THE CIVILIAN WORK FORCE IN MILITARY ORGANIZATIONS: AN ANNOTATED BIBLIOGRAPHY

NAVY PERSONNEL RESEARCH AND DEVELOPMENT CENTER
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THE CIVILIAN WORK FORCE IN MILITARY ORGANIZATIONS:
AN ANNOTATED BIBLIOGRAPHY

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There are approximately 300,000 federal civil service employees in the Navy work force and 1,000,000 in the Department of Defense. The productivity and effectiveness of these employees have a tremendous impact on military operational readiness. Despite their numbers and importance, surprisingly little written information exists concerning this population. This report provides an annotated bibliography for those interested in the civilian work force in military organizations.
FOREWORD

This project was conducted as one of the first steps in developing a systematic research program on the Navy's civil service work force. The overall goal of this research program is to develop, test, and evaluate ways to enhance the productivity and effectiveness of this work force through improved management and personnel practices. This program is being developed in response to the interest of the Chief of Naval Operations (OP-14). It is funded by project Z1383-PN (Civilian Personnel Issues).

The literature review underlying this report was conducted to ascertain what knowledge is already available on the topic of civilians in the military. Once a list of references was compiled, it was decided to publish it in bibliographic form to provide a useful starting point for researchers and policy makers interested in this topic.

The literature reviewed was gleaned from a wide variety of highly disparate sources. Although the reference list is extensive, it would be unrealistic to assume it is complete. Plans are to continue adding references to the list as new material is discovered. Therefore, it is requested that readers of this report who are aware of other relevant material contact the authors of this report (Commercial (714) 225-6935 or Autovon 933-6935).

JAMES F. KELLY, JR.
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Technical Director
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INTRODUCTION

Problem

At present, there are almost 300,000 civil service employees in the Navy work force and about 1,000,000 in the Department of Defense. These employees provide supplies, maintain facilities, and develop, procure, and maintain weapons. Therefore, their productivity and effectiveness have an enormous impact on operational readiness. Despite their numbers and importance, however, surprisingly little written information exists concerning this population. The information that does exist has been generated from highly disparate sources and is not easily located.

Purpose

The purpose of this effort was to provide researchers, policy makers, and other groups with an interest in the DoD's civilian work force with a readily accessible list of references on this population. In addition, the information is being used by the Navy Personnel Research and Development Center as an initial step in developing a long-range Navy civilian personnel research program.

Approach

References for the bibliography were gathered by:

1. Making use of the authors' prior knowledge regarding certain materials, based on their previous professional efforts in the field.

2. Making inquiries of (a) appropriate headquarters' organizations in the three services and in the Office of the Secretary of Defense, (b) researchers, managers, and policy makers known to have some familiarity with or interest in this field, and (c) contractors who have done relevant studies.

3. Conducting literature searches of libraries and computerized data bases.

The Lockheed DIALOG literature retrieval system was used to search the data bases of the Smithsonian Science Information Exchange's (SSI) Current Research, the American Psychological Association's PsycINFO, and the file of the National Technical Information Service (NTIS). In addition, a search was made of the Manpower and Training Research Information System (MATRIS), which is located at the Navy Personnel Research and Development Center and which collects information relevant to all people-related research and development performed within the DoD research community or under contract by DoD. No direct attempt was made to locate material from countries other than the United States.

Results

The bibliography developed on civilians in the military appears in the appendix. The references with annotations are presented in alphabetical order by author and title, followed by a cross-reference index.
APPENDIX

ANNOTATED BIBLIOGRAPHY ON THE CIVILIAN WORK FORCE IN MILITARY ORGANIZATIONS

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ALPHABETICAL LISTING


   Describes a promotion policy model that can be used to deal with the problems caused by personnel ceiling restrictions, high grade controls, promotion restrictions, and other related controls. Application of the model at two Navy laboratories is described.


   Article reports on warnings to Congress by the Senior Executive Association (SEA) concerning the importance of raising the federal pay cap and outlines problems like those in DoD that are caused by the turnover of executives who run the military establishment.


   Provides information on quality circles along with the results of a questionnaire assessing Navy organizations' interest and involvement in productivity improvement programs in general, and quality circles in particular. In addition, a plan for implementing quality circles in Navy organizations is presented.


   Supplies details on a Navy demonstration project designed to show if a more flexible personnel system can help managers increase their organizations' effectiveness. Features of the project and employee reactions are reviewed.


   Study focuses on the organizational and behavioral byproducts of DoD's dichotomous structure, composed of military and civilian elements.


   Paper considers the rising cost of DoD personnel and discusses cost issues related to the substitution of civilians for military personnel. Provides recommendations on how to proceed with civilianization.

This paper examines the defense support establishment and clarifies the important support issues involved. Spending issues are identified and a framework for assessing them is developed. The author forwards his proposals for improving the defense support program.


Examines the appropriate mix of military, federal civilian, and private sector workers employed by the defense establishment, and explains why changes in this personnel mix are necessary. The study recommends how changes may be brought about to make more effective use of manpower resources and exposes those areas of analysis where further investigation and research are urgently needed.


Concerns the analysis of workload demands in a major shore activity in San Diego. The study was performed with the objective of developing an input-output model of the fleet-support demand network that could be used in manpower planning.


This report contains a complete description and the possible application of a model created to forecast the changes in workload on Navy shore-based support activities caused by changes in fleet size and configuration.


Aims at providing the Navy with a quantification of the improvement in operational fleet manning from a given form of Navy-wide decrewing. One such approach involves the use of civilians in shipyards in order to free ships' crews from work they are presently performing, allowing them to be sent back into the fleet or into Shore Intermediate Maintenance Activities (SIMAs) where their manpower is needed.

Develops the methodology to comprehensively depict, from a top-level management perspective, the Navy's manpower personnel and training program. The functions, methodology, and the results obtained from the study are described.


Final report on the aforementioned study.


Abstracts the significant events in the evolution of Navy research and development (R&D) management since World War II, employing variables that include organizational structure and authority, policies, level of resources and trends, achievements and failures, and the impact of these factors on R&D activities and industry.


Summarizes above study.


Describes the test of a manpower management model in a Navy industrial facility and its output in terms of management decisions made. The manpower action plans generated with this model were judged.


Involves the development and testing of aggregate manpower and personnel models at large Navy shore activities for determining recruiting requirements based upon manpower goals and for promotion planning. Findings and conclusions are discussed.


The cost-effectiveness, cost-savings projections and related issues of a performance-contingent reward system that uses economic incentives were evaluated. Recommendations for implementation at other Navy activities are noted.

Identifies impediments to productivity in the Navy industrial community, determines the source of these impediments, and provides recommendations to improve the situation.


Purpose of study was to design and employ an inventory to collect information from a sample of Navy civilian and military managers describing their perceptions of various leadership techniques. The findings, conclusions, and recommendations generated from this research are discussed.


A major purpose of this paper is to present research findings on the relationship between career civilian and military executives in the Navy. These findings are discussed and conclusions are formulated.


Document consists of presentations given at a conference on "Productivity and Work Motivation in the Navy and Other Military Services."


Addresses the Navy's use of civilians as their primary defense strategists and explains how they achieved this status at the expense of naval officers who might vie for these positions.


Reviews the Navy's evaluation of its initial prototype equal employment opportunity (EEO) models and control systems noting that EEO goals policy must consider budget, labor market availability, and personnel progression rates as well as other factors.

Author traces the history of performance evaluation in the federal service and suggests reasons why these systems often fail. Six essentials are proposed for an effective performance evaluation system.


Data gathered from a job analysis inventory was analyzed using multiple regression and was found to be highly predictive of the general schedule (GS) grade authorized for the positions involved. Conclusions about the stability and objectivity of the civil service classification system are forwarded.


The feasibility of linking two submodels, one for military and civilian manpower and one for program planning, together to form a multilevel model is studied.


Transcript of a presentation emphasizing the need for a strong military/civilian team in the Navy of the future. Speaker discusses why the organization is composed of two experiential tracks: one for the military and one for the civilian.


Explores efforts dealing with the workload projection problem and workload-related workforce goals planning. Potential applications for concurrent use of the Shore Activity Manpower Planning System (SAMPS) with the aforementioned effort are discussed and research recommendations are made.


Report of conference that raised questions regarding Navy civilian manpower issues for application in R&D settings. Abstracts of briefings, observations of participants, and suggestions for action are included.

Report describes the composition of the DoD civilian blue-collar work force, with emphasis on manpower costs and the pay determination system.


Comparisons were made between Air Force civilian and military members in similar jobs. Similarities and differences were reported and discussed between the two groups. Factors not considered in the comparison were recommended for future research.


Reports on demonstration project carried out at two Navy organizations. The project's objectives were to improve the personnel evaluation and development functions of the organizations. Details on the measures taken to accomplish this are outlined.


An attitude survey of Navy civilians is examined for links with employee turnover through the use of factor analysis and regression analysis. The relationship between turnover and the other variables is explored.


Compiles information on DoD dealing with organization, budget, civilian and military personnel, training force, locations, and weapons systems.


Paper investigates productivity of the economy as a whole, of the public sector, and of the federal upper level managers. Study focuses on the latter group and analyzes selected issues affecting their productivity.


Report outlines the development of an incentive management program using monetary rewards for Navy civilian employees, and describes the development of subsequent programs using the original program as a model.

Report describes the composition of the DoD civilian blue-collar work force, focusing on age distribution and aging trends and policies potentially impacting on aging dynamics.


Focuses primarily on the military-civilian team within the Naval Material Command (NAVMAT) and supplies specifics on the NAVMAT organization. Outlines factors that influence the military-civilian relationship.


Examines and appraises the potential for and problems of placing civilians aboard U.S. Navy combat and fleet support ships. Recommendations for further study are made.


Article deals with the military-civilian technical organization, its nature, and its problems. Attempts to suggest principles that provide a frame of reference for understanding military-civilian technical organizations.


Military and civil service personnel who have similar jobs are compared on several attributes. Distinct differences found between the two groups are discussed. Recommendations for further investigation are given.


Examines the advantages of the Automated Career Management System, a computer-based civilian personnel inventory, appraisal, and referral system. Maintains that the DoD is not adequately using the system's capabilities, cites weaknesses in the appraisal and referral process, and makes suggestions for improving the system's effectiveness.

Recommends that DoD take steps to accommodate increases in civilian personnel and decreases in military personnel within industrial facilities, since an earlier study found costs could be lowered if civilians were more fully used in this setting.


Report stresses that a well-defined policy is necessary for total force management to obtain the most cost-effective mix of military, civilian, and contractor personnel. Includes recommendations on the type of guidance DoD should supply.


Reviews the problem of DoD grade escalation and its possible causes. Reports on the effectiveness of mechanisms used by DoD to slow this growth, the problems that such controls produce, and the possible use of position management as an alternative.


Emphasizes the need to have work force requirements and personnel management decisions based on appropriate work force planning systems and procedures. GAO recommends the establishment of a federal policy and standards for work-force planning.


Report is concerned with DoD's problems in work measurement. GAO cites the DoD's most serious problems, the implications if deficiencies are not corrected, and recommendations to strengthen work measurement programs.


Reviews DoD's Defense Integrated Management Engineering System (DIMES) work measurement program and judges its effectiveness in contributing to DoD's productivity efforts. Weaknesses in the work measurement program were cited and recommendations for improving the system are forwarded.

Study maintains that the need for more efficient and effective management of people becomes more pressing as federal personnel costs escalate and that effective personnel management is the key to achieving any agency's mission. It reviews the fundamental philosophy of the Civil Service Reform Act, identifies current and emerging issues related to managing and compensating the federal work force, and presents the perspective used in organizing GAO audit efforts in this area.


Study points out that many military and civilian employees lack sufficient expertise and effectiveness in performing DoD manpower and personnel management functions. Assignment practices and career programs have hindered the development of this type of expertise. Recommendations are made to remedy the situation.


Second volume of above study.


Responds to a Congressional inquiry into DoD's 1980 use of its authority to exceed its civilian personnel ceiling. Discusses whether the use of this authority was consistent with the intent of the DoD Authorization Act, which allows DoD this flexibility to handle events not covered in the budget process.


This report maintains that federal agencies are not realizing the full benefits that may be achieved through an effective employee suggestion system. Problems prevail because no single office with the authority to act has directed agencies to implement the system aggressively.


Report deals with the Navy's Advanced Information System, which allows for the centralized management of all Navy personnel resources and requires the concurrent consideration of all manpower and personnel elements to determine the optimum composition of the total force. The conclusion was that changes must be made if this system is to meet its objectives.

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56. **General Accounting Office.** Wages for federal blue-collar employees are being determined according to the law, but improvements are needed (FPCD-80-12). Washington, DC: Author, October 1979.

Investigates complaints that federal employees' hourly rates are not being set according to the law and dismisses these complaints. However, GAO recommends administrative and legislative changes to improve the system.


Determines the applicability of various manpower models developed by the Navy's Office of Civilian Manpower Management to meet the requirement of the Naval Facilities Engineering Command.


Study was conducted to identify and examine objectives and supporting strategies for management of the federal blue-collar work force. Objectives of the project were outlined and findings were reported.


Analyzes the respective administrative systems for promotion between Navy officers and civilian employees. Differences in these two systems are noted as well as their implications for performance evaluation.


The purpose of the study was to determine how to train 200,000 Air Force civilian employees to use the Job Performance Appraisal System. Different training approaches were considered and judgments made about their advantages.


Describes the testing and use of an Army's productivity measurement system that provides an index based on a number of performance factors considered relevant to productivity. Recommendations for adapting this system for use by other organizations are forwarded.

Discusses how the Senior Executive Appraisal System (SEAS) was developed through a review of literature and existing executive appraisal systems and guidance from Air Force executives. The components of SEAS are outlined. Recommendations for the successful use of the system are forwarded.


Report suggests several possible causes for the general increase in grades of civilian workers but does not definitively identify the specific cause(s). Areas for future research are suggested.


Outlines the development of the Organizational Assessment Package (OAP) to support the Air Force Leadership and Management Development Center. The Center provides services related to the management of both civilian and military Air Force personnel. The model on which the OAP was developed is presented, along with recommendations for its use.


Reports on a series of analyses of variance used to establish significant differences between response options associated with background information items from the Air Force's Organizational Assessment Package (OAP). Main effects and interactions obtained are cited and differences between civilian and military personnel noted.


Attempts to develop manpower estimating equations to forecast requirements within the base operating support sector of Navy manpower.


Analyzes and evaluates the Air Force Civilian Employee Performance Evaluation System for its motivation of the civilian employee. Strengths and weaknesses of the system are reviewed and recommendations are made.

Attempts to determine why civilians are not used as DoD program managers. Formal documentation of civilian exclusion was sought and the roles and requirements for a program manager were investigated. Advantages of using civilians in this position are cited and recommendations are made.


Describes the innovative management approach of applying the network model to DoD to provide intelligence support and enhance the relevance of bureaucratic decision making. The evolution of this network overlay application and why it improves organizational performance are outlined.


Provides a basis for research on first-line civilian supervisors, accounting for shifts in selection factors across installations and time frames. Methodology was discussed and recommendations were developed for improving the selection of first-line supervisors.


Assesses and compares the relative job satisfaction of civilian research, development, and test and evaluation (RDT&E) scientists and engineers working in DoD laboratories using the Job Descriptive Index (JDI). Findings are reviewed.


Documents a series of interactive computer routines that permit an assessment of the impact of changes in fleet structure on shore support activities' workload levels that, in turn, can be translated into manpower requirements.


Paper outlines the Navy's extremely limited use of civilian executives to manage major weapons programs.

Sources of animosity between Air Force military members and civilian employees are identified. This study presents general information that the military manager should be cognizant of when managing civilian employees, on the assumption that knowledge of the civilian personnel system will aid in resolving this conflict.


Identifies current and long-term research needs associated with Navy civilian personnel management and equal employment opportunity (EEO) necessary for the development of a personnel management research program.


This effort is directed at understanding the similarities of and differences between Air Force civilian and military personnel management communities. Employs the utilization and procurement functions of the Personnel Life Cycle to highlight these similarities and differences.


This study investigated the skills, activities, and training needs of a group of Navy civilian executives. Methodology and results are discussed.


Study is concerned with determining the content of managerial work in the public sector since this is imperative for developing effective selection, development, and appraisal programs. This study builds on Mintzberg's work in the area. It was concluded that public sector managers ranked quite similarly to private sector managers (on Mintzberg's ten managerial roles); however, differences were discussed. Recommendations on how to enhance public sector executive selection, development, appraisal, and utilization are given.


Study compared high-level public sector Navy civilian executives (GS 16-18) and private sector managers and executives in terms of job content, job characteristics, and perceptions of the skills required for effective job performance. Findings are reported and discussed.
80. Law, J. M. Quality circles zero in on productivity at the Norfolk Naval Shipyard. Management, Summer 1980, 2-5.

Looks at the growth of quality circles in American organizations, specifically at the program implemented at the Norfolk Naval Shipyard. An overview is provided and its success and projections for program expansion are included.


Examines a method of integrated military and civilian workforce analysis and planning processes necessary to coordinate the entire DoD workforce.


Objective of the research was to develop and utilize a method for determining and examining the attitudes of naval officers toward civil service managerial and technical personnel. The hypothesis that the general attitude of naval officers toward their civilian counterparts was negative failed to be supported by the findings.


A questionnaire was used to determine attitudes of R&D scientists and engineers working at an Air Force installation towards unions. Results were analyzed and discussed.


Summarizes a research effort aimed at estimating the nature and extent of alcohol-related problems among Air Force civilian employees. The questionnaire methodology employed was outlined and additional information gathered on job satisfaction, work involvement, and stress is reported.


Paper focused on the subject of military-civil service mistrust by examining attitudinal differences between military and civil service employees in the Air Force toward their work.

Article reports on the administration of a questionnaire to Air Force civilian employees that attempts to assess the degree of their alcohol-related problems. Results obtained were reviewed and recommendations for treatment programs were made.


Study attempts to develop a set of value concepts determined to be behaviorally relevant to R&D professionals, identify an appropriate set of goals for an R&D organization, and incorporate various types of information into a questionnaire. Results obtained from administering this questionnaire are reviewed.


Examines reading levels of Air Force civilians according to occupations and grade. Findings are discussed along with the utility this knowledge will have in the future.


Describes the development and design of a structure that categorizes and summarizes all Navy and Marine Corps manpower. This structure will provide a framework for constructing forecasting models.


Attempts to provide reliable baseline data on true civilian workforce attrition levels throughout the DoD, both overall and as a function of selected variables. Personnel policies and compensation practices that affect attrition are discussed. Other objectives are defined concerning attrition trouble spots, trend analysis, and manpower planning.


The study provides a perspective on the analysis of wage/salary comparability between DoD and the private sector.

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Identifies and measures any disparities in composition and compensation of minority and female scientists and engineers in DoD relative to their nonminority male colleagues.


The turnover study concentrated on DoD civilian separation characteristics and policy implications in the turnover of GS-11 through GS-18 employees and interoccupational comparisons of separation rates.


The objective of this report is to identify the extent to which productivity measurement systems are being used in the federal government and the variety of systems in use. This history of productivity measurement in the federal government and data from a survey used to determine the current state-of-the-practice of federal sector measurement systems are presented.


Outlines the approaches used at Kelly Air Force Base aimed at improving productivity. These approaches include job enrichment, incentive awards, and group competition. The productivity gains that were obtained are reviewed.


Objectives of establishing labor-management councils are outlined with productivity improvement seen as a major product of such a program. The National Center for Productivity and Quality of Working Life's involvement with this type of program is explained.


Examines the personnel composition of the naval shore establishment by selected demographic variables (e.g., age, grade, location, union representation, minority status, and activity). (This report is issued annually.)

Presentation contains the final results of a 7-month quantitative examination of the effects of the high-grade limitation on Navy laboratories. Data are presented and conclusions are drawn.


Navy guide designed for use in assessing civilian personnel management at the activity level and evaluating functional areas at various organizational levels.


Presents employment information on the federal civilian work force by branch, agency, location, payroll, turnover, and accession.


Furnishes data from a survey that reflects a wide range of information needed for comparison studies, forecasting, trend analysis, estimating, and related purposes.


Provides transcripts of presentations given at Western Forum conference on federal productivity and the quality of working life.


This paper investigates some of the management problems and personnel conflicts that exist in a joint military-civil service organization and reviews information from the literature and questionnaires on these issues. The information is summarized and conclusions are drawn for better understanding of these problems and for developing techniques to deal with them.


Report deals with the productivity and compensation of civilians in DoD's support structure areas. Reviews the progress made within DoD to improve the efficiency of this support structure and ensure that wages for employees are comparable to the private sector.

Outlines a field test on the effects of feedback and goal-setting techniques on productivity in two groups of Air Force clerical jobs. The findings are discussed in terms of potential application to other settings.


Study identifies mid-life issues important to mid-level (GS-13-15) career development. Personnel policies that either inhibit or facilitate individuals in making occupational, geographical, or organization changes influencing their careers or organizational effectiveness are evaluated. Barriers to these types of changes are cited.


Describes the research program instituted to develop an Air Force civilian appraisal system. Reports on the complexities that are involved in the effort as well as its goals.


Addresses the relationships between Navy civilian employee perceptions of organizational effectiveness and managerial, organizational, and satisfaction variables. Results and implications are discussed.


Presents, in interview form, General Clark's views on orthodox job enrichment and other productivity enhancement methods in use at Kelly Air Force Base, which has a labor force that is over 90 percent civilian.


Poses the question as to whether monetary bonuses can both motivate and reward employees in a merit pay system and, if money is inadequate, what alternative reinforcers are available. The prediction of efficient motivators is discussed.

Provides information concerning a performance contingent reward system (PCRS), an incentive program aimed at increasing individual productivity. Report identifies critical elements required for such a program and describes the application of this incentive system. Findings are discussed, conclusions are reached, and recommendations are made.


Presents information on the development of an incentive program designed to improve Navy civilian keypunch operator productivity. Describes work measurement and standards development, and provides suggestions for program implementation.


Purpose of this research was to investigate factors related to the retention and recruitment of career federal employees. A survey was employed to study the relationship between various aspects of federal civilian life in VII Corps.


Paper covers important issues concerning the tension between military officers and civilian careerists. Major areas of this tension are highlighted. Behavioral techniques are recommended to improve effectiveness.


Study employed interviews, questionnaire responses, and group discussions to obtain information on how scientific laboratories should be organized to facilitate the work of scientists. Details are presented and recommendations are made.


Presentation deals with problems present in the Air Force civilian appraisal program causing it to lose its effectiveness. Outlines the details in the development of a research plan to provide a new system for evaluating these employees.

Reports on a modeling technique for projecting support manpower requirements as a function of workload and operational force levels for mid- and long-range planning.


Attempts to analyze, describe, and demonstrate the points of tension that arise from the dynamics of civil-military relations. Cites the problems that stem from these points of tension and techniques to overcome them.


The author poses the question of whether there is a need for naval shipyards or if private shipyards could handle the work more efficiently and at a lower cost. He calls for complete reliance on the private sector for the Navy's defense needs based on economic arguments. (Naval shipyard employees account for approximately 20 percent of the Navy's civilian workforce).


Report describes the composition of the DoD federal wage system work force (1973-1979), with emphasis on selected work force characteristics.


This research developed criteria for evaluating the equal employment opportunity (EEO) basic and advanced counselor training programs. Training needs are considered, as well as a recommendation for training improvements.


This report describes a model that forecasts supply workload given fleet configuration, operating schedules and maintenance man-days at shipyards, ship repair facilities, and intermediate maintenance activities. The model can be used to determine shore manpower necessary for efficient functioning.
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