logistics, acquisition, or general administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
R&D, engineering, scientific matters (includes weather, environment, etc.), CBRNE matters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Medical or health services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Acquisition/Joint Program Management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>

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Q-52 As a result of current events, my experience in this position was different from that of my predecessors.

Select **one** answer

- ☐ Strongly Agree  
☐ Agree  
☐ Neither Agree nor Disagree  
☐ Disagree  
☐ Strongly Disagree  
☐ Not applicable

Q-53 My assessment of this position depends upon unusual current events, making it unlikely that future occupants will have the same experience.

Select **one** answer

- ☐ Strongly Agree  
☐ Agree  
☐ Neither Agree nor Disagree  
☐ Disagree  
☐ Strongly Disagree  
☐ Not applicable

Q-54 This position gives me significant experience in multi-service matters.

Select **one** answer

- ☐ Strongly Agree  
☐ Agree  
☐ Neither Agree nor Disagree  
☐ Disagree  
☐ Strongly Disagree

Q-55	This position gives me significant experience in multinational matters.
Select <b>one</b> answer	
<input type="radio"/> Strongly Agree <input type="radio"/> Agree <input checked="" type="radio"/> Neither Agree nor Disagree <input type="radio"/> Disagree <input type="radio"/> Strongly Disagree	
Q-56	This position gives me significant experience in interagency matters.
Select <b>one</b> answer	
<input type="radio"/> Strongly Agree <input type="radio"/> Agree <input type="radio"/> Neither Agree nor Disagree <input type="radio"/> Disagree <input type="radio"/> Strongly Disagree	
Q-57	In order to perform the duties of this position successfully, an individual would find <u>JPME I</u> .
Select <b>one</b> answer	
<input type="radio"/> Required <input type="radio"/> Desired <input type="radio"/> Not helpful <input type="radio"/> Not sure -- have no JPME experience	
Q-58	In order to perform my duties successfully, I have found <u>JPME II</u> .
Select <b>one</b> answer	
<input type="radio"/> Required <input type="radio"/> Desired <input type="radio"/> Not helpful <input type="radio"/> Not sure -- have no JPME experience	

Q-59	In order to perform my duties successfully, I have found joint training or education (other than JPME)
Select <b>one</b> answer	
<input type="radio"/> Required <input type="radio"/> Desired <input type="radio"/> Not helpful	
Q-60	In order to perform my duties successfully, I have found prior experience in a joint environment
Select <b>one</b> answer	
<input type="radio"/> Required <input type="radio"/> Desired <input type="radio"/> Not helpful	
Q-61	To what extent do you draw upon your primary specialty (i.e. AOC code, MOS, AFSC or Navy designator) to perform in this position?
Select <b>one</b> answer	
<input type="radio"/> Not at all <input type="radio"/> Some of the time <input type="radio"/> Half of the time <input type="radio"/> Most of the time <input type="radio"/> All of the time <input type="radio"/> Not sure	

Q-62 To what extent do you draw upon knowledge of your Service's capabilities to perform in this position?

Select **one** answer

- ☐ Not at all  
☐ Some of the time  
☐ Half of the time  
☐ Most of the time  
☐ All of the time  
☐ Not sure

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Q-63 How many **MONTHS** did it take in this position to become comfortable in a joint environment?

Select **one** answer

- ☐   
☐ Not sure  
☐ Not in a joint environment  
☐ Not applicable for other reasons

Q-64 What is the planned length of your current assignment (in **MONTHS**)?

Select **one** answer

Q-65 How many **MONTHS** do you think your assignment should last?

Enter **whole** numbers only

Q-66 How many **MONTHS** do you think a typical permanent joint duty assignment should last?

Select **one** answer

Q-67 How many **MONTHS** do you think a typical temporary (TAD/TDY) joint task force assignment should last? (Do not limit your answer by current tour length constraints, e.g. 179 days)

Select **one** answer

Q-68 Which of the following was most important to you in this assignment?

Select **one** answer

- ☐ Service core competencies
- ☐ Prior joint experience
- ☐ Specialized training and orientation in joint matters
- ☐ Functional expertise other than acquisition/joint program management (e.g. operations, intelligence, personnel, etc.)
- ☐ Functional expertise in acquisition/joint program management
- ☐ Other not listed here - please specify:

Q-69 In your opinion, what is the most important thing your successor should possess?

Select **one** answer

- ☐ Service core competencies
- ☐ Prior joint experience
- ☐ Specialized training and orientation in joint matters
- ☐ Functional expertise other than acquisition/joint program management (e.g. operations, intelligence, personnel, etc.)
- ☐ Functional expertise in acquisition/joint program management
- ☐ Other not listed here - please specify:

Q-70 A civilian could perform the duties and responsibilities of this position just as effectively.

Select **one** answer

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neither Agree nor Disagree
- ☐ Disagree
- ☐ Strongly Disagree

Q-71 My position requires unique knowledge of my own service and could not be performed by an officer of another service.

Select **one** answer

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neither Agree nor Disagree
- ☐ Disagree
- ☐ Strongly Disagree
- ☐ Not applicable

Q-72 Morale problems will exist if joint duty credit is awarded for some positions in my immediate organization but not for others.

Select **one** answer

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neither Agree nor Disagree
- ☐ Disagree
- ☐ Strongly Disagree
- ☐ Not applicable

Q-73 How much of your assessment of this billet is based on experience gained through TAD/TDY?

Select **one** answer

- ☐ Considerable amount
- ☐ Moderate amount
- ☐ Minimal amount
- ☐ Not at all
- ☐ Not applicable

Q-74 Have you served at least two months in a permanent joint duty billet AND, since September 2001, also served at least two months in a temporary joint task force (JTF) billet?

Select **one** answer

- ☐ Yes  
☐ No

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Q-75 In your experience, would you claim that, when comparing an equal period of time of time, you received an understanding of the joint environment more quickly while serving in the temporary joint task force (JTF) billet than while serving in the permanent joint duty assignment billet?

Select **one** answer

- ☐ YES, considerably more quickly  
☐ YES, slightly more quickly  
☐ About the same  
☐ NO, more slowly  
☐ NO, much more slowly

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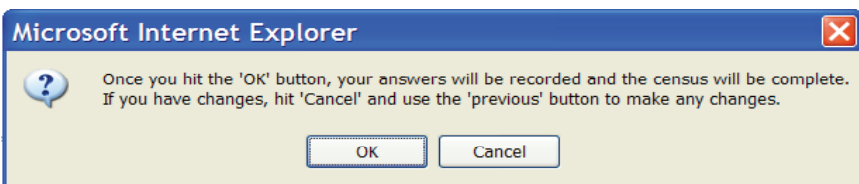
Q-76 Is there anything else you would like to tell us?

Enter comments below.

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Submit





*Thank you again for taking the time to participate in this critical endeavor. Again, please encourage others in your organization to take the time to provide their input, too. Your efforts will help us formulate appropriate legislative recommendations and make informed policy decisions to serve better the future joint officer and the Nation.*

*David S. C. Chu  
Under Secretary of Defense  
(Personnel and Readiness)*

**Census Complete. Thank You for Participating. You may now exit your browser.**

## Non-Incumbent Questionnaire, 2005 Joint Officer Management Census Survey

REPORT CONTROL SYMBOL (RCS): DD-P&R(OT)2196

### JOINT OFFICER MANAGEMENT (JOM) CENSUS

#### PRIVACY ACT STATEMENT

**AUTHORITY:** 10 U.S.C. 136; 10 U.S.C. 1782; 10 U.S.C. 2358; 10 USC 531.

**PRINCIPAL PURPOSE(S):** TO CAPTURE DATA REQUIRED FOR A BILLET-LEVEL ANALYSIS OF JOINT CHARACTERISTICS. THE INFORMATION OBTAINED IN THIS CENSUS WILL BE USED TO ASSIST THE OFFICE OF THE SECRETARY OF DEFENSE IN DEVELOPING A STRATEGIC PLAN FOR JOINT OFFICER MANAGEMENT AND JOINT PROFESSIONAL MILITARY EDUCATION THAT LINKS JOINT OFFICER DEVELOPMENT AND ACCOMPLISHMENT TO THE OVERALL MISSION AND GOALS OF THE DEPARTMENT OF DEFENSE.

**ROUTINE USES:** NONE.

**DISCLAIMER:** THIS CENSUS HAS BEEN APPROVED FOR INFORMATION COLLECTION AND HAS BEEN ASSIGNED A REPORT CONTROL SYMBOL (RCS, DD-P&R(OT)2196, IN ACCORDANCE WITH DoD 8910.1-M, "DoD PROCEDURES FOR MANAGEMENT OF INFORMATION REQUIREMENTS." THE EXPIRATION DATE FOR RCS DD-P&R(OT)2196 IS APRIL 30, 2008. THE APPROVED SD FORM 455, "REQUEST FOR APPROVAL OF INFORMATION COLLECTION" HAS BEEN PLACED IN THE OFFICIAL FILE.

**DISCLOSURE:** VOLUNTARY. HOWEVER, FAILURE TO PROVIDE THE INFORMATION MAY RESULT IN YOUR VIEWS NOT BEING REPRESENTED IN THE FINAL RESULTS AND OUTCOMES.



Enter your ID and Password forwarded to you by your organization's point of contact. Your census key is **not** your ID or your Password; instead it will be entered later in order to identify your particular billet.

ID:	<input type="text"/>
Password:	<input type="password"/>
<input type="button" value="Enter Census"/>	

For login-census key tips, click --> [here](#)  
**This census is best viewed using Internet Explorer.**



## Welcome Statement from the Honorable David S. C. Chu

*There have been great strides in the joint arena since the enactment of the Goldwater-Nichols Act of 1986; but we must improve how we manage the joint officer force. Congress, the General Accountability Office and our own independent reviews all argue for this improvement.*

*In partnership with the Joint Staff/J-1, my office is undertaking a "clean slate" strategic review of joint officer management. It includes an assessment of the characteristics of joint positions; a comprehensive exploration of the full set of needs for joint experience; and how we refresh and expand our understanding of jobs that provide joint experience. The census you are about to take is a cornerstone for the review.*

*I ask you to take the next 15 minutes to focus on this census. I also ask that you encourage those in your organization who are asked to complete the census to do the same. In order to achieve meaningful results, we need close to 100 percent return. The time you invest will provide input and direction to significant legislative and policy decisions in the near future.*

*Thank you for your help & and your service.*

David S. C. Chu  
Under Secretary of Defense  
(Personnel and Readiness)

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Q-1 Please enter census key below:

Census Key:

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For login-census key tips, click [here](#)

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Confirm billet	
Q-2	Is this the billet you have been asked to evaluate?
	Billet Key : ZZZZZZZ
	Organization : Navy
	Organization Sub-Element : UNKNOWN
	Unit Identification : 00019
	Unit Identification Clear Text : COMNAVAIRSYSCOM
	Organization Position Identifier : 0002305
	Other Billet Specific Information Text : ZZZZZZZ
	Major Command : UNKNOWN
	Work Center Name : ZZZZZZZZ
	Work Center Identifier : ZZZZZZZZZZ
	Work Center Position Name : Commander, Naval Air Systems Command
	Work Center Position Identifier : 00300
	Position GEOLOC Code : ZZZZ
	Position GEOLOC : UNKNOWN
<p><i>Note: some data for your billet may be unavailable and, therefore, may be represented by "ZZZZZZZZ", "NO DATA FOUND" or a blank return. Please disregard these entries and review the data that is available to make an assessment that you were given the correct census key for your billet.</i></p>	
<input type="radio"/> Yes <input type="radio"/> No	
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Q-3	Are you the:
Select <b>one</b> answer	
<input checked="" type="radio"/> Person occupying the billet? Please ensure that you answer all of the following questions based on the confirmed billet, to include any TAD/TDY experiences during your service in the billet. If your billet is a temporary joint task force (JTF) billet, answer all questions based solely on your JTF experience unless instructed otherwise.	
<input type="radio"/> Supervisor of the billet?	
<input type="radio"/> Another person designated to complete the survey?	
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Q-4	How many MONTHS have you been assigned to this billet?
Please enter a <b>whole</b> number	
<input type="text"/>	
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Q-5	Is the billet you have been asked to evaluate a temporary JTF billet?
Select <b>one</b> answer	
<input type="radio"/> Yes <input type="radio"/> No	
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Q-6 Please enter the total number of **WEEKS** you have spent on TDY / TAD (NOT including training and education) during this assignment.

Please enter a **whole** number

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Q-7 Please enter the total number of **WEEKS** you have spent on TDY / TAD due to training or education during this assignment:

Please enter a **whole** number

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**Questions 9 through 11 are optional. Answers will not be used for the JOM study.**

Q-8 What is your pay grade?

Select **one** answer

Please Select ▼

Q-9 What is your gender?

Select **one** answer

- ☐ Male  
☐ Female

Q-10 Are you Spanish/Hispanic/Latino?

Select **one** answer

- ☐ No, not Spanish/Hispanic/Latino  
☐ Yes, Mexican, Mexican-American, Chicano, Puerto Rican, Cuban, or other Spanish/Hispanic/Latino

Q-11 What is your race?

Mark one or more races to indicate what you consider yourself to be.

- ☐ White  
☐ Black or African-American  
☐ Native American or Alaska Native  
☐ Asian (for example: Asian Indian, Chinese, Filipino, Japanese, Korean, or Vietnamese)  
☐ Native Hawaiian or other Pacific Islander (for example: Samoan, Guamanian, or Chamorro)  
☐ Other

Q-12 How many **YEARS** have you been a commissioned officer?

Please enter a **whole** number.

Q-13 Are you:

Select **one** answer

- ☐ Active Duty List Officer  
☐ Reserve Component Officer

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Q-14	Of the following list, what intermediate or senior level schools have you completed? Next to each school that you have completed, note your paygrade at time of completion.	
		<b>SELECT ONLY IF COMPLETED</b>
<b>JOINT AND COMBINED SCHOOLS</b>		
National War College		-- Please Select --
Industrial College of the Armed Forces		-- Please Select --
School of Information Warfare and Strategy		-- Please Select --
Joint Forces Staff College		-- Please Select --
Joint and Combined Staff Officer School		-- Please Select --
Joint and Combined Warfighting School		-- Please Select --
<b>US ARMY SERVICE SCHOOLS</b>		
US Army War College (resident)		-- Please Select --
US Army War College (non-resident)/Dept. of Distance Education		-- Please Select --
Army Command and General Staff College (resident)		-- Please Select --
Army Command and General Staff College (non-resident)		-- Please Select --
<b>US NAVY SERVICE SCHOOLS</b>		
College of Naval Warfare		-- Please Select --
College of Naval Command and Staff (resident)		-- Please Select --
College of Distance Education (Navy intermediate-level college non-resident)		-- Please Select --

<b>US AIR FORCE SERVICE SCHOOLS</b>	
Air War College (resident)	-- Please Select --
Air War College (non-resident)	-- Please Select --
Air Command and Staff College (resident)	-- Please Select --
Air Command and Staff College (non-resident)	-- Please Select --
<b>US MARINE CORPS SERVICE SCHOOLS</b>	
Marine Corps War College	-- Please Select --
Marine Corps Command and Staff College	-- Please Select --
Marine Corps College of Continuing Education (Marine Corps Command and Staff College non-resident)	-- Please Select --
Q-15 If you have received credit for post-graduate education at another civilian or military institution not listed above (to include international institutions).	
Please enter the name of the institution and the pay grade you held when you graduated in the boxes below.	
<b>INSTITUTION</b>	<b>Pay Grade</b>
<input type="text"/>	-- Please Select --
<input type="text"/>	-- Please Select --
<input type="text"/>	-- Please Select --
<input type="text"/>	-- Please Select --

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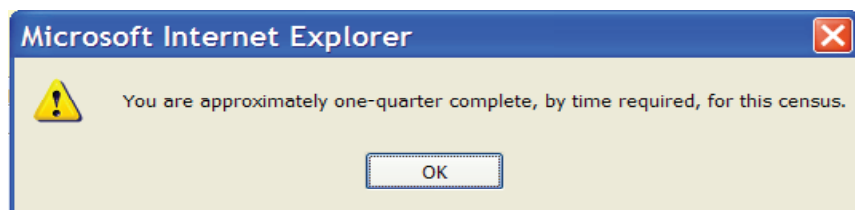
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Q-16	Have you received credit for <u>JPME I</u> ?
Select <b>one</b> answer	
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Not Sure
Q-17	Have you received credit for <u>JPME II</u> ?
Select <b>one</b> answer	
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Not Sure
Q-18	What is your service and component?
Select <b>one</b> answer	
	<input type="radio"/> U.S. Army <input type="radio"/> U.S. Army National Guard <input type="radio"/> U.S. Army Reserve <input type="radio"/> U.S. Navy <input type="radio"/> U.S. Naval Reserve <input type="radio"/> U.S. Air Force <input type="radio"/> U.S. Air National Guard <input type="radio"/> U.S. Air Force Reserve <input type="radio"/> U.S. Marine Corps <input type="radio"/> U.S. Marine Corps Reserve

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Q-19	Select your primary AFSC, e.g., 11MX (qualified Mobility Pilot) from the following list.
Select <b>one</b> answer	
	-- Please Select --

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Q-20	Select your primary Area of Concentration (AOC) code, e.g., 11A (Infantry) from the following list.
-- Please Select --	

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Q-21	Select your 4 digit officer designator code, e.g., 111X (Surface Warfare Officer) from the following list.	
<div>--Please Select--</div>		▼

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Q-22	Select your 4 digit Military Occupational Specialty (MOS) code, e.g., 0802 (Field Artillery Officer).	
<div>-- Please Select --</div>		▼

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Q-23	Are you a Joint Specialty Officer (JSO)?
<div><input type="radio"/> Yes</div>	
<div><input type="radio"/> No</div>	
<div><input type="radio"/> Unsure</div>	

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Q-24	Who is your 1st level supervisor (e.g., Rater or Reporting Senior)?	<div>-- Please Select --</div> ▼
Q-25	Who is your 2nd level supervisor (e.g., Intermediate Rater, Additional Rater or Reviewing Senior)?	<div>-- Please Select --</div> ▼
Q-26	Who is your 3rd level supervisor (e.g., Senior Rater or Reviewer)?	<div>-- Please Select --</div> ▼
Q-27	In your current position, do you serve full time with members from another Military Department (i.e., Army, Air Force, Navy/Marine Corps)? [Note: Navy officers who work only with the Navy or Marine Corps, and Marine Corps officers who work only with the Marine Corp or Navy should answer NO to this question.]	
<div><input type="radio"/> Yes</div>		If yes, are you assigned to a billet in that other Military Department? <input type="radio"/> Yes <input type="radio"/> No
<div><input type="radio"/> No</div>		

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Q-28	Do you typically serve full time with the armed forces of another nation or with an international military or treaty organization (e.g., a US officer assigned to a assignment in the headquarters of NATO; a liaison officer at the headquarters of a foreign military service; an officer assigned full time to an element of the United Nations, etc.)?	
	<input type="radio"/> Yes <input type="radio"/> No	If yes, are you formally assigned to a billet in that organization? <input type="radio"/> Yes <input type="radio"/> No
Q-29	Are you assigned to both your own service and a joint, combined, or international organization? (Example, an officer assigned to a billet in the G3, Eighth US Army while simultaneously assigned to positions in the J3, US Forces Korea, and the C3, Combined Forces Command (ROK/US)). Such assignments are referred to as "Dual Hat Positions."	
<i>Select one answer</i>		
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure	
Q-30	Do you serve in Joint Task Force Headquarters Staff?	
<i>Select one answer</i>		
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure	
Q-31	Do you serve in a Joint Task Force Subordinate Organization?	
<i>Select one answer</i>		
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure	

Q-32	Do you serve in a Joint Task Force Service Component?	
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure	If yes, are you permanently assigned to it? <input type="radio"/> Yes <input type="radio"/> No

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Q-33	Do you work in a Joint Program Office?
Select <b>one</b> answer	
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure
Q-34	Where is the billet located?
Select <b>one</b> answer	
	<input type="radio"/> United States (including Alaska and Hawaii) <input type="radio"/> Iraq <input type="radio"/> Other Middle East <input type="radio"/> South Asia (e.g., Pakistan, Afghanistan) <input type="radio"/> Korea <input type="radio"/> Cuba <input type="radio"/> Europe <input type="radio"/> Other nation outside of the U.S. <input type="radio"/> Afloat at sea
Q-35	Are you currently serving at your home base?
Select <b>one</b> answer	
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure
Q-36	Are you currently receiving <a href="#">Family Separation Allowance (FSA)</a> , or would you collect FSA in this position if you had dependents?
Select <b>one</b> answer	
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure

Q-37	Are you currently receiving special pay for duty subject to <a href="#">Hostile Fire or Imminent Danger</a> ?						
Select <b>one</b> answer							
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure						
Q-38	Are you currently receiving special pay for <a href="#">Hardship Duty</a> ?						
Select <b>one</b> answer							
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure						
Q-39	Is your pay subject to <a href="#">Combat Zone Tax Exclusion</a> ?						
Select <b>one</b> answer							
	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unsure						
Q-40	Please indicate the approximate percent of your work time you spend reviewing or deciding matters yourself, as opposed to preparing others to review or decide matters.						
	<table border="1"> <tr> <td>Reviewing / deciding matters myself</td> <td>0</td> <td>%</td> </tr> <tr> <td>Preparing others to review/decide matters</td> <td>0</td> <td>%</td> </tr> </table>	Reviewing / deciding matters myself	0	%	Preparing others to review/decide matters	0	%
Reviewing / deciding matters myself	0	%					
Preparing others to review/decide matters	0	%					
Q-41	Indicate which one of the following statements best describes the primary focus of your efforts.						
Select <b>one</b> answer							
	<input type="radio"/> The primary focus of my efforts is on operational or supportability matters pertaining to a Combatant Commander's Area of Responsibility (AOR) or several AORs. <input type="radio"/> The primary focus of my efforts is on defense-wide issues or matters that affect one or more Combatant Commander's, Military Departments or Defense Agencies. <input type="radio"/> None of the above						

Q-42 If you could choose only one of the following, which best summarizes the level of your job:

Please click on the hyperlinked choices if you are unsure

- ☐ Strategic  
☐ Operational  
☐ Tactical

Q-43 On average, how many **HOURS** per week do you work?

Please enter **whole** numbers only

Q-44 Select the tasks you typically perform.

Please select **ALL** that apply.

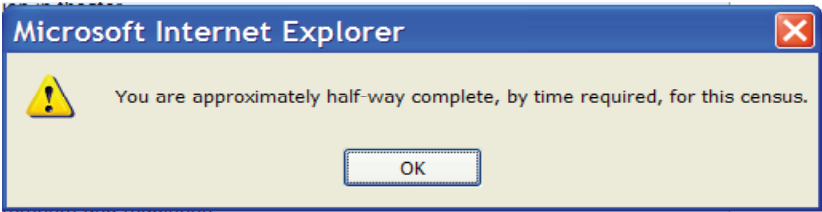
- ☐ Provide strategic direction and integration  
☐ Legal affairs  
☐ Inspector General activities  
☐ Conduct mobilization  
☐ Provide administrative or technical support  
☐ Develop, conduct or provide intelligence, surveillance, and reconnaissance  
☐ Provide or exercise command and control  
☐ Employ forces  
☐ Employ firepower or other assets  
☐ Deploy and maneuver forces  
☐ Provide or coordinate protection of the force, or protect the force  
☐ Special operations  
☐ Conduct deployment, redeployment, movement, or maneuver of forces  
☐ Counter or manage deterrence of CBRNE weapons, or operate in a CBRNE environment  
☐ Mapping, charting and geodesy  
☐ Provide sustainment  
☐ Provide logistics or combat service support  
☐ Combat engineering  
☐ Maintenance  
☐ Industrial management  
☐ Engineering  
☐ Civil affairs and psychological operations  
☐ Coordinate counter-proliferation in theater  
☐ Foster multinational, interagency, alliance or regional relations

- ☐ Host nation security  
☐ Targeting of enemy information systems  
☐ Sustain theater forces communications, and computers (C4)  
☐ Develop / assess joint doctrine  
☐ Develop / assess joint policies  
☐ Establish theater force requirements and readiness  
☐ Resource / financial management  
☐ Medical / health services  
☐ Research, development, testing, evaluation & simulations  
☐ Conduct force development  
☐ Operations other than war  
☐ Law enforcement  
☐ Safety  
☐ Acquisition/or Joint Program Management

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Q-45 The tasks you chose in the previous question will appear below. Enter the number of HOURS per week you perform each task.

The tasks you chose in the previous question will appear below. Enter the number of HOURS per week you perform each task. (Total work hours answered in question 43 is 50. You may use the 'previous' button to edit the total hours or tasks)

Tasks	Hours
Provide strategic direction and integration	<input type="text" value="0"/>

Q-46 The tasks you chose in the previous question will appear below. Next to each task is a percentage reflecting the percentage of time during the week you spend performing the task. This is based on your answer to the previous question, as well as your answer to question 43 regarding the total number of hours per week you work. Do the percentages accurately reflect how you spend your time during the week?

Change the values in question 45 to update the percentages.

Tasks	Percentage
Provide strategic direction and integration	<input type="text" value="NaN %"/>

Q-47 For each of your identified tasks, please select the relative level of importance to your job.

Tasks	Level of Importance
Provide strategic direction and integration	-- Please Select --

Q-48 Please select the level of responsibility you hold for each of the tasks you perform

Select one answer

Tasks	Level of Responsibility
Provide strategic direction and integration	-- Please Select --



Q-49 With what organizations do you interact? For each organization that applies, please quantify the frequency of your interaction. **Only select a frequency for those that apply.**

Organization	Frequency of Likely Interaction
DOD - Office of the Secretary of Defense	Please Select If Applicable ▾
DOD - Joint Chiefs of Staff	Please Select If Applicable ▾
DOD - US Army	Please Select If Applicable ▾
DOD - US Army National Guard	Please Select If Applicable ▾
DOD - US Army Reserve	Please Select If Applicable ▾
DOD - US Navy	Please Select If Applicable ▾
DOD - US Naval Reserve	Please Select If Applicable ▾
DOD - US Air Force	Please Select If Applicable ▾
DOD - US Air National Guard	Please Select If Applicable ▾
DOD - US Air Force Reserve	Please Select If Applicable ▾
DOD - US Marine Corps	Please Select If Applicable ▾
DOD - US Marine Corps Reserve	Please Select If Applicable ▾
DOD - CENTCOM	Please Select If Applicable ▾
DOD - EUCOM	Please Select If Applicable ▾
DOD - JFCOM	Please Select If Applicable ▾
DOD - NORTHCOM	Please Select If Applicable ▾
DOD - PACOM	Please Select If Applicable ▾
DOD - SOCOM	Please Select If Applicable ▾
DOD - SOUTHCOM	Please Select If Applicable ▾

DOD - Defense Finance and Accounting Service	Please Select If Applicable ▾
DOD - Defense Legal Services Agency	Please Select If Applicable ▾
DOD - Defense Information Systems Agency	Please Select If Applicable ▾
DOD - DOD Computer Emergency Response Team	Please Select If Applicable ▾
DHS - Bureau of Customs and Border Protection	Please Select If Applicable ▾
DHS - Bureau of Immigration and Customs Enforcement	Please Select If Applicable ▾
DHS - Emergency Preparedness & Response Directorate	Please Select If Applicable ▾
DHS - Federal Emergency Management Agency	Please Select If Applicable ▾
DHS - Federal Law Enforcement Training Center	Please Select If Applicable ▾
DHS - Transportation Security Administration	Please Select If Applicable ▾
DHS - US Coast Guard	Please Select If Applicable ▾
DHS - US Secret Service	Please Select If Applicable ▾
DHS - Other	Please Select If Applicable ▾
Central Intelligence Agency	Please Select If Applicable ▾
Other independent agency or government corporation	Please Select If Applicable ▾
Executive Branch	Please Select If Applicable ▾
Legislative Branch	Please Select If Applicable ▾
Judicial Branch	Please Select If Applicable ▾
Department of Agriculture	Please Select If Applicable ▾
Department of Commerce	Please Select If Applicable ▾
Department of Interior	Please Select If Applicable ▾

Department of Justice	Please Select If Applicable	▼
Department of State	Please Select If Applicable	▼
Department of Transportation	Please Select If Applicable	▼
Department of the Treasury	Please Select If Applicable	▼
Department of Energy	Please Select If Applicable	▼
Department of Health and Human Services	Please Select If Applicable	▼
The United Nations	Please Select If Applicable	▼
Treaty organizations (such as NATO)	Please Select If Applicable	▼
US non-governmental orgs (such as The Red Cross)	Please Select If Applicable	▼
Foreign non-governmental orgs (such as The Red Crescent)	Please Select If Applicable	▼
Non-US military	Please Select If Applicable	▼

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Q-50 We would like to know with whom you interact. Please indicate this information by indicating the frequency of interaction.

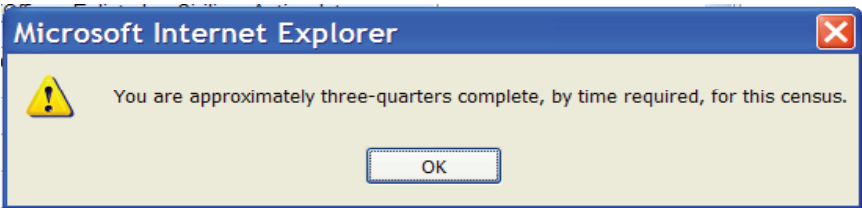
**Only select a frequency for those that apply.**

US Army personnel (Officer, Enlisted, or Civilian; Active duty, Nat'l Guard or Reserve)	Please Select If Applicable	▼
US Navy personnel (Officer, Enlisted or Civilian; Active duty or Reserve)	Please Select If Applicable	▼
US Air Force personnel (Officer, Enlisted or Civilian; Active duty, Nat'l Guard or Reserve)	Please Select If Applicable	▼
US Marine Corps personnel (Officer, Enlisted or Civilian; Active duty or Reserve)	Please Select If Applicable	▼
US Coast Guard Personnel (Officer, Enlisted or Civilian; Active duty or Reserve)	Please Select If Applicable	▼
Other DOD Civilian	Please Select If Applicable	▼
Other US Civilian	Please Select If Applicable	▼
Non-US Civilian	Please Select If Applicable	▼
Non-US Military Officer	Please Select If Applicable	▼

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Q-51 In this section, we would like to know two things:

- What knowledge you feel was required or helpful to a person in this position, and
- In what knowledge a person will gain – or can expect to gain – either familiarity or proficiency while in this position.

*There are two sets of columns by each type of knowledge listed below. The first set of columns permits you to identify the type of knowledge that is either "required" or "helpful" for someone serving in this position. The second set of columns to identify those areas of expertise in which a person will gain either proficiency or familiarity while serving in this assignment.*

**Please select buttons only from each subject row that applies to this position. It is likely that there will be lines or sections from which you do not select any buttons.**

	For this position, I find this knowledge:		My level of expertise at the end of this tour is expected to be:		
National Military Capabilities, Organization and Command Structure	Required / Helpful		Proficient / Familiar		
Roles, relationships, and functions of the NCA, JCS, COCOMs, NSC, JFC, CJCS or the <a href="#">interagency process</a> .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear"/>
Force structure requirements and resultant capabilities and limitations of US military forces	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear"/>
How the US military plans, executes, and trains for <a href="#">joint</a> , <a href="#">interagency</a> , and multinational ops.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear"/>
Service-unique capability, limitation, doctrine, and command structure integration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear"/>

National Military Strategy	Required / Helpful		Proficient / Familiar		
Art and science of developing, deploying, employing, and sustaining the military resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear"/>
Capabilities and limitations of the US force structure and their effect on joint military strategy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear"/>
Concepts of the strategic decision-making and defense planning processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Resource needs, both national and international, for national defense	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Key considerations that shape the development of national military strategy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Current National Military Strategy and other examples of US and foreign military strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
DoD long term and immediate process for strategic planning and assessment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
National Security Strategy	Required / Helpful		Proficient / Familiar		
National security policy process, to include the integration of the instruments of national power	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Impact of defense acquisition and its implications for enhancing our joint military capabilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Relationships between the military, Congress, NSC, DoD agencies, and the public	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Developing, applying, and coordinating the instruments of national power	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
How national policy is turned into executable military strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
Capabilities and vulnerabilities of US industry and infrastructure in a global market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>
National security technological environment for current and future competitive advantage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="clear..."/>

National Security Policy Process	Required / Helpful		Proficient / Familiar		
Origins, responsibilities, organization, and <a href="#">modus operandi</a> of the <a href="#">NSC</a> system.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
How major governmental and <a href="#">NGO's</a> influence and implement national security policies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
How the US government prioritizes among issues for developing national-level strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
National Planning Systems and Processes	Required / Helpful		Proficient / Familiar		
National security decision-making system and the policy formulation process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Responsibilities and relationships of the interagency and the joint community, Responsibilities and relationships of the interagency and the joint community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
DoD processes by which national ends, ways, and means are reconciled, integrated, and applied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
How time, coordination, policy, politics, doctrine, and national power affect the planning process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>

Command, Control, Communications, Computers, INTELLIGENCE, SURVEILLANCE AND RECONNAISSANCE (C4ISR)	Required / Helpful		Proficient / Familiar		
How C4ISR systems apply at the tactical and operational levels of war	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
How <a href="#">IO</a> is incorporated into both the <a href="#">deliberate</a> and <a href="#">crisis action</a> planning processes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
How opportunities and vulnerabilities are created by increased reliance on IT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Integrating IO and C4 to support the National Military and National Security Strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Integrating IO and C4 into the theater and strategic campaign development process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
<a href="#">IO</a> , <a href="#">IVV</a> , and C4I concepts in joint operations. , Role of the unified commander in developing theater plans, policies, and strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Theater Strategy and Campaigning	Required / Helpful		Proficient / Familiar		
Role of the unified commander in developing theater plans, policies, and strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Coordination of US military plans/actions with foreign forces, interagency and NGOs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
How joint and multinational campaigns and operations support national objectives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Combatant Commander's perspective of the resources required to support campaign plans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Organization, responsibilities, and capabilities of military forces available to the JFCs, Organization, responsibilities, and capabilities of military forces available to the JFCs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>

Geo-Strategic Context	Required / Helpful	Proficient / Familiar
Current social, cultural, political, economic, military, technological, and historical issues	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
Roles and influence of international organizations and other non-state actors	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
Key military, non-military, and transnational challenges to US national security	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
Instruments of National Power	Required / Helpful	Proficient / Familiar
Fundamental characteristics, capabilities, and limitations instruments of national power	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
Employment of diplomatic, economic, military, and informational instruments of national power	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
Joint Operational Art	Required / Helpful	Proficient / Familiar
Joint doctrine and the joint operational art	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
Integration of Service, joint, interagency, and multinational capabilities	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
Joint Warfare Fundamentals	Required / Helpful	Proficient / Familiar
Each combatant command's mission, organization, and responsibilities	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
Joint aspects of military operations other than war (MOOTW)	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
Capabilities of other Services' weapon systems	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
Joint Campaigning	Required / Helpful	Proficient / Familiar
JTF organization, including who can form a JTF and how and when a JTF is formed.	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
Characteristics of a joint campaign and the relationships of supporting capabilities	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>

Joint Doctrine	Required / Helpful	Proficient / Familiar
Current joint doctrine	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
Factors influencing joint doctrine	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
Relationship between Service doctrine and joint doctrine	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
Joint and Multinational Forces at the Operational Level of War	Required / Helpful	Proficient / Familiar
Considerations for employing joint and multinational forces at the operational level of war	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
How theory and principles of war apply at the operational level of war	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
Relationships among national objectives, military objectives, and conflict termination	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
Relationships among the strategic, operational, and tactical levels of war	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
Joint Planning and Execution Processes	Required / Helpful	Proficient / Familiar
Relationship between national objectives and means availability	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
Effect of time, coordination, policy changes, and political developments on the planning process	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
How national, joint, and Service intelligence organizations support JFCs	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>
Integrating battle space support systems into campaign/theater planning and operations	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="button" value="clear..."/>

Others	Required / Helpful		Proficient / Familiar		
Inspector General activities, legal/legislative, law enforcement, physical security or investigations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Special operations, operations other than war, tactical matters (i.e., training exercises, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Manpower / personnel, training, education, logistics, acquisition, or general administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
R&D, engineering, scientific matters (includes weather, environment, etc.), CBRNE matters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Medical or health services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>
Acquisition/Joint Program Management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<a href="#">clear...</a>

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Q-52 As a result of current events, my experience in this position was different from that of my predecessors.

Select **one** answer

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neither Agree nor Disagree
- ☐ Disagree
- ☐ Strongly Disagree
- ☐ Not applicable

Q-53 My assessment of this position depends upon unusual current events, making it unlikely that future occupants will have the same experience.

Select **one** answer

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neither Agree nor Disagree
- ☐ Disagree
- ☐ Strongly Disagree
- ☐ Not applicable

Q-54 This position gives me significant experience in multi-service matters.

Select **one** answer

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neither Agree nor Disagree
- ☐ Disagree
- ☐ Strongly Disagree

Q-55	This position gives me significant experience in multinational matters.
<i>Select one answer</i>	
	<input type="radio"/> Strongly Agree <input type="radio"/> Agree <input checked="" type="radio"/> Neither Agree nor Disagree <input type="radio"/> Disagree <input type="radio"/> Strongly Disagree
Q-56	This position gives me significant experience in interagency matters.
<i>Select one answer</i>	
	<input type="radio"/> Strongly Agree <input type="radio"/> Agree <input type="radio"/> Neither Agree nor Disagree <input type="radio"/> Disagree <input type="radio"/> Strongly Disagree
Q-57	In order to perform the duties of this position successfully, an individual would find <u>JPME I</u> .
<i>Select one answer</i>	
	<input type="radio"/> Required <input type="radio"/> Desired <input type="radio"/> Not helpful <input type="radio"/> Not sure -- have no JPME experience
Q-58	In order to perform my duties successfully, I have found <u>JPME II</u> .
<i>Select one answer</i>	
	<input type="radio"/> Required <input type="radio"/> Desired <input type="radio"/> Not helpful <input type="radio"/> Not sure -- have no JPME experience

Q-59	In order to perform my duties successfully, I have found joint training or education (other than JPME)
<i>Select one answer</i>	
	<input type="radio"/> Required <input type="radio"/> Desired <input type="radio"/> Not helpful
Q-60	In order to perform my duties successfully, I have found prior experience in a joint environment
<i>Select one answer</i>	
	<input type="radio"/> Required <input type="radio"/> Desired <input type="radio"/> Not helpful
Q-61	To what extent do you draw upon your primary specialty (i.e. AOC code, MOS, AFSC or Navy designator) to perform in this position?
<i>Select one answer</i>	
	<input type="radio"/> Not at all <input type="radio"/> Some of the time <input type="radio"/> Half of the time <input type="radio"/> Most of the time <input type="radio"/> All of the time <input type="radio"/> Not sure

Q-62	To what extent do you draw upon knowledge of your Service's capabilities to perform in this position?
Select <b>one</b> answer	
<div><input type="radio"/> Not at all</div> <div><input type="radio"/> Some of the time</div> <div><input type="radio"/> Half of the time</div> <div><input type="radio"/> Most of the time</div> <div><input type="radio"/> All of the time</div> <div><input type="radio"/> Not sure</div>	

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Q-63	How many <b>MONTHS</b> did it take in this position to become comfortable in a joint environment?
Select <b>one</b> answer	
<div><input type="radio"/> <input type="text"/></div> <div><input type="radio"/> Not sure</div> <div><input type="radio"/> Not in a joint environment</div> <div><input type="radio"/> Not applicable for other reasons</div>	
Q-64	What is the planned length of your current assignment (in <b>MONTHS</b> )?
Select <b>one</b> answer	
<input type="text"/>	
Q-65	How many <b>MONTHS</b> do you think your assignment should last?
Enter <b>whole</b> numbers only	
<input type="text"/>	
Q-66	How many <b>MONTHS</b> do you think a typical permanent joint duty assignment should last?
Select <b>one</b> answer	
<input type="text"/>	
Q-67	How many <b>MONTHS</b> do you think a typical temporary (TAD/TDY) joint task force assignment should last? (Do not limit your answer by current tour length constraints, e.g. 179 days)
Select <b>one</b> answer	
<div><input type="text" value="- Please select -"/></div>	



Q-68 Which of the following was most important to you in this assignment?

Select **one** answer

- ☐ Service core competencies
- ☐ Prior joint experience
- ☐ Specialized training and orientation in joint matters
- ☐ Functional expertise other than acquisition/joint program management (e.g. operations, intelligence, personnel, etc.)
- ☐ Functional expertise in acquisition/joint program management
- ☐ Other not listed here - please specify:

Q-69 In your opinion, what is the most important thing your successor should possess?

Select **one** answer

- ☐ Service core competencies
- ☐ Prior joint experience
- ☐ Specialized training and orientation in joint matters
- ☐ Functional expertise other than acquisition/joint program management (e.g. operations, intelligence, personnel, etc.)
- ☐ Functional expertise in acquisition/joint program management
- ☐ Other not listed here - please specify:

Q-70 A civilian could perform the duties and responsibilities of this position just as effectively.

Select **one** answer

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neither Agree nor Disagree
- ☐ Disagree
- ☐ Strongly Disagree

Q-71 My position requires unique knowledge of my own service and could not be performed by an officer of another service.

Select **one** answer

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neither Agree nor Disagree
- ☐ Disagree
- ☐ Strongly Disagree
- ☐ Not applicable

Q-72 Morale problems will exist if joint duty credit is awarded for some positions in my immediate organization but not for others.

Select **one** answer

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neither Agree nor Disagree
- ☐ Disagree
- ☐ Strongly Disagree
- ☐ Not applicable

Q-73 How much of your assessment of this billet is based on experience gained through TAD/TDY?

Select **one** answer

- ☐ Considerable amount
- ☐ Moderate amount
- ☐ Minimal amount
- ☐ Not at all
- ☐ Not applicable

Q-74	Have you served at least two months in a permanent joint duty billet AND, since September 2001, also served at least two months in a temporary joint task force (JTF) billet?
Select <b>one</b> answer	
<input type="radio"/> Yes	
<input type="radio"/> No	

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Q-75	In your experience, would you claim that, when comparing an equal period of time of time, you received an understanding of the joint environment more quickly while serving in the temporary joint task force (JTF) billet than while serving in the permanent joint duty assignment billet?
Select <b>one</b> answer	
<input type="radio"/> YES, considerably more quickly	
<input type="radio"/> YES, slightly more quickly	
<input type="radio"/> About the same	
<input type="radio"/> NO, more slowly	
<input type="radio"/> NO, much more slowly	

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#### COMMENTS

Q-76 Is there anything else you would like to tell us?



Enter comments below.

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Microsoft Internet Explorer		
	Once you hit the 'OK' button, your answers will be recorded and the census will be complete. If you have changes, hit 'Cancel' and use the 'previous' button to make any changes.	
<input type="button" value="OK"/>		<input type="button" value="Cancel"/>



*Thank you again for taking the time to participate in this critical endeavor. Again, please encourage others in your organization to take the time to provide their input, too. Your efforts will help us formulate appropriate legislative recommendations and make informed policy decisions to serve better the future joint officer and the Nation.*

*David S. C. Chu  
Under Secretary of Defense  
(Personnel and Readiness)*

**Census Complete. Thank You for Participating. You may now exit your browser.**



## Model Description

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### Joint Management Model

The joint management model simulates the flow of officers through O-4 to O-6 assignments. The model represents the process by which each service community develops officers who have some degree of joint experience. The model is dynamic in that it does three things that depend on one another:

1. enters, promotes, and retains field grade officers (differently for joint and non-joint)
2. assigns officers to joint and non-joint assignments
3. quantifies the accumulation of officers with joint experience.

As described in Chapter Four, modeling this system produces an assessment of whether we might expect sufficient joint officers to satisfy the need for officers with joint experience. This system considers the supply of joint officers, the demand for joint officers, and the likely management of and resulting behavior of joint officers. A systems dynamic modeling software, iThink<sup>®</sup>, was used in developing this model. The model's primary purpose is to identify and illustrate the flow of officers from O-4 to O-6 as they progress through billets that provide and/or require joint experience, and to quantify the process. Thus, the model includes assignments to four types of jobs: those that provide joint experience, those that require prior joint experience, those both provide and require joint experience, and those that neither provide nor require joint experience. The input of each model run

includes the numbers of each of those four types of billets at each pay grade, and the management and behavior assumptions, as embodied by the different management frameworks (competencies, leadership, and skills).

The output of each model run provides the number of joint officers at each pay grade (O-4 to O-6) that can be expected to have acquired joint experience, given assumptions about the management of those officers and their retention behavior. This output tells us whether there are sufficient numbers of field grade joint-experienced officers to satisfy the demand for such officers. For each model run, the three demand questions discussed in Chapter Four are considered.

This appendix explains the assumptions and calculations in the model, discusses the input provided by the survey, and describes some of the relationships between the various elements that flow throughout the model (for example, how the management frameworks affect the inputs and outputs). To illustrate this process, we isolate in this appendix one section of the model, the path to and from O-5 (see Figure B.1). In the sections below, we start by describing the basic principles of system dynamics, then follow with a discussion of the key assumptions, inputs, and outputs on which the model is based.

## Basic Principles of System Dynamics<sup>1</sup>

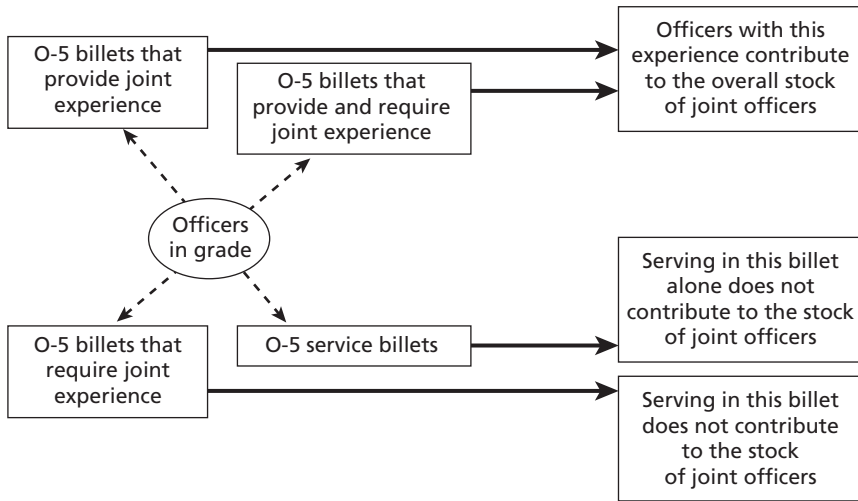
### Stocks

Stocks and flows are the primary building blocks of systems structures in systems dynamics. Stocks are most easily explainable as things or accumulations of things. In the case of this joint model, stocks represent types or accumulations of people, such as officers in a joint assignment or officers with joint experience. There are, however, different kinds of stocks. The joint model uses reservoir stocks and conveyor stocks. Reservoir stocks accumulate people until an event is specified:

---

<sup>1</sup> This section was incorporated from Margaret C. Harrell, John F. Schank, Harry J. Thie, Clifford M. Graff II, and Paul Steinberg, *How Many Can Be Joint? Supporting Joint Duty Assignments*, Santa Monica, Calif.: RAND Corporation, MR-593-JS, 1996.

**Figure B.1**  
**Assignment to Different Billet Types and Joint Experience Outcomes**



RAND MG886-B.1

For example, joint officers at each pay grade remain in that reservoir until they are promoted or they leave the service. Conveyor stocks retain their content only for an established period of time and then empty automatically. A conveyor stock is used to represent the flow of joint officers through a job in a certain amount of time. For example, if the duration of a tour in one of the management frameworks is three years, the conveyor stock representing that tour will retain an officer in a joint billet for only three years and will then release him or her to the next stage of the process. These duration values can, of course, be changed, and they vary from conveyor to conveyor.

### Flows

Flows represent activity, or movement, into and out of stocks. In any representation of a system, stocks and flows are mutually dependent, because stocks can neither accumulate nor empty without a flow. Because it is not necessary in this example to specify the source of the inflow or the destination of the outflow, we use cloud symbols to begin and end this chain. Another way to think of stocks and flows

is as “facts” and “policies.” In other words, the stocks represent facts that are a result of policies. For example, the number of joint O-5s in Figure B.1 is a fact that reflects the related policies of how frequently O-5s are assigned to joint billets and how O-4s and O-5s with joint experience are promoted and retained. There will frequently be more than one flow, or policy, that affects any stock, but flows are the only way to adjust stocks.

### **Auxiliaries**

Another building block used in system dynamics modeling is the auxiliary, which is represented in the model as a circle. Auxiliaries represent information that will affect the flow or accumulation in the model. In the modeled joint officer management process, auxiliaries represent such factors as the loss rates and promotion rates of officers out of grade. Auxiliaries can vary over time and can be defined by graphing a function in which time is one of the axes.

## **Joint Management Model: Key Assumptions, Inputs, and Outputs**

The key assumption in this model is that inventory equals authorizations, and thus the model promotes and retains to fill the billets that were identified by the service communities as the appropriate number of billets for those communities, by pay grade. Inputs to the model include the number of billets, by pay grade; the number of those billets that provide joint experience, require joint experience, and both provide and require joint experience; promotion rates for joint officers; promotion rates for non-joint officers; loss rates for joint officers; and loss rates for non-joint officers. Outputs of the model are the number of officers, by pay grade, with joint experience. These elements of the model will be discussed in more detail in this appendix.

### **Key Assumptions: Inventory and Authorizations**

As shown in Figure B.1, there are four kinds of O-5 billets in the model that officers might be assigned to; only two of them provide a joint

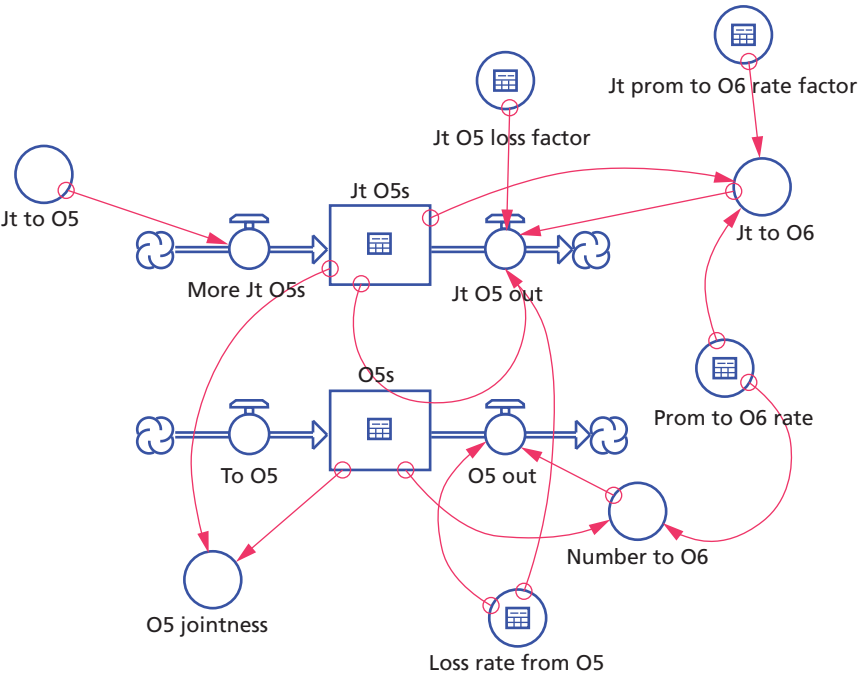


experience. The first billet type provides a joint experience. The second provides a joint experience but must be filled by an officer that has already obtained joint experience in a prior job. The third kind of billet requires officers to have prior joint experience but does not provide joint experience, and the fourth neither provides nor requires joint experience. The model that supports the analysis of this report and is described in this appendix follows the flow through these four kinds of billets to produce the primary outcome: the number of officers with joint experience. In grade, an officer can serve in a number of different billet types and therefore has several opportunities to gain joint experience and thus contribute to the pool of joint-experienced officers.

The overall purpose of the model is to illustrate and quantify the flow of joint-qualified officers from one pay grade to another. The officers within a pay grade are assigned to multiple jobs while at that pay grade, which may be any of the four kinds of jobs described earlier. When officers move through these four types of billets, they are tallied in the model, which tracks the officers with joint experience who leave the service or who remain to be promoted. Those that have served in a job that provides joint experience contribute to the stock of joint officers in the outcome (even if they also serve in non-joint jobs while in grade).

To illustrate the tallying of officers who are receiving joint experience, a more detailed look at the effect of serving both in billets that provide and do not provide joint experience, and the resulting effect on the stocks representing the tally of those officers, is required. This portion of the model is represented in Figure B.2. This figure displays an excerpt of the actual model to show how officers enter, promote, and retain. This figure includes two stocks (indicated as rectangles): one representing the tally of O-5s who have acquired joint experience and one representing all other O-5s. At each time point in the model, the flows that send officers into these stocks represent the promotion of O-4s without joint experience to O-5, the promotion of O-4s with joint experience to O-5s with joint experience, and number of O-5s who have just completed an assignment that provides joint experience. The auxiliary (circle) labeled “Jt to O-5” provides data about the number of newly promoted O-5s who had received joint experience while they

**Figure B.2**  
**Flow Into and Out of Grade O-5**



RAND MG886-B.2

were O-4s. The outflows are affected by a number of auxiliaries, including the promotion rate for O-5s to O-6, the promotion rate for joint O-5s to O-6, and the loss rates for joint O-5s and non-joint O-5s. As with new O-5s, the auxiliary labeled “Jt to 6” will inform the flows entering O-6 as to the number of newly promoted O-6s that received joint experience in prior pay grades. In sum, the two stocks illustrated show how the officers who receive joint experience are added to the overall O-5 “stock,” both with joint experience and without. The top portion of the illustration shows the stock of officers that flow in and out of the process getting joint experience, while the bottom portion illustrates officers who never serve in a billet providing joint experience, thereby not adding to the joint stock.

## Model Inputs

To better understand how officers serving in the four different kinds of billets contribute to the stock of joint officers, various inputs are required. Inputs to the model include the number of billets by pay grade (authorizations); the number of those billets that provide joint experience, require joint experience, both provide and require joint experience, and neither provide nor require joint experience; the typical length of time in job; promotion rates for joint officers; promotion rates for non-joint officers; loss rates for joint officers; and loss rates for non-joint officers.

**Authorizations.** We used total authorizations as an input to account for all other billets that were not considered joint, either by JDAL standards or from the survey responses. The authorizations were identified primarily from the Defense Manpower Data Center (DMDC) FORMIS database and through communications with community managers and other representatives of the communities modeled. After all joint billets (either requiring or providing jointness) were identified, the remaining authorizations were considered non-joint billets.

**Billets That Supply Joint Experience.** The counts for billets that supply joint experience are derived from two sources: the JDAL and the JOM survey. For the former, we assumed that any billets included on the JDAL supply joint experience. Just as the current joint officer management system assumes that officers who serve (with a minimum tenure) in a billet on the JDAL receive joint credit, our model assumes that those officers have obtained joint experience.

The second source of counts for those billets that supply joint experience came from the survey respondents. On the survey, there are three questions that were intended to elicit answers that would indicate whether the respondent might be serving in a billet that supplies joint experience. The three questions are as follows:

Q54: This position gives me significant experience in multi-service matters. [Select **one** answer: Strongly Agree, Agree, Neither Agree nor Disagree, Disagree, or Strongly Disagree.]

Q55: This position gives me significant experience in multi-national matters. [Select **one** answer: Strongly Agree, Agree, Neither Agree nor Disagree, Disagree, or Strongly Disagree.]

Q56: This position gives me significant experience in interagency matters. [Select **one** answer: Strongly Agree, Agree, Neither Agree nor Disagree, Disagree, or Strongly Disagree.]

To be considered as a billet that provides joint experience, the respondents had to answer that they either strongly agree or agree to any of those three statements.

The model runs used either the JDAL billets or the survey responses to provide the number of billets that provide joint experience. Chapter Four explained the model excursions in greater detail, but for each of the communities, Analyses 1–3 used the JDAL billets and Analyses 4–6 used the survey responses.

**Billets That Require Joint Experience.** We used the same two sources to determine the need for officers who can occupy joint billets. First, to determine the need for joint officers based on the JDAL, we counted critical billets. Critical billets both provide and require joint experience; therefore, the billets demand joint experience, and the officers filling these billets also acquire joint experience. However, officers serving in such joint billets do not further increase the stock of joint officers because they are not gaining new joint experience by serving in the billet; they were already tallied in this stock.

The JOM survey data were the second source of data used to determine the demand for joint experience. In the survey, there is one question that inquires whether the respondent believes prior joint experience should be required or desired for the billet in question. This question is

Q60: In order to perform my duties successfully, I have found prior experience in a joint environment: [Select **one** answer: Required, Desired, Not Helpful.]

Answers accounted for all those billets that “required” a prior joint experience as well as those that were “required or desired.” As discussed

in Chapter Four, the JDAL critical billets were used to determine the demand for joint experience in Analyses 1 and 4, survey responses that indicated joint experience was “required” indicated the demand for joint officers in Analyses 2 and 5, and the survey responses that indicated *either* “required” or “desired” indicated the demand for Analyses 3 and 6.

**Determining Army Infantry, Navy Surface Warfare Officer, Air Force Space and Missile, and Marine Corps Ground Billets.** The model excursions were analyzed separately for Army Infantry, Navy Surface Warfare, Air Force Space and Missile, and Marine Corps ground occupations, and therefore survey responses were also analyzed separately for these communities. Because the survey focused on the characteristics of a billet, and because respondents included both billet incumbents and others designated to complete the survey, the analysis needed to consider both the occupation of the incumbent respondents and also the occupation associated with the billet. Specifically, incumbent respondents were asked their Army Area of Concentration (AOC), Navy Officer Designator Code, Air Force Specialty Code (AFSC), or Marine Corps Military Occupation Specialty (MOS) code. The occupation associated with the billet was also separately available (indirectly from DMDC).

We included incumbent records when the respondent specialty codes matched those found to represent Army Infantry, Navy Surface Warfare, Air Force Space and Missile, or Marine Corps ground specialties. We included billet-specific information when the incumbent’s occupation did not match the criteria for inclusion in the study. These data were identified in supporting databases that categorized these occupations (e.g., DMDC and LMI databases).

The pay grade data included both respondent pay grade and billet pay grade. Incumbent respondent pay grade was generally used where possible. If the pay grade of the incumbent respondent was missing, and if the billet pay grade was in the O-4 to O-6 range, then the billet pay grade was captured in the analysis.

The response rate from the JOM survey was about 70 percent, leaving us with 30 percent missing data. In an effort to make sure that this 30 percent of responses was represented in the model, we developed

proxy responses. The goal was to use information about those billets even though the responses were by proxy. Survey response rates varied by billeted organization, and in order to represent all appropriate officer positions with the survey responses at hand, we magnified survey response records in a manner determined by organizational response rates. Stratifying on billeted organization, records were hotdecked (i.e., repeated, random draws with replacement) from those at hand in order to expand the record set to the number of records thought to be the reasonable approximation of billets from which responses might have been anticipated. From the expanded record set thought to represent the universe of targeted positions, then, various key variables were collected from the resultant records to allow for demand and supply analysis.

**Promotion and Loss Rates.** In addition to authorizations and billets, other inputs include promotion and loss rates. The model used promotion and loss rates that approximate the current management of these occupations, adjusted slightly to ensure that inventory matched authorizations in the model. These rates were used for officers without joint experience. The promotion and loss rates for officers with joint experience deviated from those as the management frameworks suggest, as each framework provides a different expectation for how joint experience officers promote and retain. The “factor” or difference between the promotion and loss rates used for non-joint and joint officers allowed us to account for the variations in how the management frameworks (leader, skills, and competency) treat joint officers, compared with other officers. The “factor” was increased, decreased, or kept equal based on the framework suggestion (see Table 4.1). For example, when we apply the competencies framework, the factors change to force a higher promotion rate to O-5 and a lower promotion rate to O-6, compared with non-joint officers, than it would in the other management frameworks. Alternatively, the loss rate factors for infantry officers with joint experience remain the same for O-4s, increase for O-5s, and decrease for O-6s when they are managed by the competency framework. These rates reflect real-world promotion and loss rates and also force the model to reach a 100 percent fill rate of billets. For example, at the time of this research, the Army was promot-

ing about 90 percent of infantry officers to O-5. Therefore, the modeled promotion rates from O-4 to O-5 reflect these actual promotion rates and also ensure that the modeled O-5 billets are filled. These promotion rates affect the model outputs. For example, it is difficult to improve infantry officer promotion by much in the leadership model, and thus joint infantry officers tend to be promoted at a rate similar to non-joint infantry officers.

**Length of Time in Job.** As explained in Chapter Four, each management framework assigns job lengths that vary based on the management assumptions. The managing leader succession framework would feature relatively shorter joint assignments; the managing competencies framework would keep officers in a billet for a longer, more stable assignment; and, in the managing skills framework, assignment lengths do not vary for joint and non-joint assignments. The job length for each framework is shown in Table B.1. There are four job lengths per pay grade for each framework. These different job lengths are asso-

**Table B.1**  
**Assignment Lengths, by Management Framework**

Assignment Length	Managing Leader Succession	Managing Competency	Managing Skills
O-4length	2	3	2.5
O-4length2	2	4	2.5
O-4length3	1.5	4	2
O-4length4	2	3	2
O-5length	2	3	2.5
O-5length2	2	4	2.5
O-5length3	1.5	4	2
O-5length4	2	3	2
O-6length	2	3	2.5
O-6length2	2	4	2.5
O-6length3	1.5	4	2
O-6length4	2	3	2

ciated with the four different kinds of billets (those that provide joint experience, provide and require joint experience, and require joint experience; and non-joint billets).

### Running the Model and Model Outputs

Each model run starts with the number of authorizations, by pay grade, for a specific community and the number of billets that supply joint experience (or not). For example “O5provjtblt” represents the number of O-5 billets that provide joint experience (and these counts are represented as auxiliaries). The auxiliary labeled as “O5provreqjtblt” is the number of O-5 billets that provide and also require joint experience. This, combined with “O5provjt” billets, is the total number of billets that provide joint experience. These “O5provreqjtblt” billets, however, do not increase the total tally of officers who have joint experience, since they had joint experience prior to being assigned to this billet. The next auxiliary, “O5intreqjtblt,” is the number of billets that require joint experience. The total O-5 billets that require joint experience is a combination of “O5provreqjtblt” and “O5intreqjtblt” and is calculated as the sum of “O5intreqjtblt” plus “O5prvnreqjtblt.” Finally, “O5svcbt” is non-joint service billets.

These four auxiliaries, which dictate the total number of each kind of billet, are shown on the left side of Figure B.3, which illustrates the O-5 portion of the model. The auxiliary at the bottom left is the total number of O-5 billets. On the far left is the auxiliary that sums the number of officers with joint experience that is required at O-5.

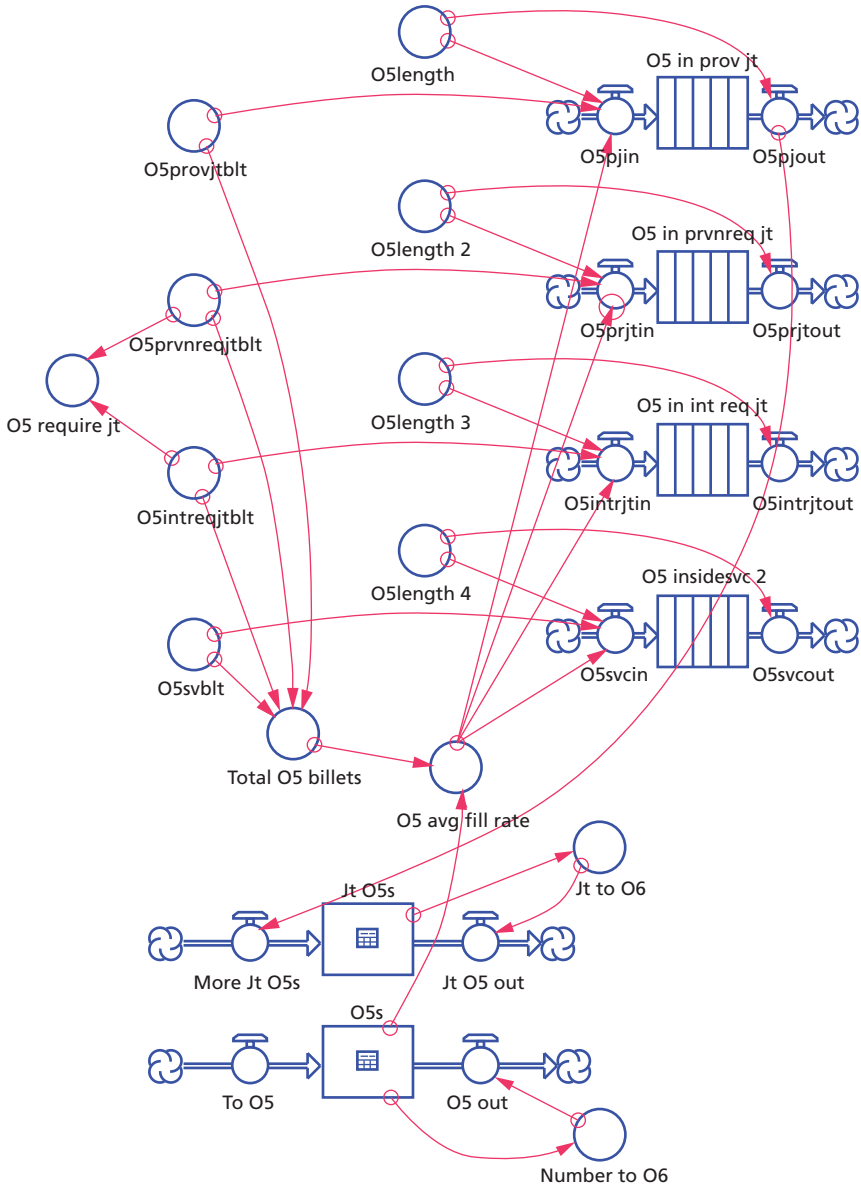
The stocks (represented by rectangles) indicate the officers serving in each type of billet. The conveyer duration of the stock is set to the various job lengths (which change depending on which management framework is applied) and is represented by the calculation (as an example, here is the equation for billets that require joint experience in job length “3”):

$$(O5intreqjtblt \times O-5\_Avg\_Fill\_Rate) / O-5Length\_3.$$

This equation multiplies the O-5 billets that require joint experience by the average fill rate of O-5 officers and then divides this number



**Figure B.3**  
**Flow Into and Out of Grade O-5 with the Addition of Joint Flow Options**



by the length specific to the management framework being applied. The average fill rate is considered the proportion of O-5 billets to the total number of O-5s. The total supply of O-5 joint officers for each model run is provided by those that flow through the “O-5 provjtblt” path. The officers that flow through this path represent those that are getting joint experience for the first time; the officers going through this path contribute to the overall stock of officers with joint experience. Thus, as officers complete the billets that provide joint assignments (represented at the top of the figure) and thus flow out of the stock that provides joint experience, the number of officers with joint experience increases, as reflected by the arrow connecting this outflow and the tally of joint officers at the bottom of the figure.

As a recap, the model accounts for all field grade officers who are moving through a grade. Each officer is assigned to one of four different kinds of assignments, which are reflected in the model as stocks: a billet that provides joint experience, a billet that provides and requires joint experience, a billet that requires joint experience, or a non-joint service billet. As officers complete an assignment, they are returned to the stock of O-5s, from which promotions, losses, and additional assignments occur. As these officers serve in these various billets, they gain joint experience and contribute to the stock of overall officers with joint experience. By considering the average fill rates, the promotion and loss rates, the length of time spent in each job, and how these factors differ for joint and non-joint officers, the model determines the total count of officers with joint experience at each pay grade.

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