

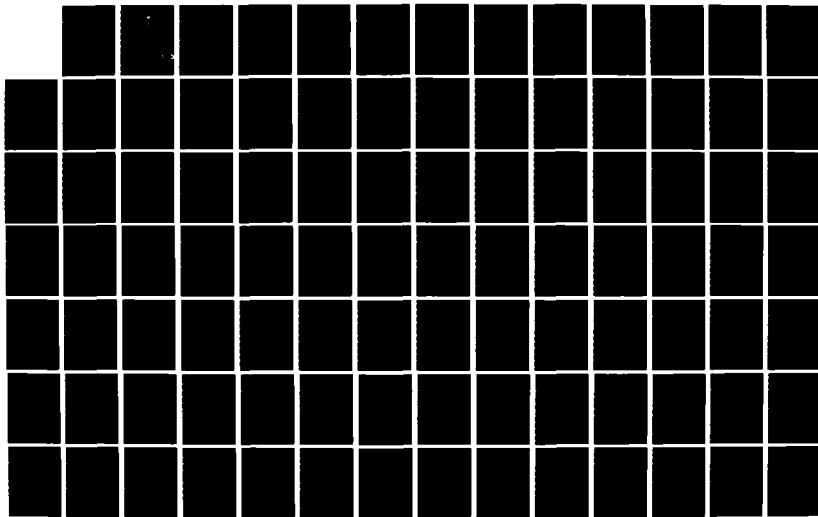
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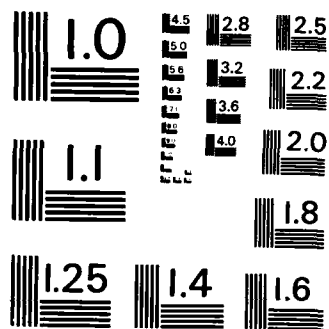
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WHO IS THE AIR FORCE DEPUTY COMMANDER  
FOR RESOURCE MANAGEMENT: AN EMPIRICAL  
STUDY OF RESOURCE MANAGERS

THESIS

Dennis M. Crimiel  
First Lieutenant, USAF

AFIT/GLM/LSM/85S-16

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WHO IS THE AIR FORCE DEPUTY COMMANDER FOR  
RESOURCE MANAGEMENT: AN EMPIRICAL STUDY  
OF RESOURCE MANAGERS

THESIS

Presented to the Faculty of the School of Systems and  
Logistics of the Air Force Institute of Technology  
Air University  
In Partial Fulfillment of the  
Requirements for the Degree of  
Master of Science in Logistics Management

Dennis M. Crimiel, B.S.

First Lieutenant

September 1985

Approved for public release; distribution unlimited

### Acknowledgements

Writing this thesis entailed a great deal of support and patience from many different sources. I would like to thank my thesis advisor, Lt Col David LLOYD, for giving me a tremendous amount of support and guidance. I also extend thanks to my reader, Dr. Anthony D'Angelo for additional assistance. I would like to commend Ms Beverly Carroll, for the great typing support she rendered in the final preparation of this report. A very special thanks goes to my wife Olivia for her patience and unending support which was much needed in accomplishing this task.

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Abstract

It is critically important that today's Air Force have logistics managers that are capable of making the most efficient uses of our resources. Many concerns have surfaced recently as to whether the Air Force is properly grooming individuals to fill its senior level logistics positions. This study focused upon the Deputy Commander for Resource Management (DCR), a senior logistician at the wing/base level. The purpose of this research was to describe the current DCRs, and also explore the issue of "stovepiping", a concern raised by Lt General Leo Marquez. An attempt was made to determine if a correlation exists between the level of success attained by the DCRs and their individual backgrounds in logistics.

To provide insight as to how well the Air Force is meeting its objectives in the selection of DCRs, descriptive files were established for each of the DCRs in the total population. The descriptive statistics computed from this population were compared to the selection criteria established by AFR 36-1. The issue of "stovepiping" suggests individuals have followed a narrow and vertical career pattern without developing a broad logistics knowledge base. The career patterns of the DCRs were analyzed to test this issue. In addition, Discriminant

Analysis was used to test for a relationship between the level of success by the DCR and his or her background in logistics. MEI ratings from five DCR subfunctions were used to establish a measure of success. The DCRs in this study come from five MAJCOMS.

The results showed that 55 percent of the DCRs in the population had been "stovepiped" in their careers, 8 percent of the DCRs multi-disciplined background in logistics, and 36 percent had no backgrounds in logistics. The Discriminant Analysis could not establish a relationship between the level of success attained by a DCR and his or her background in logistics. Further research in this critical area is warranted and several recommendations are made.

WHO IS THE AIR FORCE DEPUTY COMMANDER FOR RESOURCE  
MANAGEMENT: AN EMPIRICAL STUDY OF RESOURCE MANAGERS

I. Introduction

"In terms of the paramount importance of logistics, the die has been cast. Technology has seen to that, the declining resource base has seen to that, and our enemies have seen to that. Your challenge, then, will be to continue living up to the responsibilities that being a logistician now entails. And that means demanding, incessantly if necessary, the proper consideration for those logistics imperatives which are so much a part of modern military reality."

General James P. Mullins

Background

Today's Air Force is highly complex and ever-changing. Senior Air Force officials have shown an increasing concern in developing logisticians who have a multi-disciplined background in logistics. With the advent of new sophisticated weapon systems, tighter controls on the defense budget, and the increased emphasis on maintaining a quality force, it is imperative that our senior leadership have the necessary managerial skills and expertise to properly carry out their duties and responsibilities. Today's peacetime force is better equipped, better educated, better trained than ever before. The military has a commitment to the taxpayers to get the most out of each dollar spent. It has been estimated that 29 percent of

each tax dollar goes for National Defense.

The 1985 budget requested by the Department of Defense was the highest ever. DOD requested over \$305 billion which was 13 percent more than requested in fiscal year 1984 (26:1-3). It is through the proper management of our forces that the military can provide a constant state of readiness to combat any threat that might develop.

Fred Gluck, retired Air Force colonel and author, wrote in an article in the Logistics Spectrum, "military logistics must be integrated across the military complex as an essential part of the management and the nation's military capability" (15:13). Management of our armed forces is an issue that has the concern of President Reagan's administration, Congress and down through the major commands. It is a fact that a large portion of the nation's resources are applied to the defense of the country. It was estimated in the 1985 Budget in Brief that 7.4 percent of the Gross National Product goes for defense and national interest expenditures (26:3). With this point in mind, it is easy to understand the increased concern over the management of the military. President Reagan alluded to this very issue in his budget message to Congress when he stated:

The task of rebuilding our military forces to adequate levels must be carried to completion, ... At the same time, further action is required to curb the size and growth of many programs and to achieve managerial efficiencies throughout Government, wherever the opportunity is present. (26:4)

A recent message from Headquarters, United States Air Forces in Europe (USAFE) stated that considerations were being given to changing the career development process for logistics managers. Specifically, a screening process for officers with varied logistics backgrounds should be implemented to identify those individuals who would be groomed for senior logistics positions (19:1). This same point was emphasized by Fred Gluck. He pointed out that the complexities of the military system of logistics demand leaders who have a broad knowledge base. Otherwise, those persons who hold positions and lack a thorough logistics background or an understanding of how the system works, cannot be effective leaders (15:30).

Lieutenant General Leo Marquez, Deputy Chief of Staff for Logistics and Engineering, HQ USAF, has shown a great concern as to whether we are "raising our senior logistics managers properly" (24:1). In his address to the 1984 Logistics Conference, General Marquez stated that "we should consider ways to promote the growth of professional logisticians with a solid, general knowledge base" (13:1). Other noted logisticians have expressed similar concerns. In an article in the Logistics Spectrum, Jerome G. Peppers, a noted logistics author and educator wrote:

The logistician, probably more than any other professional should be alert to the potential of the future. The fact that we are able to meet today's requirement should not satisfy us because our real job is to be prepared for tomorrow. The essence of logistics is to be able, at all times to create and sustain some specified capability whether it be military or product or service oriented. To do this, we must be able to live today prepared for tomorrow. No greater responsibility exists in logistics management, or any other derivation of the future ... a useful forecast (27:8).

The need to develop senior level logisticians has been identified and is a matter of concern. General Marquez has stated that the Air Force tends to develop logisticians through specialty career patterns. This condition, described by General Marquez as "stovepiping", refers to career patterns that are narrow and vertical in specific specialty areas such as supply, transportation, contracting, etc. (24:1). "Given that each of the logistics disciplines is a complete career field, there is a widespread problem in obtaining individuals at the senior level who are qualified to act as the overseer or head logistician at any level" (22:2).

This research effort was focused upon the managerial expertise, education, training, and functional background of a logistician at the Wing/Base level, the Deputy Commander for Resource Management (DCR). This senior logistician has several logistical functional areas under his control i.e. supply, contracting, logistics plans, comptroller, and transportation. Lieutenant Colonel Blansett wrote in an Air War College student report in 1982.



The functional responsibilities of the DCR are varied and diverse. He is responsible for one of the most complex and demanding functions on an installation. The expertise of the individual assigned as the DCR must be observed as one of the driving forces by which a wing or base succeeds or fails in its mission. The DCR must be all things to all people - - especially the commander. He must be a fiscal, supply, transportation, procurement and logistics plans expert (3:2).

Research was therefore, warranted to explore the issue of "stovepiping" as well as to describe the DCR.

#### Problem Statement

Resource management encompasses a wide range of responsibilities and objectives which include planning, accounting, controlling, executing and monitoring resource use and effectiveness against a designated plan or program (4:1).

The Deputy Commander for Resource Management is one of the most important logisticians at the Wing/Base level. Given the increased attention that has surfaced in regard to developing logisticians with multi-disciplined backgrounds, a DCR with a very limited knowledge base may not be effective as a logistics manager. Those DCRs who have been "stovepiped" in their career patterns may have limited success in the performance of their duties. Those individuals who lack a broad knowledge base in resource management, and who are not accustomed to the diversity of the functional areas that goes along with the position of a DCR, may not recognize problems or problem areas that surface. A condition as described above may imply that the Air Force is not selecting the right individuals to fill the

DCR position. The end result could possibly impair the ability of the wing to perform its mission.

This research is designed to explore the issues. If problem areas do currently exist in the selection process used by the Air Force, this research effort should highlight those problem areas, provide insight into the issue of "stovepiping" and make recommendations for improvement in the system.

#### Scope

This research effort is restricted to the study of only one logistician, the DCR. While there are several senior logisticians at the wing/base level, the emphasis in this study is intended to focus only upon the DCR and provide insight to the issues raised in the problem statement. The terms, "logistics" and "logisticians", that follow in the text of this research tend to project a more broader or global perspective than the focus of this research. This study, therefore, takes a limited perspective in terms of approach and analysis.

#### Research Objectives

The first objective of this research effort was to determine just who are the current DCRs and the extent of their backgrounds in logistics. An examination of their backgrounds should provide further insight into the issue of "stovepiping".

The second objective of this effort was to establish a measure of success for the DCRs and to determine whether or not a correlation exists between the organizational success of the DCRs and their backgrounds in logistics.

#### Research Questions

1. To what degree do the current DCRs meet the qualifications as established by AFR 36-1. What is the experience level of the DCRs?
2. To what degree does "stovepiping" exist?
3. Is there a relationship between the DCR's level of success and the condition of "stovepiping".
4. Are there distinguishing characteristics of those DCRs who have attained a high degree of success in their positions?

## II. LITERATURE REVIEW

### Introduction

"In view of many recent trends, one of the greatest challenges facing industry, businesses, government agencies, and the general consumer of products and services today is the growing need for more effective and efficient management of our resources" (2:4). A previous AFIT thesis established the point that not much has been accomplished in trying to ascertain just how effective the DCR position has been since its creation in 1975 (25:10). A concerted effort was made to research literature that would be relevant to this research effort. It has become evident to this researcher that not much has been written about the DCR or how effective this position has been.

Before beginning the literature review, attention needs to be focused on several terms that will be used in the context of this research effort. Fred Gluck has described the term military logistics as "an integrated management of those activities and resources necessary to create and sustain some required level of military capability" (16:13).

In another article, Gluck continued by saying:

Our nation can no longer afford to treat military logistics with the level of ignorance demonstrated over the last three decades. The importance of strategies and tactics notwithstanding, "modern" military logistics is the basis of military power (the level and duration of war that can be waged by combat forces). Therefore, the effective and efficient operation of "modern logistics is critical to the safety and survival of this nation. "Modern" military logistics must provide the assurance that concept, structure, focus, and management of military logistics are present and effectively aligned to provide for the needs of today's military forces . . . . (15:14).

Jerome Peppers has stated that "managers must be concerned about the future. Logistics managers ought to be more concerned than most because they bear the responsibility of preparing for tomorrow" (27:8). An understanding of the basics of logistics is therefore important. Logistics managers need a solid knowledge base as described by General Marquez. Logistics must be considered in whole and not in part as a subsystem of society. This system we call logistics was formed and created to sustain a needed capability for not just the military, but society and the world also (27:1). Military leaders and managers must also understand the complexities of a logistics system. While gaining an understanding of the concepts of logistics, military leaders need to know how to apply effective management practices to insure the most efficient and effective utilization of resources are realized.

An attempt has been made to show that the terms "logistics" and "logisticians" must be clearly understood. This research effort has focused upon describing that senior base level military logistician, the DCR. In chapter I, the DCR and the functional areas under his control were described. The job of the DCR is complex and very demanding. Logisticians or logistics managers, within the Air Force must be prepared to control a very complex and demanding interactive process to insure that the primary goal of maintaining an acceptable level of wartime readiness is met. These logistics managers control and manage many thousands of assets and resources ranging from munitions, fuel, people, and spare parts to facilities. Even in peacetime, the task of maintaining a constant level of support in itself is very demanding. Logisticians must act as coordinators to insure that the many resources and processes they oversee operate together and result in wartime readiness (28:1).

The Air Force Institute of Technology Compendium of Authenticated Systems and Logistics Terms, Definitions, and Acronyms, gives a very basic definition of logistics. This definition states:

Logistics is the science of planning and carrying out the movement and maintenance of forces. In its most comprehensive sense, those aspects of military operations which deal with research and development, acquisition, storage, movement, distribution, maintenance, evacuation, and and disposition of material (8:401)

Graham W. Rider, retired Air Force Major General, wrote in his dissertation at Arizona State University, that:

The basic concept of logistics is that it has the sociol-economic function of physical supply and physical distribution that creates time and place utility for goods and services. As a system, logistics is comprehended by the processes of acquisition, movement, and storage. In organizational, or work function, the term logistics is procurement, traffic management, warehousing, and inventory control (30:5).

For purposes of this research, these definitions of the following definitions are used:

"Logistics" is a science which covers all aspects of maintaining supplies and equipment to support military forces. That maintenance includes any transporting, equipping, storage, and acquisition of supplies and equipment needed to keep military forces combat ready.

"Stovepiping" refers to an individual following a narrow career path in one career field without developing a broad knowledge base through experience in other logistics areas.

"Logisticians" are managers of the logistics process. They act as coordinators of the various logistics functions to insure a constant level of service and readiness is maintained.

"Management" is defined as:

"Those continuing actions of planning, organizing, directing, controlling, and evaluating the use of men, money, materials, and facilities to accomplish a specified task or mission" (6:22).

"Success" is defined as "having a favorable course or termination of anything attempted" (32:735).

#### Scope of the Literature Review

This literature review focuses upon current and past literature that was deemed relevant to understanding the complexities of the job of a logistician. The DCR position, Air Force Specialty Code, 0096, was initially created in 1975. In an attempt to find literature written on the DCR, it was soon discovered that not much has been written on the subject. In the late 1970's, several papers were written by students at the Air War College at Maxwell Air Force Base. The majority of these papers were unpublished and are no longer available. The papers that were still available will be discussed later in this literature review. Many of the current material addressed in this thesis comes from the Logistics Spectrum and Air Force Institute of Technology theses. In essence, the primary task pursued in this effort was to try to relate the various articles and some proposed initiatives developed by Air Force senior officials to the logistician under study, the DCR.

#### Background Material

General Marquez has stated that our leadership has not recognized that in order to produce combat sorties, the various logistics functions must be combined and intergrated. In order to be effective, and properly manage



the total logistics system, the right people must be in the positions of control (24:1). The Air Force uses a selection process that was established by Air Force Regulation 36-1, Officer Classification Regulation, to match officers with respective DCR positions. The qualifications listed include:

- a. Knowledge. Knowledge of the Air Force management concepts and objectives in their specific relationships to the effective and economical execution of the mission is mandatory.
- b. Education.
  - 1. Bachelor's degree, preferably in business administration, industrial engineering, economics, or computer science is mandatory.
  - 2. Master's degree, preferably in business administration, or logistics management, is desirable.
  - 3. Completion of senior service school is desirable.
- c. Experience. Full qualification in a staff officer specialty in one or more of the utilization fields in the Logistics or Comptroller career field is mandatory. In addition, a minimum of 12 months experience in directing and monitoring the resource management activity is mandatory (9:A5-9). A telephone interview with an official at Headquarters, Manpower and Personnel Center, confirmed that this was the criteria used to select officers for DCR positions (18).

The Air Force has a Deputy Commander for Resource Management course that is offered at Maxwell AFB. The course was built around the following three objectives. The first objective of this course was to create an awareness of what the DCR organization is tasked to do. The second objective defined the organizational structure and

explained the spectrum of responsibilities associated with the DCR position. The third objective of the course was established to show the relationship of the DCR organization with other organizations and to describe the many interactions that take place. The major thrust of the third objective is show how the DCR can assess the effectiveness and efficiency of his organization (7:1-30).

It would seem that the Air Force has taken the necessary steps to insure that the right people are being selected for the DCR position. Many of the major concerns raised by earlier researchers refer to senior logisticians as not being effective in their positions. This question was addressed in a 1965 AFIT thesis. That research effort concluded:

Despite the fact that the logistics manager's job is demanding, complex, and vital, there has been little attempt to objectively determine the criteria or yardstick by which we can measure the man, his training, and his development against the exacting requirements of the logistics management job (23:4).

A 1978 AFIT thesis stated that "since the DCR position was created, it has been difficult to ascertain how effective the DCR has been" (25:10).

These concerns that surfaced in the 1960s and 70s are still valid today. Research has been conducted to explore ways to develop logisticians. A professor at the Air Force Institute of Technology developed a career progression model for logisticians. The thrust of that research effort

centered around establishing career patterns that would focus on education and broad operational experience. Figure 1 is an adaptation of the model. The implications of this model suggest:

Specific schooling requirements include a basic technical course upon the officer's initial entry into service to prepare him for a specific functional career speciality, subsequent attendance at professional military schools to broaden his knowledge of the services and to provide an understanding of the roles of other commands and responsibilities of other career fields, sustained participation in a certificate program consisting of continuing education courses designed to add depth to his knowledge of his own specialty and to add breadth to his understanding of the other functional areas and their interrelationships within the logistics career field, and matriculation in a graduate logistics management program designed to enhance his capabilities to assume the responsibilities of a highly qualified logistician serving in key positions as director of material or director of logistics. (29:13)

Another logistics career development plan was developed by HQ USAF/LEXX. This plan was built around a concern of General Marquez. General Marquez stated:

... We have been developing senior officers who in many cases have come up through the ranks in one specialty. Not recognizing that we needed managers instead of maintenance officers or supply officers. These people have reached senior positions unprepared to manage the totality of our complex logistics systems (24:1).

The solution suggested in this career development plan focused on three initiatives: a. "Grow our own", b. develop logisticians in two or more major logistics disciplines, c. Accomplish this task by crossflowing individuals from a specific AFSC to other related logistics

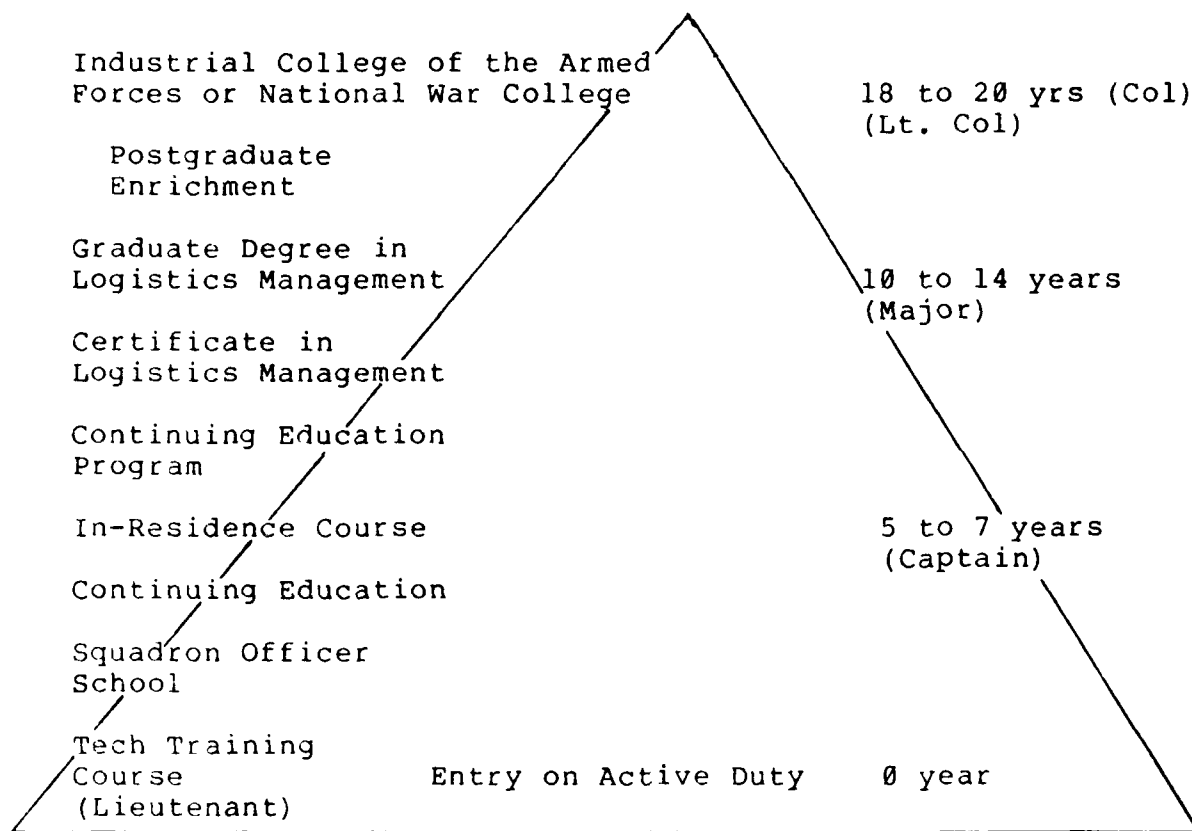


Figure 1. The Logistician Progression Model (29:2)

AFSCs. Figure 2 describes the development plan.

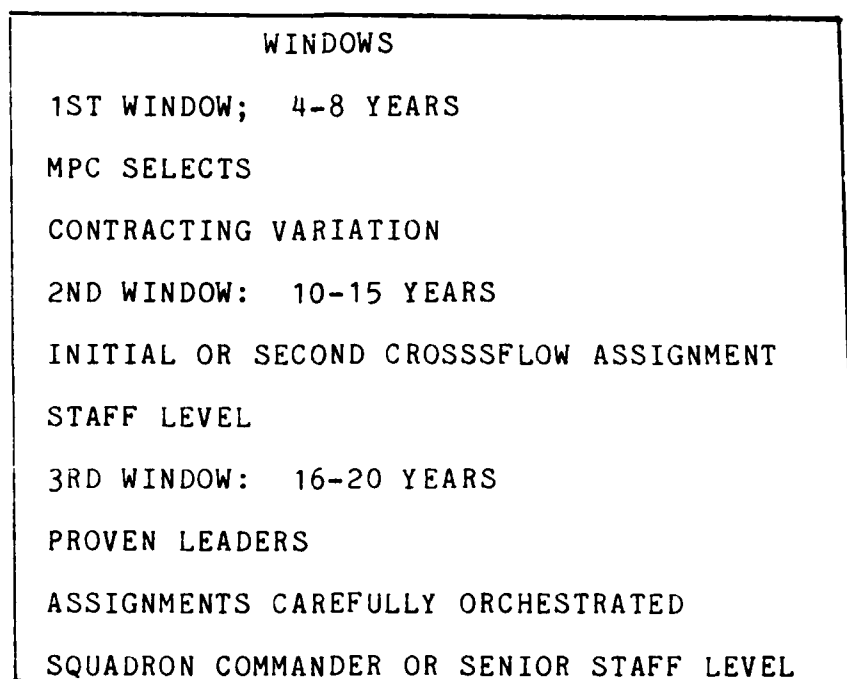


Figure 2. Logistics Career Development Plan (8:1-10

The minutes published from the Future Look 84, USAF Logistics Long-Range Planning Conference produced some interesting statistics. It was brought out in this conference that 16 percent of the Air Force logistics officers had experience in more than one logistics career field. Those minutes reported that these officers were in such positions as Directors of Logistics, Logistics Plans and Programs, and Resource Management. In comparison to other career fields, only about 10 percent of those officers had a broad logistics background (13:18).

Career development plans and training programs to develop logisticians have been attempted or are being

developed. The Air Force has established regulations and a course to prepare the DCR to handle the vast amount of duties and responsibilities that go along with the position. The development of these career development plans and initiatives, as well as the selection process used by the Air Force, support a statement written by Bruce D. Harcastle in an article to the Logistics Spectrum. Harcastle wrote in that article, "as a basis for decisions of public policy and military action, civilian and military leaders require some background in logistics. Lack of experience can lead to unforeseen problems, losses, and expense" (17:25)

#### DCR Related Literature

Air Force Regulation 36-1 summarizes the duties of the DCR as follows:

Directs and controls financial and logistics resources at wing or base level through management of comptroller, supply, transportation, contracting, and resource plans functions. Serves as the principal financial and logistics (other than maintenance) coordinator for the commander and staff within these functional areas (9: A5-9).

An Air War College report accomplished in 1975 emphasized the point that when the various functions that are now under the control of the DCR were brought together, a tremendous job of heading these diverse activities was the end result. The report stated that time limitations do not allow the DCR to acquire actual experience in these functional areas. This comment was made on the assumption

that most DCRs were rated and through their career progression had not developed a broad base of experience outside of the operations career field. This created a situation in which those individuals filling the DCR position had very limited experience. This limited experience base led to an identity crisis for the DCRs. The report compared the DCR to a company executive who had experience in maybe one or two divisions of the company and was suddenly made the company president (22:10). The report went on to reference another article written by Fred Gluck in 1967 to the the Logistics Spectrum which listed three criteria for a "Logistician". A logistician should:

- 1.) be experience in the field and be highly qualified in one functional area or discipline
- . . .2.) understand the total logistics system
- . . .and 3.) be at a level of management where he controls more than one functional area or performs duties at a management level which cuts across a number of functional areas (14:32).

A 1978 AFIT thesis used a survey to explore the perceptions concerning the management of functions for which the DCR is responsible. Prior to 1975, a dual-deputy system of wing organization was used for all Air Force Bases. Figure 3 depicts the dual-deputy system. In the early 1970's a need was recognized in United States Air Forces in Europe (USAFE), to restructure the base organizational system being used. The tri-deputy system was tested and received with varying degrees of success. Although some of the MAJCOMs felt uneasy about the implementation of this new

organizational structure, the Air Force adopted the tri-deputy system in July 1975 (25:2-4). Figure 4 portrays the current base organizational structure. The primary thrust of this reorganization effort was to streamline the communication process to assure more management interaction in terms of financial and resource management (25:1-10).

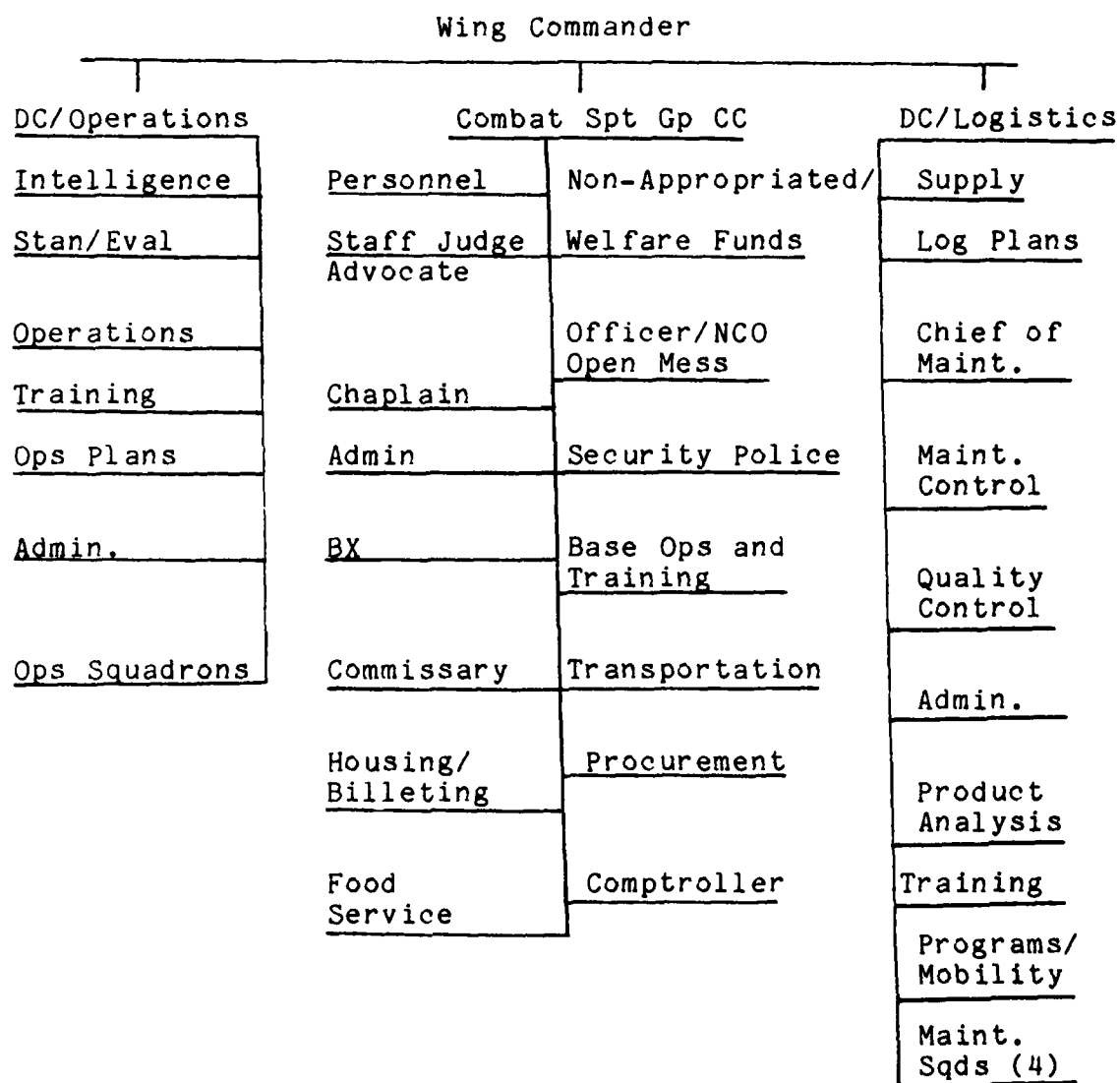


Figure 3. Air Force Wing/Base Organization Prior to 1 July 1975 (24:3)



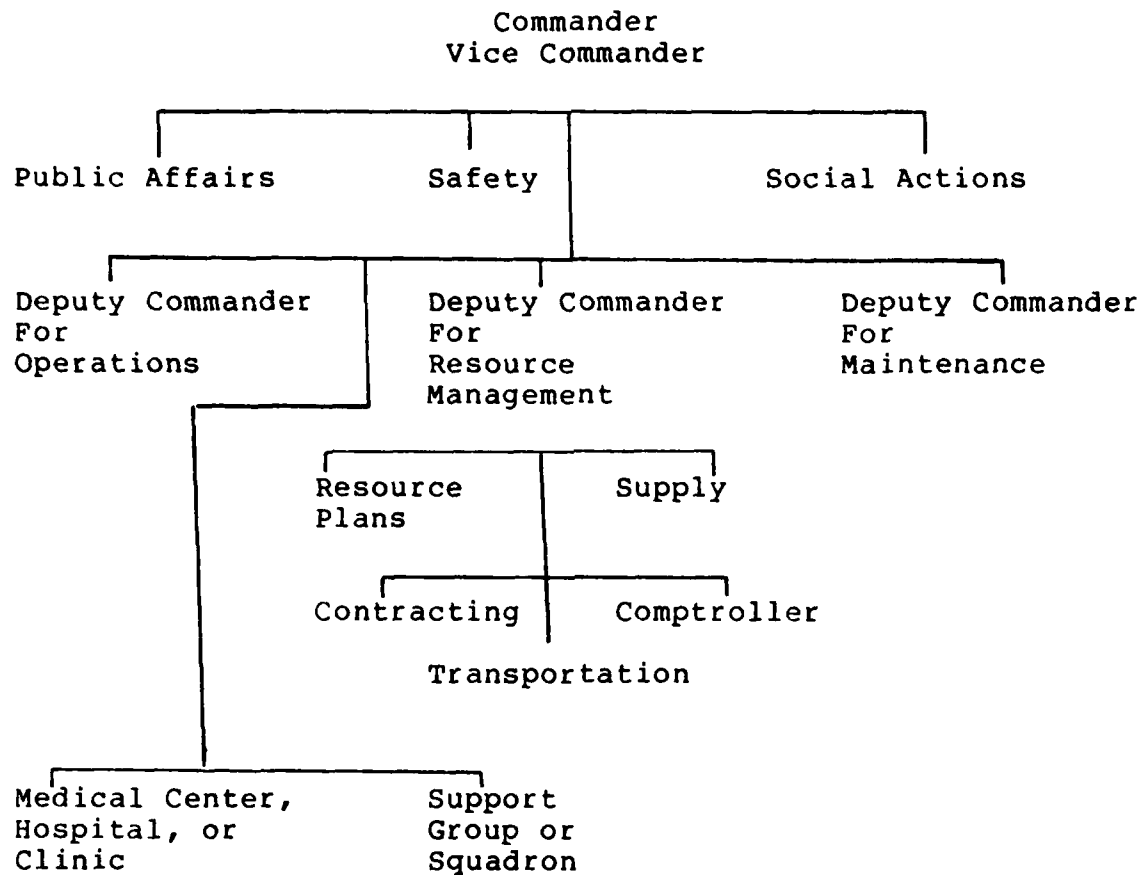


Figure 4. Current Wing/Base Organization (10:4)

#### Summary of Literature Review

The literature researched highlighted the fact that we need effective managers and logisticians to properly manage our resources. The reports and studies examined emphasized that a need exists to insure that the senior leadership is well equipped to carry out the duties and handle a diversified job such as that of the DCR. The Air Force has established standards and criteria to be used in the DCR selection process. Just how effective that selection process has been remains a question. Suggested career

patterns have been developed by the Air Staff and other logisticians that would insure our senior logisticians are well prepared to meet very demanding responsibilities associated with their duties. The emphasis has been upon developing logisticians who possess a broad knowledge base. If our senior logisticians have been "stovepiped" or have progressed through narrow career paths in one specialty; then a question arises as to whether or not this situation has impacted their effectiveness as logisticians. It was therefore, necessary to research these issues and provide further insight.

### III. METHODOLOGY

#### Introduction

This chapter describes the data collection plan, testing, and analytical methodology employed in this research effort. Empirical data gathered from the Atlas data base was used to provide specific demographic descriptions of DCRs. Management Effectiveness Inspection (MEI) ratings were used to provide a second source of data. The assumptions and limitations that impact upon this research are listed as they apply to a particular data collection method or analytical approach.

#### Data Collection Plan

In Chapter I, two general research objectives and four research questions were identified. This sections describes the data collection plan used to address those questions and objectives. As mentioned in the introduction, two data sources were used in this research. The Atlas data base, maintained by the Manpower and Personnel Center, Randolph AFB, Texas, was used to provide background and historical information on the DCRs. The following type of information was requested from that data base:

- All individuals in the grade of colonel or lieutenant colonel with AFSC 009X.
- Current Rank
- Date of duty title
- Unit of current assignment

- Level of education
- Type of degree
- Major field of study
- Historical listing of assignments to include for each:
  - Major command
  - Duty title
  - AFSC
  - Unit of Assignment
  - Inclusive dates of assignment
  - Level (for example, headquarters, numbered air force, air division, wing, unit)
  - Commissioning Source
  - Names of courses of Professional Military Education (PME) completed
  - Names of courses of Professional Continuing Education (PCE) completed

The collection of this data established the descriptive files for each DCR and addressed the following questions:

1. Who are the current DCRs?
2. What was the extent of their backgrounds in logistics?
3. What was their career progression in the USAF?
4. How well do these individuals match up against existing selection criteria established by Air Force Regulation 36-1? The use of this data provided the basis for answering research questions 1 and 2.

In order to address the second research objective and

research questions 3 and 4, another data source was needed. The second source of data used was the Management Effectiveness Inspection (MEI) ratings from several Major Commands, i.e., Strategic Air Command (SAC), Military Airlift Command (MAC), Tactical Air Command (TAC), United States Air Forces in Europe (USAFE), and Pacific Air Forces (PACAF). The MEI reports were collected on units from the five selected major commands. The MEI ratings collected were not ratings of the DCR's office or division. Instead, the ratings collected were for the functional units under the DCR's control, i.e., supply, contracting, logistics plans, transportation, and comptroller. Figure 5 shows the type of information requested and received from each MAJCOM.

MAJCOM: XXX						
Functional Areas:	Ratings	O	E	S	M	U NR
Supply						
Transportation						
Logistics Plans						
Comptroller						
Contracting						
O denotes Outstanding Rating E denotes Excellent Rating S denotes Satisfactory Rating M denotes Marginal Rating U denotes Unsatisfactory Rating NR denotes not rated						

Figure 5. MEI Information Requested

The second research objective identified in Chapter one, focused upon establishing a common measure of success for each DCR. For purposes of this research, the degree of success attained by each DCR was defined as a function of the individual ratings of the subordinate units under the realm of the DCR's responsibility rather than an overall rating of the DCR position itself. This decision was made for the following reasons:

- a. Not all MAJCOMs assign overall ratings to the DCR.
- b. A correlation of success of each subordinate unit could be tied to the the functional expertise of the DCR.

For purposes of this research, a DCR was considered to be "successful" if the ratings received by his functional units met either of two criteria. The first criteria used to determine if a DCR was to be considered "successful" was based on all of the functional units receiving satisfactory ratings. The second criteria was that at least one unit received a higher than satisfactory rating and no more than one unit received at least a marginal rating. "Highly successful" was defined as having at least two functional units with excellent ratings or higher and no units less than satisfactory. Those DCRs with functional areas that received unsatisfactory ratings or received ratings no higher than satisfactory and one or more units rated marginal were considered to be "less than successful".

Letters were sent out to each of the five MAJCOMs requesting the MEI ratings on the functional units of 74 wings. Figure 6 shows the distribution of wings selected in the study by MAJCOM. Information was requested on the most current inspection reports. The current date of assignment of the DCRs was used to select the 74 wings analyzed in the study. To insure that each DCR had at least 6 months job experience prior to the inspection, the data on the Atlas data base and the MEI ratings were carefully scrutinized.

MAJCOM	# of Wings	Relative Frequency
SAC	17	33.3 %
MAC	7	13.7 %
TAC	11	21.5 %
PACAF	2	3.9 %
USAFE	14	27.4 %
Total	51	100 %

Figure 6. Number of Wings Selected from Each MAJCOM

The analysis for finding degree of success was accomplished for each wing in the sample population. By comparing the information gathered from the Atlas data base to the degree of success assigned to each DCR, answers to the following questions were provided:

1. Is there a significant correlation between having a background in logistics and the level of success to be attained by a DCR?
2. Does educational level, the number of PME or PCE courses completed impact the degree of success attained by the DCR?

3. Do DCRs with rated backgrounds perform better than those DCRs who are nonrated?
4. Does having a diversified background in logistics, having two or more AFSCs, have any impact upon the level of success attained by the DCR?

#### Defining the Population

The population examined to provide answers to the first research objective consisted of 134 individuals in the grades colonel and lieutenant colonel. Only those individuals who held a duty title of Deputy Commander for Resource Management or a similar duty title were included in the research. The total population was used to provide descriptive statistics. No specific length of time was set that the DCR had to have held his current position. The Atlas data base initially provided background information on 244 individuals. Individuals currently assigned as Assistant Deputy Commanders (ADCR) were eliminated from further study. This decision eliminated 110 individuals from the data base. This research was designed to focus only upon the DCRs and therefore, individuals with other duty positions were excluded.

The initial population used to provide answers to the second research objective consisted of 74 individuals. Of the 74 individuals in this population, analysis was performed on only 51 individuals. Twenty DCRs were eliminated because they failed to have six month experience prior to the MEI, and three units did not have current MEI



ratings. Appendix H contains the MEI ratings for each of the 51 wings under study. A test to determine if 51 individuals would be a representative sample of the 134 total population was conducted. The following formula was used:

$$n = \frac{N(ZxZ) \times p(1-p)}{(N-1) \times (dx\bar{d}) + (ZxZ) \times p(1-p)}$$

where: n = sample size  
 N = total population  
 p = maximum sample size factor (.50)  
 d = defined tolerance (.05)  
 Z = factor of assurance (1.96) for  
 a 95% confidence interval (5:12)

The results showed that to achieve a 95 percent confidence interval, the sample population needed to consist of 50 individuals. "This confidence/reliability level means that if many samples of the same size and format were to be drawn from the same population, 95 percent or more of the confidence intervals of the sample population would contain the true population mean" (5:11). Therefore, the 51 individuals in the sample barely met the criteria established by the formula and provided a representative sample.

#### Summary of Assumptions

The following are the assumptions contained in this research effort:

1. The information from the Atlas data base was current.

2. The MEI ratings provide a valid measurement tool in assessing the effectiveness of the DCR.
3. The factors chosen to provide descriptive statistics are adequate enough to describe the DCR.
4. The analysis accomplished on the various wings in the sample population provide objective answers to the research objectives.
5. The sample chosen in the second part of the analysis is representative of all the DCRs in the Air Force.

#### Summary of Limitations

1. AFR 36-1 lists several requirements used in the selection process to fill the DCR positions. One of those requirements, knowledge, can not be justifiably measured in this research effort. However, it is assumed that through PCE, PME, job experience, and various assignments, an individual will acquire a certain amount of knowledge. This research does not attempt to measure that requirement.
2. The Atlas data base reflects current information on the DCR. Factors used in this study provide descriptive statistics on each DCR. However, these factors are limited in nature. A survey instrument could possibly have provided other factors to be considered.
3. The ADCRs were excluded from this research study. An examination of the ADCRs could possibly have produced data which impacted the level of success attained by each DCR.
4. The Atlas base excluded information on pre-captain experience, i.e., the data does not contain any experience data that occurred when the individual was a lieutenant. This exclusion may eliminate certain experiences from study and analysis.

#### Method of Analysis

The first part of the analysis was accomplished using basic math procedures. The statistics program on the VAX

computer was used to provide descriptive statistics statistics, i.e. mean, range, standard deviations. In some cases, such as logistics experience, PCE, and number of logistics assignments, histograms were drawn to show the distribution of the data. These histograms are contained in Appendices B, C, and D. In chapter 4, various figures are presented to display the descriptive data. These statistics were then compared to the requirements listed in AFR 36-1. These statistics not only provide information needed to describe the the DCR, but also provide answers to research questions one, two, and three.

The MEI ratings received from the MAJCOMS were sorted using the Multiplan program on the Burroughs B-20 Computer. For the wings in the sample, a score was assigned based upon a five point rating system. Figure 7 depicts that rating system. After all the scores of the wings had been tallied, the wings were then ranked from highest to the lowest score.

Rating	Score
Outstanding	10
Excellent	5
Satisfactory	1
Marginal	-5
Unsatisfactory	10
Non rated	0

Figure 7. MEI Rating Scale

Appendix A provides the rankings given to each wing.

A program was then written using the BMDP statistical software to test for correlation between the level of

success attained by the DCRs in the sample population and their backgrounds in logistics. Stepwise discriminant analysis was the program chosen to perform these test. Stepwise discriminant analysis discriminates between two or more groups. This program is designed to identify variables that add most to the separation of two or more groups (11:24). The MEI ratings were then coded using a three point rating system and compared against eight other factors that were extracted from the data on each DCR. The following factors were used in the program:

<u>Factor</u>	<u>Relative Definition</u>	<u>Coding</u>
MEIRT	MEI rating	1,2,3
LOGEP	Logistics experience	Years
AFSC	Air Force Specialty Code	0,1
PME	Professional Military Education	0,1
Degree	Highest Level of Education	1,2
DEGFLD	Degree Field	1,2,3,4,5
LOGASG	Logistics Assignments	Numbers
Rating	Rated or Nonrated	1,2
PCE	Professional Continuing Education	Numbers

A specific coding scheme was developed for each factor listed above. These codes were then put into a data file on the computer. Appendix "F" provides a listing of that data file. The program was written to perform discriminant

analysis and the data file was used as the input file. The specific program used in the analysis is depicted in Appendix "E".

The MEI rating (MEIRT) were classified into one of three groups. The other eight factors were then compared against the MEIRT to test for a discriminant variable. The three groups, "less than successful", "successful", and "highly successful", were coded 1, 2 and 3 respectively. This coding system was based on the break out of the three distinct groups that materialized after the data was sorted.

Logistics Experience (LOGEP) was coded in terms of years. For example, if a DCR had nine years of experience, that individual's experience was coded as a 9 under this factor.

AFSC was broken down into six categories in the program. These six categories comprised the AFSCs that were deemed relevant in the analysis of this research. The six AFSCs used in the analysis were transportation (60XX), supply (64XX), contracting (65XX), logistics plans (66XX), comptroller (67XX), and maintenance (40XX). For each category, a 1 or 0 was assigned. A 1 was assigned if an individual possessed that particular AFSC, and a 0 otherwise. If an individual received a 0 in all six categories, that individual did not possess a logistics related AFSC considered in this study.

PME was broken down into three categories: PME1, PME2,

and PME3. PME1 depicted junior level PME courses such as Squadron Officer School. PME2 depicted intermediate level PME such as Air Command and Staff College. PME3 depicted senior level PME such as Air War College. A 1 was assigned if an individual had completed a specific category. A 0 was assigned if that individual had not completed a course in a particular category.

The factor "Degree" was used in the program to depict the highest level of education an individual had attained. The factor consisted of two categories: bachelor's and master's. A 1 was assigned if an individual only personnel a bachelor's degree. An individual that had completed a master's degree program was coded as a 2.

The DCR's college major or type of degree was coded in the factor DEGFLD. It was divided into five categories each pertaining to a specific field of study. These five categories: Business, Education, Math, Political Science, and Other, were chosen based upon the number of individuals in the sample population that had acquired degrees in these fields of study. The coding system used was 1 for Business, 2 for Education, 3 for Math, 4 for Political Science, and 5 for other.

Logistics assignments (LOGASC) were coded in terms of the number of logistics assignments an individual had prior to becoming a DCR. For example, an individual who had 5 assignments prior to becoming a DCR was coded as a 5 under this factor.

The Aeronautical rating of the DCR (Rating) was broken down into two categories, rated or nonrated. A rated individual was coded as a 1, whereas a nonrated individual was coded as a 2.

The use of discriminant analysis was designed to provide answers to research objective two and research questions three and four. Another program was written to produce histograms on the factors used in the discriminant analysis. These histograms are displayed in Appendix "G".

#### IV. FINDINGS

##### Introduction

This chapter shows the results and findings after the data was analysed and tested and contains two sections. The first section addresses research objective one and research questions one and two. It provides descriptive statistics for the total population. The second section addresses the second research objective and research questions three and four.

The total DCR population consisted of 134 DCRs. The total population was used to provide the descriptive statistics to research objective one. The second population used consisted of 51 individuals. A statistical test was conducted in chapter III and determined that this was a sufficient sample of the total population at the 95 percent confidence level.

##### Research Objective One

The first objective of this research focused upon determining who are the current DCRs and the extent of their backgrounds in logistics. The thrust of this objective was to provide insight into the concept of "stovepiping". Research question one asked how well do the current DCRs meet the requirements as established by AFR 36-1. The qualifications listed in AFR 36-1 are comprised of knowledge, education, and experience. As noted in Chapter



III, knowledge was not measured in this study. The findings for the requirements that were measured are as follows:

#### Education

1. AFR 36-1, states that a bachelor's degree, preferably in business administration, industrial engineering, economics, or computer science is mandatory.

The results showed that 100 percent of the population DCR had bachelor's degrees. Figure 8 shows the distribution of the specific degrees.

Degree Field	Number	Percentage
Business	75	56.0%
Indust Engineering	1	.7%
Economics	3	2.2%
Computer Science	0	0.0%
Math	2	1.5%
Political Science	9	6.7%
Education	15	11.0%
Social Science	3	2.2%
Public Admin	10	7.5%
Psychology	7	5.2%
Mech Engineering	2	1.5%
Language	2	1.5%
System Mgt	2	1.5%
Other	3	2.2%
Total	134	100%

Figure 8. Degree Fields of the DCRs

2. AFR 36-1 lists master's degree as preferably in business administration, or logistics management as desirable. The data showed that 101 individuals or 75 percent of the DCRs had master's degrees. Forty one percent of those individuals with master's degrees had obtained those degrees in the field of business/logistics.
3. AFR 36-1 identifies completion of senior service school as a desirable requirement. Figure 9 shows the distribution of the PME courses attended. It can be seen that 41.8 percent of the DCRs have completed a senior service school.

Schools	Number	Percent
Senior:		
National War College	1	.7%
Air War College	54	40.3%
Army War College	1	.7%
Intermediate:		
Industrial College	68	50.7%
Armed Forces Staff College	6	4.5%
Air Command and Staff	116	86.6%
Junior:		
Squadron Officers School	109	81.3%

Figure 9. PME Courses Attended

4. AFR 36-1 listed experience in a staff officer speciality in one or more of the utilization fields in the logistics or comptroller career field as a mandatory requirement. Figure 10 depicts the number of individuals who had prior logistics experience in a logistics or comptroller specialty before becoming a DCR. The logistics experience computed in this research for each DCR did not specifically address staff level experience. The computed logistics experience used in this study reflects all logistics experience that an individual had acquired prior to becoming a DCR.

Logistics Related AFSC		No Logistics Related AFSC	
Number	Percent	Number	Percent
36	64%	48	36%

Figure 10. DCR Logistics Related Experience

A figure that should be noted when assessing the experience level of the DCRs is that 23 percent of the DCRs who had logistics experience had also served in a position as ADCR.

Summary of the Results for Research Question One.

100 percent of the DCRs had at least a bachelor's degree and 56 percent of those degrees were in the area of business. While a master's degrees is listed as desirable in AFR 36-1, 75 percent of the DCRs had a master's degree and 42 percent of those degrees were in the field of business. Only 64 percent of the DCRs met the mandatory requirement of experience in logistics. In the two categories of education and experience, the Air Force had achieved at least a 64 percent success ratio in the selection process.

Research Question 1 also focused upon the experience level of the DCRs. Appendix B displays the distribution of the logistics experience level of the DCRs in the Air Force. Figure 11 depicts some basic statistics of the experience level of the DCR.

	Mean	Std Dev	Range
Logistics Experience	4.6 yrs	4.6	0-14 yrs

Figure 11. Logistics Experience Statistics

The DCRs in the total population had an average of 4.6 years of logistics related experience. This experience ranged from zero to 14 years. This was not a surprising figure since 36 percent of the DCRs had no prior logistics experience. The years of logistics experience was calculated on the basis of the assignments the DCR had

served through since he was a captain. Information in the Atlas data base on assignments begins at the grade of captain. Therefore, experience gained while the individuals were first and second lieutenants was not included. Therefore, three to four years of logistics experience may not be accounted for. In describing the DCR, this point must be kept in mind to get a true picture of the DCR. An additional three to four years of experience would increase the range in from zero to 17/18 years of experience. This would invariably have an effect on the mean years of experience also.

Research Question 1 is summarized in Figure 12.

AFR 36-1 Requirement	Research Results
Education	
BS Degree	100%
MS Degree	75%
Completion of Senior Service School	42%
Prior Logistic Experience	64%

Figure 12. Summary of Research Question One

Research Question 2 addressed the theory of "stovepiping". As noted in chapter 2, "stovepiping" means having a very narrow and vertical career path in one AFSC. Figure 13 shows the results of the analysis. Figure 13 shows that 56 percent of the DCRs in the total population fall into the category of being "stovepiped" as defined in

this research. Only 8 percent of those individuals in the total population had two or more AFSCs. It must also be remembered that 36 percent of the population had no logistics related AFSCs. These individuals were mainly from rated career fields. It should be pointed that 53 percent of the DCRs in the population were rated. Figure 14 shows that relationship.

# of AFSCs	# of DCRs	Frequency
1 AFSC	75	56.0%
2 AFSCs	9	6.7%
3 AFSCs	2	1.4%
4 AFSCs	0	0
No log AFSCs	48	36.0%
TOTAL	134	100%

Figure 13. Number of Logistics Related AFSCs

	# of DCRs	Relative Frequency
Rated	71	53%
Nonrated	63	47%

Figure 14. Rated vs Nonrated DCRs

It is therefore easy to understand the correlation between the 36 percent of the DCRs who had no prior backgrounds and the 53 percent of the total population that was rated.

The issue of "stovepiping" relates to career patterns also. The statistics presented in figure 13 indicate that 56 percent of the DCRs had been stovepiped in their careers. There were 75 individuals who fell into this category. Figure 15 depicts the career patterns of these DCRs with a

single AFSC and the number of assignments in that AFSC.

AFSC	Number of Assignments					TOTAL
	5 or more	4	3	2	1	
60XX	6	0	2	1	3	12
64XX	20	0	0	1	2	23
65XX	2	1	0	3	0	6
66XX	4	0	1	1	1	7
67XX	7	0	3	1	0	11
40XX	1	4	3	2	4	14
Other	2	0	0	0	0	2
Totals	42	5	9	9	10	
Percentages	31.3%	3.73%	6.71%	6.71%	7.46%	75

Figure 15. Number of Assignment/Single AFSC

In each logistics AFSC that this study looked at, the majority of the DCRs had 5 or more assignments in that career field. Appendix C gives a display of the data in a histogram. The number of assignments ranged from 0 to 11. The mean number of assignments for the total population was 3.209, and the standard deviation was 3.209. The 40XX career field is the maintenance career field. It is a logistics career field and 18 percent of those DCRs with logistics backgrounds possessed experience in the maintenance career field. This number was significant enough to be included in the analysis. Only two of the total population had logistics AFSCs that were not considered relevant to this research.

These findings strongly support the theory of "stovepiping". The majority of the DCRs with logistics backgrounds followed narrow career paths in one specialty. Only 11 individuals or 8 percent of the total population had multiple AFSCs. Figure 16 depicts those DCRs with multiple AFSCs.

AFSCs			# of DCRs
60XX	40XX		1
64XX	40XX		2
64XX	66XX		2
66XX	40XX		1
66XX	65XX		2
66XX	67XX		1
64XX	65XX	67XX	1
60XX	65XX	67XX	1
Total			11
Freq.			8%

Figure 16. DCRs with Multiple AFSCs

The number of PCE courses completed by each DCR was also included in the analysis. Appendix D displays a histogram of the data. The mean number of PCE courses completed was 7.315. The range was from 1 to 13 courses and the standard deviation was 2.98. These figures show that the majority of the DCRs had attended at least 7 PCE courses.

#### Summary of Research Objective One

Before the findings are discussed for research objective two, the results of research objective one are summarized. The analysis showed that 100 percent of the DCRs

had bachelor degrees and 75 percent had master's. 41.8 percent of the DCRs had completed senior service school and a large percentage of the population had completed the intermediate and junior level PME courses. 64 percent of the DCRs had logistics related experience and 36 percent had no prior logistics experience before becoming a DCR. The average DCR with a logistics background had at least 4.6 years of experience. The range of experience in logistics was from 0 to 14 years. Taking into account the years of experience that were not accounted for due to the limited nature of the data, the range of experience could go for 0 to 18 years. 56 percent of the DCRs in this study had been "stovepiped" in their careers. Only 8 percent of the DCRs in the total population had multiple AFSCs. 53 percent of the DCRs had rated backgrounds which corresponds to the 36 percent of the DCRs with no logistics backgrounds.

#### Research Objective Two

Research objective number two focused upon establishing a measure of success for DCRs and also examine the data to determine if there was any correlation between the success the DCRs attained and their backgrounds in logistics. The research questions sought to determine if stovepiping affected the level of success attained by the DCR and to determine if there were any distinguishing characteristics of those DCRs who were rated "highly successful".

In Chapter III the criteria was established for



assigning a measure of success to each DCR. The sample population consisted of 51 individuals and a rating was assigned to each. The total score of each DCR can be found in Appendix A. Figure 17 depicts the breakout of the groups into 3 categories, i.e., "highly successful", "successful", and "less than successful". Each of the DCRs in the three groups were given a rating of 3, 2 or 1. This rating was based upon the scores calculated using the five point system established in Chapter III.

Category	Rating	#of DCRs	Frequency
Highly Successful	3	9	.176%
Successful	2	32	.627%
Less than Successful	1	10	.196%

Figure 17. Measure of Success Ratings for Sample Population

After establishing a measure of success and assigning a rating to each DCR in the sample population, stepwise discriminant analysis was used to test for correlation of the rating assigned and the nine variables chosen in the study. Appendix E provides a copy of the program used to accomplish the analysis. The BMDP statistical program used performed stepwise discriminant analysis to enter variables in the discriminant function. The F statistics determine whether or not a particular variable enters the function and discriminants between groups. The nine primary variables established in Chapter III were used in the analysis.

Results showed that no variables entered into the function. There were no variables that discriminated between the three groups, i.e., "highly successful", "successful", and "less than successful". Results of the analysis are shown in Appendix E. None of the variables could be used as distinguishing characteristics that would differentiate between the groups.

Appendix E also provides Statistics on all three groups, such as means and standard deviations. The average years of logistics experience for the three groups was as follows: highly successful - 2.78, successful - 3.0, and less than successful - 4.5. These groups had standard deviations in years of experience of 3.7, 3.8, and 4.9, respectively. However, the analysis showed that years of logistics experience had no effect on the success that the DCR attained.

A second program was run comparing only two groups, "highly successful" and "successful". The results also proved inconclusive. No variables were found that discriminated between the two groups.

Histograms were run on the data derived from the sample population. The results are shown in Appendix G. The histograms break out each variable used into the three categories. This information was useful in examining the distribution of the data.

### Summary of Research Objective Two

A measure of success was established for each DCR. Using a three point rating system, nine DCRs fell into the "highly successful" group, thirty two fell into the "successful" group and ten fell into the "less than successful" group. Using the nine variables established in Chapter III, the stepwise discriminant analysis proved to be inconclusive. There were no variables found in the analysis that would discriminant between the groups. The end result was that there was no correlation between having a background in logistics and the level of success attained by the DCR. Further analysis did not produce any different results.

## V. CONCLUSIONS AND RECOMMENDATIONS

### Review of Research Objectives

The first objective of this research was to provide insight into who the current DCRs are and to examine the extent of their backgrounds in logistics. This effort was needed in order to provide insight into the issue of "stovepiping". The current DCRs were compared against the assignment/selection criteria listed in AFR 36-1. On the average, DCRs matched up against this criteria quite well, given that 53 percent of the DCRs were rated and 36 percent had no prior logistics experience. This means that 64 percent of the DCRs in the total population did possess logistics experience. The logistics experience of the current DCRs ranged from zero to 14 years. The results also showed that 56 percent of those DCRs who had backgrounds in logistics had been "stovepiped" in their careers. This research showed that only 8 percent of the total population could be described as having a multi-disciplined background in logistics. A surprising result was that 18 percent of the DCRs who had logistics experience had gained that experience in the maintenance career field. You would think these individuals would be serving in Deputy Commander for Maintenance (DCM) positions. In addition, over 40 percent of the DCRs had completed senior service school and the mean number of PCE courses completed exceeded 7. Surprisingly, only 53 percent of the DCRs in the total

population were from rated backgrounds. The majority of the 36 percent of the DCRs who had no prior logistics experience could be attributable to the rated DCRs. The number of logistics assignments ranged from zero to eleven. Many of the DCRs who had been "stovepiped" in their careers had five or more assignments in a specific career field, i.e., supply, transportation, etc. This result adds more weight to the theory that many of our senior logisticians have indeed been "stovepiped" in their careers.

The second research objective sought to establish a measure of success for each DCR in the sample population of 51 individuals. This research objective also sought to test for correlation between the measure of success attained by a DCR and the DCR's background in logistics. Using the rating system established in this study, nine DCRs were rated "highly successful", thirty-two were rated "successful", and ten were rated as "less than successful". Stepwise discriminant analysis was used to test for correlation between the degree of success and the nine variables chosen in this study. The results showed that there were no distinguishing characteristics which separate the groups. This analysis also lead to the conclusion that there was no correlation between the degree of success attained by the DCR and having a background in logistics. Rated individuals did just as well as those individuals who were nonrated. DCRs that had been "stovepiped" in their careers fared just

as well in the analysis as those individuals who had not been "stovepiped" or had no background in logistics. None of the variables used in the study was significant enough to impact the test results and thereby to discriminate between the three groups. An additional test to compare only two groups produced the same results. Additionally three chi-square goodness-of-fit tests failed to show any difference between the rated/nonrated, "stovepiped", nonstovepiped, and logistics experience/no experience variables. The histograms produced in the analysis showed the variance in variables as they pertain to a particular grouping.

#### Conclusion

The justification for this research was that the DCR is a senior level military logistician at the wing/base level who commands a very critical position which, if not managed properly could impair the wing or base mission. Many questions and concerns have surfaced about the management of our armed forces. It is crucial that our senior leadership be effective leaders as well as managers. Lt. General Marquez has expressed concern over the issue of "stovepiping" and its potential effects. The general has stated that he wants a system that will develop senior logisticians who have a multi-disciplined background in logistics. The DCR, a senior logistician, sits in a very critical and demanding position. It is of great importance

to the Air Force that the right people are selected to fill this critical position. The DCR, who is typically responsible for five functional areas (supply, contractor, transportation, comptroller, and logistics plans) must indeed be an effective leader and manager.

No correlation was found in this study between the degree of success attained by the DCRs and their backgrounds in logistics. The population tested consisted of 51 individuals and statistically was a sufficient sample of the total population of DCRs. Judging from the test run on the sample population, the Air Force is successful in selecting the right individuals to fill the DCR positions. The measure of success used in this study was based upon MEI ratings of the functional units under of the DCR's responsibility. This measure was used because of its commonality to the five major commands chosen in the study and its ease of measurement. However, it must be kept in mind that even though this is a common measure used by all of the MAJCOMs, their specific criteria used in rating the DCR and the functional units under the realm of the DCR's responsibility may be different. There is undoubtedly subjectivity employed in the rating systems employed. For purposes of this research, the MEI ratings were considered a good measure to use.

In summary, this study found that "stovepiping" did exist in the DCR position, but the analysis was unable to

indicate whether that "stovepiping" hindered or improved the effectiveness of the DCR as a manager and leader. No cause and effect relationship could be determined. In addition, this study did not find any distinguishing characteristics that could be used to differentiate DCRs who were rated as "highly successful", "successful", and "less than successful". It appears that a logistician, such as the DCR, can be an effective leader and manager regardless of the nature of background in logistics.

#### Recommendations

The total population used in this study was limited to 134 individuals. The ADCRs were eliminated from the population under study. The success attained by the DCR could be affected by the individual who served in the position of ADCR. It is therefore recommended that further study be conducted using the ADCRs in the total population also. Using the MEI ratings as a measure, additional analysis could potentially produce distinguishing characteristics that would separate the highly successful from the other groups. The primary thrust of this type of analysis would be to determine just what makes a DCR highly successful.

A survey instrument could produce better demographic information than the Atlas data base used in this research effort. This type of data base could provide more variables to be used in producing descriptive statistics. A survey



instrument could also be used to search the field for another common measure of success to assess the effectiveness of the DCR. Wing commanders could be surveyed to find out what they consider makes a DCR successful. This type of approach could provide useful insight when developing a rating system that could be used to project DCR success, or assignment qualification policies.

Further analysis is recommended using additional variables or variables other than those used in this research to test for correlation between the success attained by the DCR and the individuals background in logistics. This analysis should try to use the total population when testing for correlation if possible. This recommendation is contingent upon finding another common measure of success.

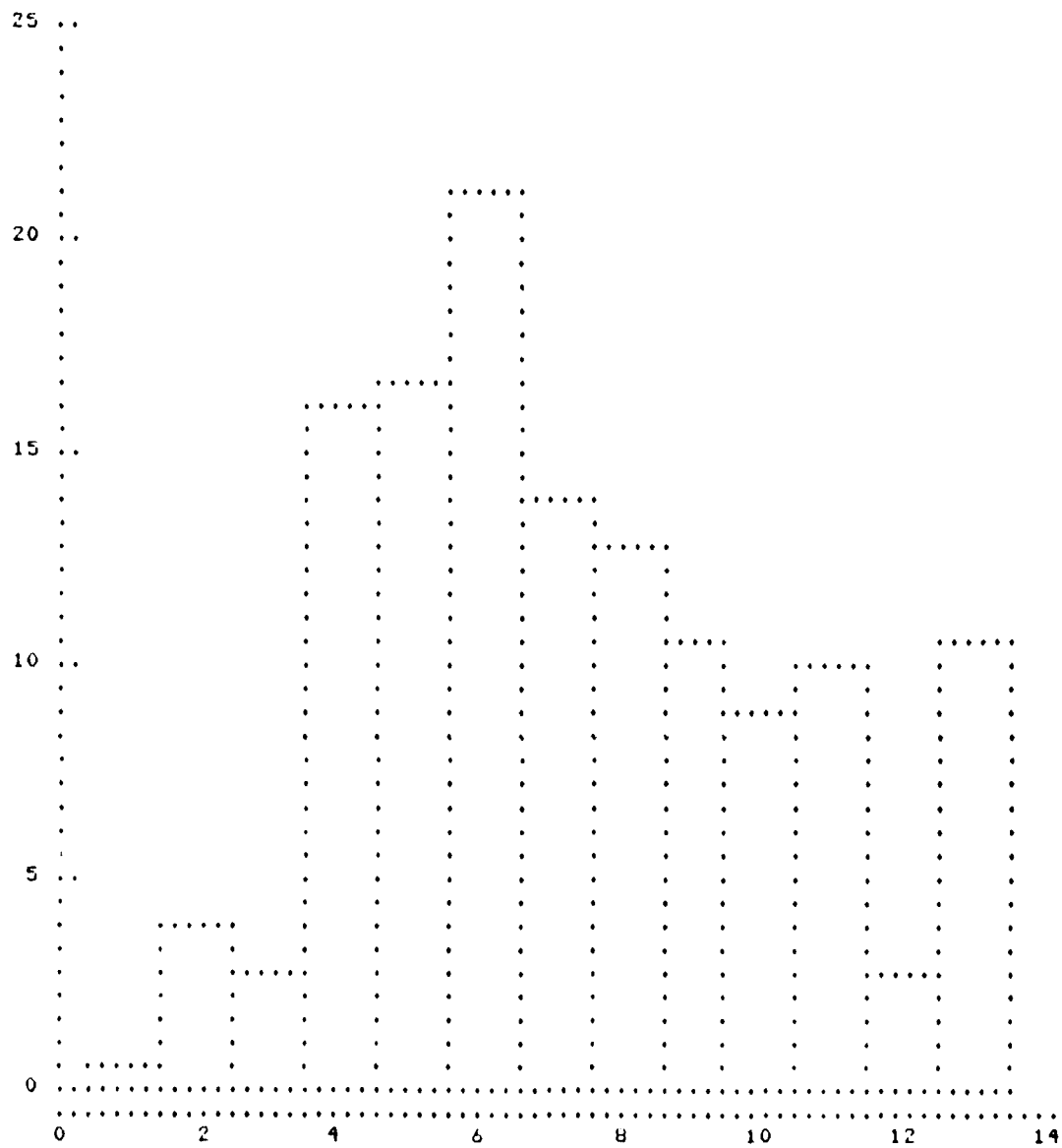
APPENDIX A: MEI RATING OF UNITS IN RANKED ORDER

MEI RATINGS

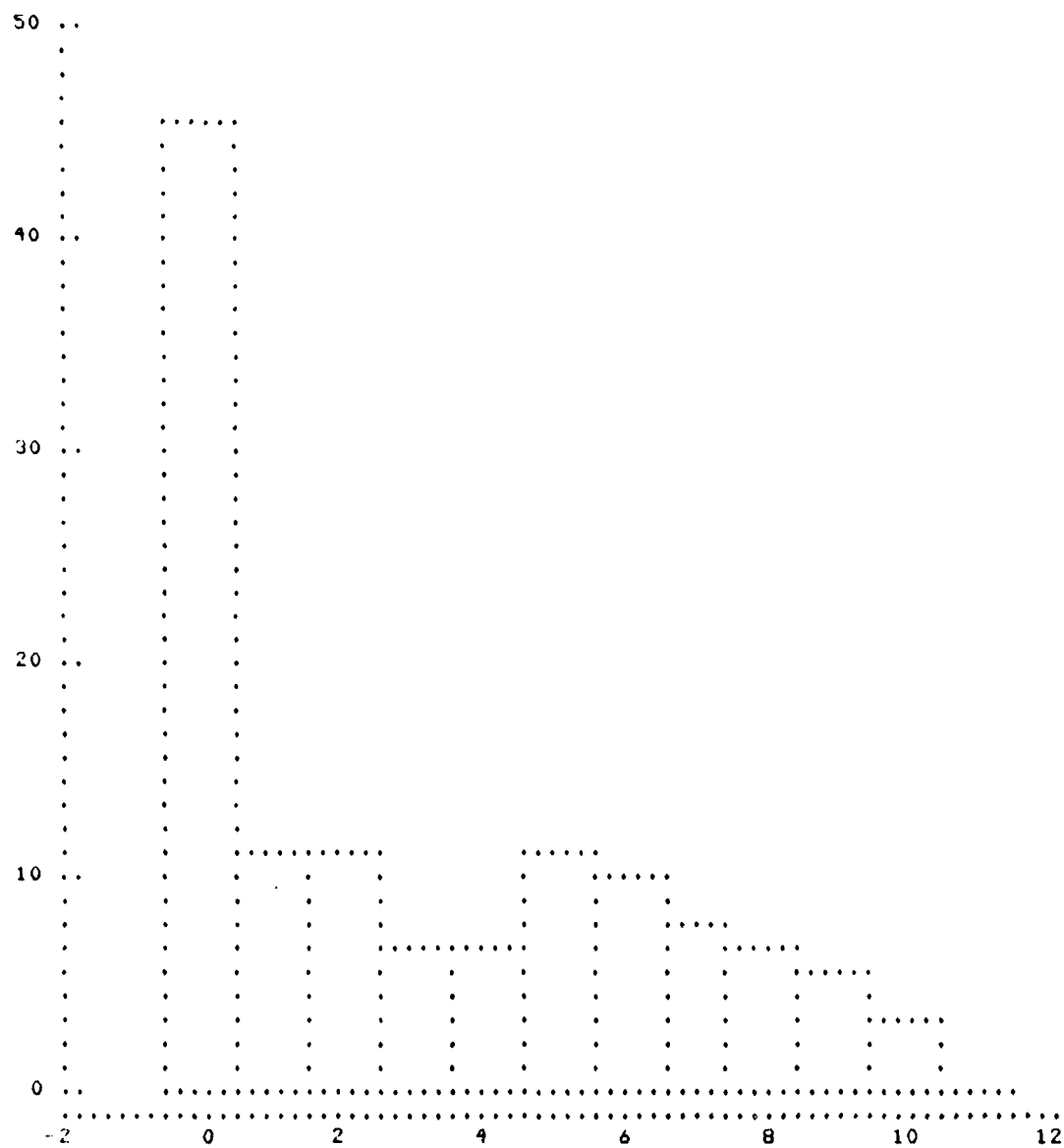
Unit	O	E	S	M	U	NR	TOTAL
36		4				1	20
24	1	1	3				18
54	1	1	2			1	17
66		3	2				17
20		2	3				13
10		2	3				13
22		2	3				13
67		2	3				13
53		2	2			1	12
1		1	4				9
2		1	4				9
3		1	4				9
8		1	4				9
12		1	4				9
35		1	4				9
41		1	4				9
43		1	4				9
46		1	4				9
47		1	4				9
56		1	4				9
60		1	4				9
63		1	4				9
70		1	4				9
72		1	4				9
44		1	3			1	8
73		1	3			1	8
33		2	2	1			7
38		2	2	1			7
49		2	2	1			7
4			5				5
5			5				5
7			5				5
21			5				5
61			5				5
62			5				5
69			5				5
9		1	3	1			3
11		1	3	1			3
14		1	3	1			3
27			3			2	3
59		1	3	1			3

29		2	2		1		2
16			4	1			-1
19			4	1			-1
39			4	1			-1
45			4	1			-1
51			4	1			-1
40			2	1		2	-3
57		1	2	2			-3
65			1	1		3	-4
48			3	2			-7
Total	2	49	174	18	1	12	339
MAX	1	4	5	2	1	3	20
MIN	1	1	1	1	1	1	-7
MEAN	1.00	1.40	3.48	1.13	1.00	1.50	6.67
STD DEV	0	.69	1.01	.34	0	.76	5.83

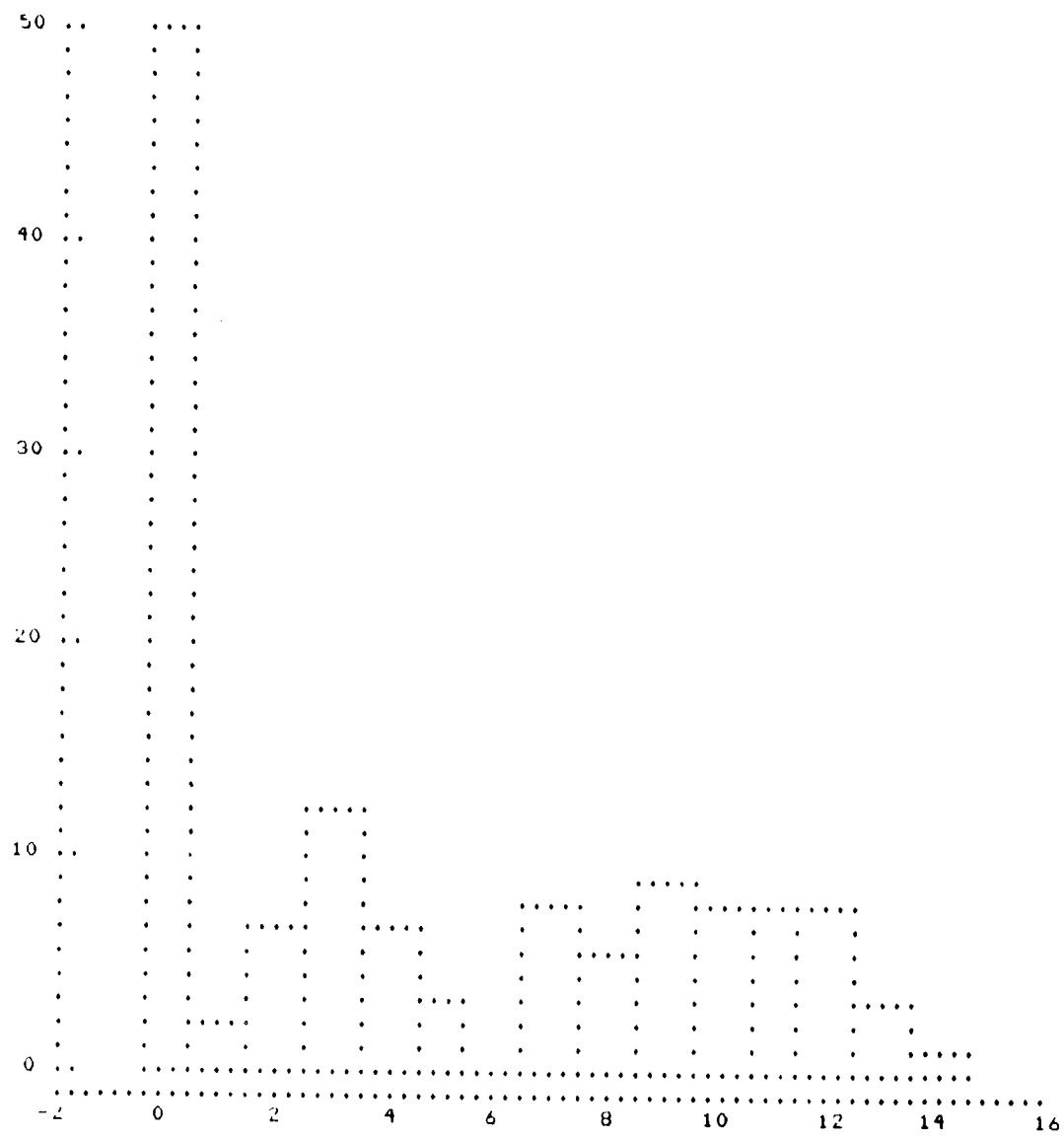
APPENDIX B: HISTOGRAM OF LOGISTICS EXPERIENCE



APPENDIX C: HISTOGRAM OF LOGISTICS ASSIGNMENTS



APPENDIX D: HISTOGRAM OF PCE COURSES



APPENDIX E: DISCRIMINANT ANALYSIS PROGRAM

BMDP7M - STEPWISE DISCRIMINANT ANALYSIS.  
BMDP STATISTICAL SOFTWARE, INC.  
1964 WESTWOOD BLVD, SUITE 202  
LOS ANGELES, CA, USA 90025  
(213) 475-5700  
PROGRAM REVISED OCTOBER 1983  
MANUAL REVISED -- 1983  
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PROGRAM CONTROL INFORMATION

/Problem Title is 'Findings'.  
/Input variables are 16.  
Format is free.  
File is 'data1'.  
/Variable Names are MEIRT,LOGEP,AFSC60,AFSC64,AFSC65,AFSC66,  
AFSC67,AFSC40,PME1,PME2,PME3,DEGREE,DEGFLD,LOGASG,RATING,PCE.  
GROUPING IS MEIRT.  
  
/GROUP CODES(MEIRT) = 1,2,3.  
NAMES(MEIRT) = LESSUC,SUCC,HISUCC.  
  
CODES(AFSC60) = 0,1.  
NAMES(AFSC60) = OTHER,'60XX'.  
  
CODES(AFSC64) = 0,1.  
NAMES(AFSC64) = OTHER,'64XX'.  
  
CODES(AFSC65) = 0,1.  
NAMES(AFSC65) = OTHER,'65XX'.  
  
CODES(AFSC66) = 0,1.  
NAMES(AFSC66) = OTHER,'66XX'.  
  
CODES(AFSC67) = 0,1.  
NAMES(AFSC67) = OTHER,'67XX'.  
  
CODES(AFSC40) = 0,1.  
NAMES(AFSC40) = OTHER,'40XX'.  
  
CODES(PME1) = 0,1.  
NAMES(PME1) = NONE,JUNR.

CODES(PME2) = 0,1.  
NAMES(PME2) = NONE,INTH.

CODES(PME3) = 0,1.  
NAMES(PME3) = NONE,SENR.

CODES(DEGREE) = 1,2.  
NAMES(DEGREE) = BS,MS.

CODES(RATING) = 1,2.  
NAMES(RATING) = RATED,NRATED.

CODES(DEGFLD) = 1,2,3,4,5.  
NAMES(DEGFLD) = BUS,EDUC,MATH,POLSCI,OTHER.

/END

PROBLEM TITLE IS  
Findings

NUMBER OF VARIABLES TO READ IN. . . . . 16  
NUMBER OF VARIABLES ADDED BY TRANSFORMATIONS. . . . . 0  
TOTAL NUMBER OF VARIABLES . . . . . 16  
NUMBER OF CASES TO READ IN. . . . . TO END  
CASE LABELING VARIABLES . . . . .  
MISSING VALUES CHECKED BEFORE OR AFTER TRANS. . NEITHER  
BLANKS ARE. . . . . MISSING  
INPUT FILE. . . . . UNIT 7 . . . . .data1  
REWIND INPUT UNIT PRIOR TO READING. . DATA. . . YES  
NUMBER OF WORDS OF DYNAMIC STORAGE. . . . . 25598

VARIABLES TO BE USED

1 MEIRT	2 LOGEF	3 AFSC60	4 AFSC64	5 AFSC65
6 AFSC66	7 AFSC67	8 AFSC40	9 PME1	10 PME2
11 PME3	12 DEGREE	13 DEGFLD	14 LOGASC	15 RATING
16 PCE				

INPUT FORMAT IS  
FREE

MAXIMUM LENGTH DATA RECORD IS 80 CHARACTERS.

TOLERANCE. . . . . .010  
F-TO-ENTER . . . . . 4.000 4.000  
F-TO-REMOVE. . . . . 3.996 3.996  
METHOD . . . . . 1  
MAXIMUM FORCED LEVEL . . . 0  
MAXIMUM NUMBER OF STEPS. . 32  
GROUPING VARIABLE. . . . . 1  
NUMBER OF GROUPS . . . . . 3  
PRIOR PROBABILITIES. . . . .33333 .33333 .33333



VARIABLE NO. NAME	MINIMUM LIMIT	MAXIMUM LIMIT	MISSING CODE	CATEGORY CODE	CATEGORY NAME	INTERVAL RANGE GREATER LESS THAN OR = TO
----------------------	------------------	------------------	-----------------	------------------	------------------	--

1 MEIRT

1.00000 LESSUC  
2.00000 SUCC  
3.00000 HISUCC

NUMBER OF CASES READ. . . . . 51

MEANS

VARIABLE	GROUP = LESSUC	SUCC	HISUCC	ALL GPS.
2 LOGEP	4.50000	3.00000	2.77778	3.25490
3 AFSC60	.00000	.09375	.11111	.07843
4 AFSC64	.20000	.15625	.22222	.17647
5 AFSC65	.20000	.03125	.00000	.05882
6 AFSC66	.00000	.06250	.00000	.03922
7 AFSC67	.00000	.06250	.00000	.03922
8 AFSC40	.20000	.09375	.33333	.15686
9 PME1	.80000	.90625	1.00000	.90196
10 PME2	.90000	.93750	1.00000	.94118
11 PME3	.60000	.40625	.44444	.45098
12 DEGREE	1.90000	1.62500	1.66667	1.68627
13 DEGFLD	2.10000	2.59375	2.88889	2.54902
14 LOGASC	2.80000	2.18750	2.33333	2.33333
15 RATING	1.40000	1.21875	1.22222	1.25490
16 PCE	7.90000	7.37500	7.44444	7.49020

COUNTS 10. 32. 9. 51.

STANDARD DEVIATIONS

VARIABLE	GROUP = LESSUC	SUCC	HISUCC	ALL GPS.
2 LOGEP	4.94975	3.82690	3.70060	4.04160
3 AFSC60	.00000	.29614	.33333	.27415
4 AFSC64	.42164	.36890	.44096	.39196
5 AFSC65	.42164	.17678	.00000	.23133
6 AFSC66	.00000	.24593	.00000	.19764
7 AFSC67	.00000	.24593	.00000	.19764
8 AFSC40	.42164	.29614	.50000	.36282
9 PME1	.42164	.29614	.00000	.29996
10 PME2	.31623	.24593	.00000	.24044
11 PME3	.51640	.49899	.52705	.50705
12 DEGREE	.31623	.49187	.50000	.46547
13 DEGFLD	2.80674	1.73873	1.83333	1.99743
14 LOGASC	3.48967	3.15653	3.16228	3.22256
15 RATING	.51640	.42001	.44096	.44310
16 PCE	3.41402	2.74450	2.65100	2.86728

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# COEFFICIENTS OF VARIATION

GROUP =	LESSUC	SUCC	HISUCC	ALL GPS.
VARIABLE				
2 LOGEP	1.09994	1.27563	1.33222	1.24170
3 AFSC60	.00000	3.15888	3.00000	3.49543
4 AFSC64	2.10819	2.36097	1.98431	2.22110
5 AFSC65	2.10819	5.65685	.00000	3.93269
6 AFSC66	.00000	3.93495	.00000	5.03988
7 AFSC67	.00000	3.93496	.00000	5.03988
8 AFSC40	2.10819	3.15888	1.50000	2.31300
9 PME1	.52705	.32678	.00000	.33256
10 PME2	.35136	.26233	.00000	.25547
11 PME3	.86066	1.22829	1.18585	1.12434
12 DEGREE	.16644	.30269	.30000	.27604
13 DEGFLD	1.33654	.67035	.63462	.78361
14 LOGASC	1.24631	1.44299	1.35526	1.38110
15 RATING	.36886	.34463	.36078	.35310
16 PCE	.43215	.37214	.35610	.38280

STEP NUMBER 0

VARIABLE	F TO FORCE	TOLERANCE	x	VARIABLE	F TO FORCE	TOLERANCE
	REMOVE LEVEL				ENTER LEVEL	
DF= 2 49				DF= 2 48		
			x	2 LOGEP	.601 1	1.000000
			x	3 AFSC60	.523 1	1.000000
			x	4 AFSC64	.122 1	1.000000
			x	5 AFSC65	2.380 1	1.000000
			x	6 AFSC66	.596 1	1.000000
			x	7 AFSC67	.596 1	1.000000
			x	8 AFSC40	1.619 1	1.000000
			x	9 PME1	1.062 1	1.000000
			x	10 PME2	.420 1	1.000000
			x	11 PME3	.557 1	1.000000
			x	12 DEGREE	1.339 1	1.000000
			x	13 DEGFLD	.391 1	1.000000
			x	14 LOGASC	.138 1	1.000000
			x	15 RATING	.667 1	1.000000
			x	16 PCE	.129 1	1.000000

NO VARIABLES ENTERED

# APPENDIX F: DATA FILE

```

2 0 0 0 0 0 0 0 0 1 1 1 1 0 1 4
2 0 0 0 0 0 0 0 1 1 0 2 5 0 1 11
2 7 0 0 0 0 1 0 1 1 0 2 1 6 2 4
2 7 0 0 0 0 0 1 1 1 1 2 5 7 1 8
2 3 0 1 0 0 0 0 1 1 1 2 2 1 1 5
2 0 0 0 0 0 0 0 1 1 0 1 1 0 1 13
2 0 0 0 0 0 0 0 0 1 1 2 5 0 2 5
2 4 0 0 0 0 0 1 1 1 0 1 3 0 1 8
3 3 0 0 0 0 0 1 1 1 0 1 5 3 1 6
2 0 0 0 0 0 0 0 1 1 1 1 4 0 1 9
2 9 0 1 0 0 0 0 1 1 1 2 1 8 2 10
2 0 0 0 0 0 0 0 1 1 0 1 3 0 1 7
1 0 0 0 0 0 0 0 1 1 1 2 1 0 1 11
1 11 0 0 1 0 0 0 0 1 1 2 1 10 2 6
2 4 0 0 0 1 0 0 1 1 0 2 5 1 1 12
3 1 1 0 0 0 0 0 1 1 1 2 1 1 2 6
3 2 0 0 0 0 0 1 1 1 1 2 4 1 1 9
3 0 0 0 0 0 0 0 1 1 0 1 5 0 1 13
2 0 0 0 0 0 0 0 1 1 0 2 5 0 1 5
1 0 0 0 0 0 0 0 1 1 0 2 1 0 1 12
2 0 0 0 0 0 0 0 1 1 1 1 5 0 1 6
2 0 0 0 0 0 0 0 1 1 1 2 1 0 1 4
3 0 0 0 0 0 0 0 1 1 1 2 2 0 1 6
2 0 0 0 0 0 0 0 1 1 0 2 2 0 1 10
1 12 0 1 0 0 0 0 1 1 1 2 2 7 2 5
1 2 0 0 0 0 0 1 1 1 1 2 10 1 1 7
2 0 0 0 0 0 0 0 1 1 0 1 5 0 1 11
2 11 0 1 0 0 0 0 1 1 1 2 1 6 2 6
2 0 0 0 0 0 0 0 1 1 0 2 4 0 1 8
1 0 0 0 0 0 0 0 0 1 2 2 0 1 5
2 0 0 0 0 0 0 0 1 0 1 2 1 0 1 8
2 7 0 1 0 1 0 0 1 1 0 2 1 9 2 4
1 0 0 0 0 0 0 0 1 1 0 2 1 0 1 10
2 12 0 1 0 0 0 0 1 1 0 2 2 8 1 5
1 3 0 0 1 0 0 0 1 1 0 2 1 2 1 12
3 1 0 0 0 0 0 1 1 1 0 2 5 1 1 8
3 10 0 1 0 0 0 0 1 1 0 2 2 6 2 4
2 9 1 0 0 0 0 0 1 1 0 2 1 8 2 6
1 8 0 0 0 0 0 1 1 1 1 2 1 3 2 9
2 5 1 0 0 0 0 0 1 1 0 2 4 3 1 5
2 0 0 0 0 0 0 0 1 1 1 2 1 0 1 5
2 0 0 0 0 0 0 0 1 1 0 2 1 0 1 13
2 8 0 0 0 0 1 0 1 0 1 1 1 6 1 7
2 0 0 0 0 0 0 0 1 1 0 1 5 0 1 10
1 9 0 1 0 0 0 0 1 1 0 1 1 5 2 2
3 0 0 0 0 0 0 0 1 1 0 1 1 0 1 9

```

3	8	0	1	0	0	0	0	1	1	1	2	1	9	1	6
2	5	1	0	0	0	0	0	0	1	0	1	1	4	2	4
2	3	0	0	1	0	0	0	1	1	1	2	1	2	1	8
2	0	0	0	0	0	0	0	1	1	0	1	4	0	1	7
2	2	0	0	0	0	0	1	1	1	0	1	1	1	1	8

## APPENDIX G: BMDP PROGRAMS WITH HISTOGRAMS

BMDP7D - DESCRIPTION OF GROUPS (STRATA) WITH HISTOGRAMS AND ANALYSIS OF VARIANCE  
BMDP STATISTICAL SOFTWARE, INC.  
1964 WESTWOOD BLVD. SUITE 202  
LOS ANGELES, CA, USA 90025  
(213) 475-5700  
PROGRAM REVISED OCTOBER 1983  
MANUAL REVISED -- 1983  
COPYRIGHT (C) 1983 REGENTS OF UNIVERSITY OF CALIFORNIA

### PROGRAM CONTROL INFORMATION

/Problem Title is 'Findings'.  
/Input variables are 16.  
Format is free.  
File is 'data1'.  
/Variable Names are MEIRT,LOGEP,AFSC60,AFSC64,AFSC65,AFSC66,  
AFSC67,AFSC40,PME1,PME2,PME3,DEGREE,DEGFLD,LOGASC,RATING,PCE.  
GROUPING IS MEIRT.

/Histogram Grouping is MEIRT.  
/GROUP CODES(MEIRT) = 1,2,3.  
NAMES(MEIRT) = LESSUC,SUCC,HISUCC.

CODES(AFSC60) = 0,1.  
NAMES(AFSC60) = OTHER,'60XX'.

CODES(AFSC64) = 0,1.  
NAMES(AFSC64) = OTHER,'64XX'.

CODES(AFSC65) = 0,1.  
NAMES(AFSC65) = OTHER,'65XX'.

CODES(AFSC66) = 0,1.  
NAMES(AFSC66) = OTHER,'66XX'.

CODES(AFSC67) = 0,1.  
NAMES(AFSC67) = OTHER,'67XX'.

CODES(AFSC40) = 0,1.  
NAMES(AFSC40) = OTHER,'40XX'.

CODES(PME1) = 0,1.  
NAMES(PME1) = NONE,JUNR.

CODES(PME2) = 0,1.  
NAMES(PME2) = NONE,INTH.

CODES(PME3) = 0,1.  
NAMES(PME3) = NONE,SENR.

CODES(DEGREE) = 1,2.  
NAMES(DEGREE) = BS,MS.

CODES(RATING) = 1,2.  
NAMES(RATING) = RATED,NRATED.

CODES(DEGFLD) = 1,2,3,4,5.  
NAMES(DEGFLD) = BUS,EDUC,MATH,PULSCI,OTHER.

/END

PROBLEM TITLE IS  
Findings

NUMBER OF VARIABLES TO READ IN. . . . . 16  
NUMBER OF VARIABLES ADDED BY TRANSFORMATIONS. . . 0  
TOTAL NUMBER OF VARIABLES . . . . . 16  
NUMBER OF CASES TO READ IN. . . . . TO END  
CASE LABELING VARIABLES . . . . .  
MISSING VALUES CHECKED BEFORE OR AFTER TRANS. . NEITHER  
BLANKS ARE. . . . . MISSING  
INPUT FILE. . . . . UNIT 7 . . . . .data1  
REWIND INPUT UNIT PRIOR TO READING. . DATA. . . YES  
NUMBER OF WORDS OF DYNAMIC STORAGE. . . . . 25598

VARIABLES TO BE USED

1 MEIRT	2 LOGEP	3 AFSC60	4 AFSC64	5 AFSC65
6 AFSC66	7 AFSC67	8 AFSC40	9 PME1	10 PME2
11 PME3	12 DEGREE	13 DEGFLD	14 LOGASC	15 RATING
16 PCE				

INPUT FORMAT IS  
FREE

MAXIMUM LENGTH DATA RECORD IS 80 CHARACTERS.

NUMBER OF CASES READ. . . . . 51  
PRINT DATA MATRIX . . . . . NO  
PRINT DATA MATRIX AFTER ORDERING. . . . . NO  
PRINT WINSORIZING TABLE . . . . . NO  
PRINT CORRELATION TABLE . . . . . NO  
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VARIABLE NO. NAME	MINIMUM LIMIT	MAXIMUM LIMIT	MISSING CODE	CATEGORY CODE	CATEGORY NAME	INTERVAL RANGE GREATER LESS THAN OR = TO
----------------------	------------------	------------------	-----------------	------------------	------------------	--

1 MEIRT

1.00000 LESSUC  
2.00000 SUCC  
3.00000 HISUCC

\*\*\*\*\*  
HISTOGRAM OF \* MEIRT \* (VARIABLE 1). CASES DIVIDED INTO GROUPS BASED ON VALUES OF \* MEIRT \*  
\*\*\*\*\*

	LESSUC	SUCC	HISUCC
MIDPOINTS	.....+.....+.....+		
3.300)			
3.150)			
3.000)			M*****
2.850)			
2.700)			
2.550)			
2.400)			
2.250)			
2.100)			
1.950)		M*****32	
1.800)			
1.650)			
1.500)			
1.350)			
1.200)			
1.050)	M*****		
.900)			

GROUP MEANS ARE DENOTED BY M'S IF THEY COINCIDE WITH \*'S, N'S OTHERWISE

MEAN	1.000	2.000	3.000
STD.DEV.	.000	.000	.000
R.E.S.D.	.000	.000	.000
S. E. M.	.000	.000	.000
MAXIMUM	1.000	2.000	3.000
MINIMUM	1.000	2.000	3.000
SAMPLE SIZE	10	32	9

HISTOGRAM OF \* LOGEP \* (VARIABLE 2). CASES DIVIDED INTO GROUPS BASED ON VALUES OF \* MEIRT \*

LESSUC	SUCC	HISUCC
MIDPOINTS		
12.800)		
12.000)*	X	
11.200)*	X	
10.400)		X
9.600)		
8.800)*	XX	
8.000)*	X	X
7.200)	XXX	
6.400)		
5.600)		
4.800)*	XX	
4.000)	XX	
3.200)*	M*	X
2.400)*	X	M
1.600)		
.800)		XX
.000)***	XXXXXXXXXXXX	XXX

GROUP MEANS ARE DENOTED BY M'S IF THEY COINCIDE WITH \*'S, N'S OTHERWISE

MEAN	4.500	3.000	2.778
STD.DEV.	4.950	3.827	3.701
R.E.S.D.	5.813	4.138	3.742
S. E. M.	1.565	.677	1.234
MAXIMUM	12.000	12.000	10.000
MINIMUM	.000	.000	.000
SAMPLE SIZE	10	32	9

ALL GROUPS COMBINED \*\*\*\*\* ANALYSIS OF VARIANCE TABLE \*\*\*\*\*  
 (EXCEPT CASES WITH \* TEST SOURCE SUM SQS. DF MEAN SQ. F P  
 UNUSED VALUES FOR \*STANDARD BETWEEN 19.631 2 9.82 .60 .5524  
 VARIABLE MEIRT ) \* WITHIN 784.056 48 16.33

\*\*\*\*\* LEVENE TEST FOR EQUAL VARIANCES \*\*\*\*\*  
 MEAN 3.255 \* BETWEEN 2 6.90 1.83 .1717  
 STD.DEV. 4.009 \* WITHIN 48 3.77  
 R.E.S.D. 4.339 \*\*\*\*\* TESTS NOT ASSUMING EQUAL VARIANCES \*\*\*\*\*  
 S. E. M. .561 \*WELCH BETWEEN 2 .44 .42 .6615  
 MAXIMUM 12.000 \* WITHIN 16 1.04  
 MINIMUM .000 \*  
 SAMPLE SIZE 51 \*BROWN- BETWEEN 2 19.63 .54 .5909  
 \*FORSYTHE WITHIN 22 36.43



\*\*\*\*\*  
 HISTOGRAM OF \* AFSC60 \* (VARIABLE 3). CASES DIVIDED INTO GROUPS BASED ON VALUES OF \* MEIRT \*  
 \*\*\*\*\*

	LESSUC	SUCC	HISUCC
MIDPOINTS			
1.120)			
1.050)			
.980)		***	*
.910)			
.840)			
.770)			
.700)			
.630)			
.560)			
.490)			
.420)			
.350)			
.280)			
.210)			
.140)			N
.070)		N	
.000)	M*****	*****	*****

GROUP MEANS ARE DENOTED BY M'S IF THEY COINCIDE WITH \*'S, N'S OTHERWISE

	LESSUC	SUCC	HISUCC
MEAN	.000	.094	.111
STD.DEV.	.000	.296	.333
R.E.S.D.	.000	.216	.263
S. E. M.	.000	.052	.111
MAXIMUM	.000	1.000	1.000
MINIMUM	.000	.000	.000
SAMPLE SIZE	10	32	9

ALL GROUPS COMBINED \*\*\*\*\* ANALYSIS OF VARIANCE TABLE \*\*\*\*\*  
 (EXCEPT CASES WITH \* TEST SOURCE SUM SQS. DF MEAN SQ. F P  
 UNUSED VALUES FOR \*STANDARD BETWEEN .079 2 .04 .52 .5960  
 VARIABLE MEIRT ) \* WITHIN 3.608 48 .08

\*\*\*\*\* LEVENE TEST FOR EQUAL VARIANCES \*\*\*\*\*  
 MEAN .078 \* BETWEEN 2 .13 2.62 .0834  
 STD.DEV. .272 \* WITHIN 48 .05  
 R.E.S.D. .183 \*\*\*\*\* TESTS NOT ASSUMING EQUAL VARIANCES \*\*\*\*\*  
 S. E. M. .038 \*WELCH BETWEEN 2 .01 .01 .9903  
 MAXIMUM 1.000 \* WITHIN 31 1.02  
 MINIMUM .000 \*  
 SAMPLE SIZE 51 \*BROWN- BETWEEN 2 .08 .63 .5454  
 \*FORSYTHE WITHIN 14 .12

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\*\*\*\*\*  
 HISTOGRAM OF \* AFSC64 \* (VARIABLE 4). CASES DIVIDED INTO GROUPS BASED ON VALUES OF \* MEIRT \*  
 \*\*\*\*\*

LESSUC	SUCC	HISUCC
.....+.....+.....+		
MIDPOINTS		
1.120)		
1.050)		
.980)**	*****	**
.910)		
.840)		
.770)		
.700)		
.630)		
.560)		
.490)		
.420)		
.350)		
.280)		
.210)N		N
.140)	N	
.070)		
.000)*****	*****	*****

GROUP MEANS ARE DENOTED BY M'S IF THEY COINCIDE WITH \*'S, N'S OTHERWISE

MEAN	.200	.156	.222
STD.DEV.	.422	.369	.441
R.E.S.D.	.423	.336	.460
S. E. M.	.133	.065	.147
MAXIMUM	1.000	1.000	1.000
MINIMUM	.000	.000	.000
SAMPLE SIZE	10	32	9

ALL GROUPS COMBINED \*\*\*\*\* ANALYSIS OF VARIANCE TABLE \*\*\*\*\*

(EXCEPT CASES WITH	* TEST	SOURCE	SUM SQS.	DF	MEAN SQ.	F	P
UNUSED VALUES FOR	*STANDARD	BETWEEN	.037	2	.02	.12	.8855
VARIABLE MEIRT )	*	WITHIN	7.374	48	.15		

\*\*\*\*\* LEVENE TEST FOR EQUAL VARIANCES \*\*\*\*\*

MEAN	.176	*	BETWEEN	2	.03	.46	.6312
STD.DEV.	.385	*	WITHIN	48	.06		
R.E.S.D.	.368	***** TESTS NOT ASSUMING EQUAL VARIANCES *****					
S. E. M.	.054	*WELCH	BETWEEN	2	.11	.10	.9010
MAXIMUM	1.000	*	WITHIN	15	1.04		
MINIMUM	.000	*					
SAMPLE SIZE	51	*BROWN-	BETWEEN	2	.04	.11	.9000
		*FORSYTHE	WITHIN	23	.35		

\*\*\*\*\*  
 HISTOGRAM OF \* AFSC65 \* (VARIABLE 5). CASES DIVIDED INTO GROUPS BASED ON VALUES OF \* MEIRT \*  
 \*\*\*\*\*

	LESSUC	SUCC	HISUCC
MIDPOINTS			
1.120)			
1.050)			
.980)**		*	
.910)			
.840)			
.770)			
.700)			
.630)			
.560)			
.490)			
.420)			
.350)			
.280)			
.210)M			
.140)			
.070)			
.000)*****			

\*\*\*\*\*31\*\*\*\*\*

GROUP MEANS ARE DENOTED BY M'S IF THEY COINCIDE WITH \*'S, M'S OTHERWISE

	LESSUC	SUCC	HISUCC
MEAN	.200	.031	.000
STD.DEV.	.422	.177	.000
R.E.S.D.	.423	.077	.000
S. E. M.	.133	.031	.000
MAXIMUM	1.000	1.000	.000
MINIMUM	.000	.000	.000
SAMPLE SIZE	10	32	9

ALL GROUPS COMBINED \*\*\*\*\* ANALYSIS OF VARIANCE TABLE \*\*\*\*\*

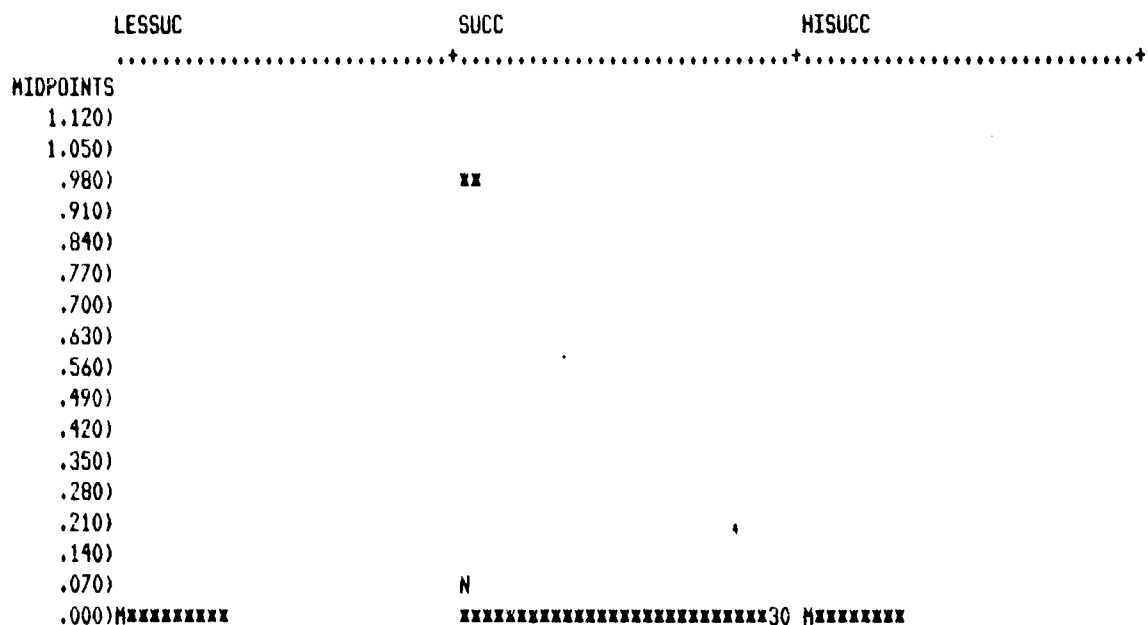
(EXCEPT CASES WITH	* TEST	SOURCE	SUM SQS.	DF	MEAN SQ.	F	P
UNUSED VALUES FOR	*STANDARD	BETWEEN	.255	2	.13	2.38	.1033
VARIABLE MEIRT )	*	WITHIN	2.569	48	.05		

\*\*\*\*\* LEVENE TEST FOR EQUAL VARIANCES \*\*\*\*\*

	LESSUC	SUCC	HISUCC
MEAN	.059 *	BETWEEN	2 .31 10.49 .0002
STD.DEV.	.238 *	WITHIN	48 .03
R.E.S.D.	.140 *****	TESTS NOT ASSUMING EQUAL VARIANCES *****	
S. E. M.	.033 *WELCH	BETWEEN	2 .76 .74 .4862
MAXIMUM	1.000 *	WITHIN	27 1.02
MINIMUM	.000 *		
SAMPLE SIZE	51 *BROWN-	BETWEEN	2 .25 1.65 .2365
	*FORSYTHE	WITHIN	11 .15

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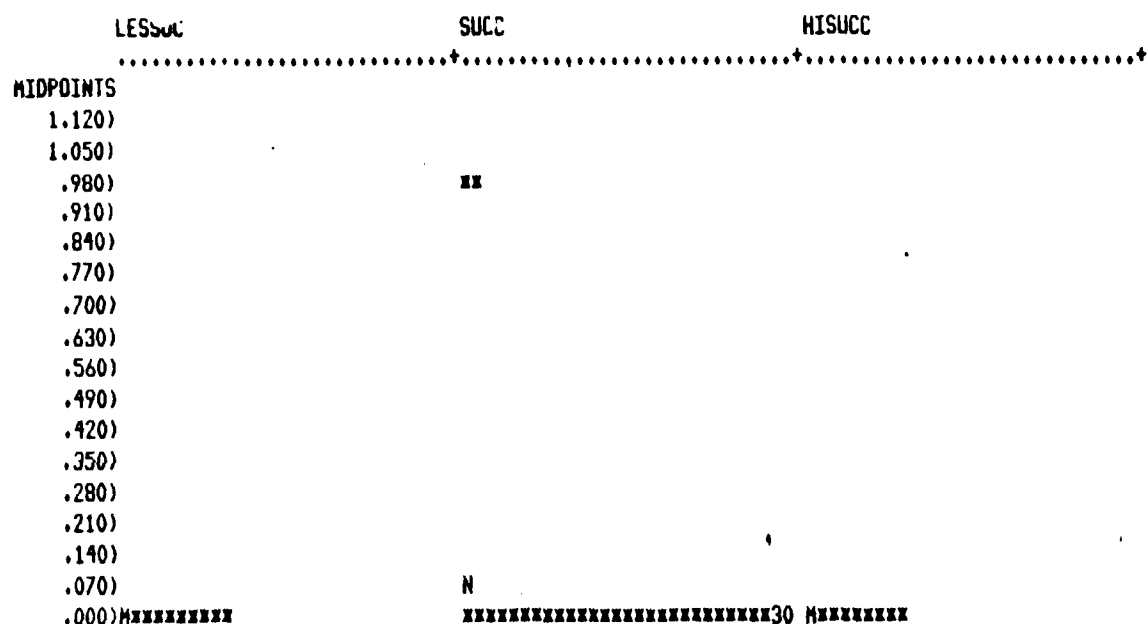
HISTOGRAM OF \* AFSC66 \* (VARIABLE 6). CASES DIVIDED INTO GROUPS BASED ON VALUES OF \* MEIRT \*  
 \*\*\*\*\*



GROUP MEANS ARE DENOTED BY M'S IF THEY COINCIDE WITH \*'S, N'S OTHERWISE

MEAN	.000	.063	.000
STD.DEV.	.000	.246	.000
R.E.S.D.	.000	.149	.000
S. E. M.	.000	.043	.000
MAXIMUM	.000	1.000	.000
MINIMUM	.000	.000	.000
SAMPLE SIZE	10	32	9

HISTOGRAM OF AFSC67 (VARIABLE 7), CASES DIVIDED INTO GROUPS BASED ON VALUES OF MEIRT



GROUP MEANS ARE DENOTED BY M'S IF THEY COINCIDE WITH X'S, N'S OTHERWISE

MEAN	.000	.063	.000
STD.DEV.	.000	.246	.000
R.E.S.D.	.000	.149	.000
S. E. M.	.000	.043	.000
MAXIMUM	.000	1.000	.000
MINIMUM	.000	.000	.000
SAMPLE SIZE	10	32	9

\*\*\*\*\*  
 HISTOGRAM OF \* AFSC40 \* (VARIABLE 8). CASES DIVIDED INTO GROUPS BASED ON VALUES OF \* MEIRT \*  
 \*\*\*\*\*

LESSUC	SUCC	HISUCC
.....+.....+.....+		
MIDPOINTS		
1.120)		
1.050)		
.980)xx	xxx	xxx
.910)		
.840)		
.770)		
.700)		
.630)		
.560)		
.490)		
.420)		
.350)		N
.280)		
.210)N		
.140)		
.070)	N	
.000)xxxxxxx	xxxxxxxxxxxxxxxxxxxxxxx	xxxxxx

GROUP MEANS ARE DENOTED BY M'S IF THEY COINCIDE WITH \*'S, N'S OTHERWISE

	LESSUC	SUCC	HISUCC
MEAN	.200	.094	.333
STD.DEV.	.422	.296	.500
R.E.S.D.	.423	.216	.591
S. E. M.	.133	.052	.167
MAXIMUM	1.000	1.000	1.000
MINIMUM	.000	.000	.000
SAMPLE SIZE	10	32	9

ALL GROUPS COMBINED \*\*\*\*\* ANALYSIS OF VARIANCE TABLE \*\*\*\*\*

(EXCEPT CASES WITH	* TEST	SOURCE	SUM SQS.	DF	MEAN SQ.	F	P
UNUSED VALUES FOR	*STANDARD	BETWEEN	.426	2	.21	1.62	.2087
VARIABLE MEIRT )	* WITHIN		6.319	48	.13		

\*\*\*\*\* LEVENE TEST FOR EQUAL VARIANCES \*\*\*\*\*

MEAN	* TEST	SOURCE	SUM SQS.	DF	MEAN SQ.	F	P
.157	* BETWEEN			2	.30	5.50	.0071
.367	* WITHIN			48	.05		

\*\*\*\*\* TESTS NOT ASSUMING EQUAL VARIANCES \*\*\*\*\*

S. E. M.	*TEST	SOURCE	SUM SQS.	DF	MEAN SQ.	F	P
.051	*WELCH	BETWEEN		2	1.12	1.07	.3707
MAXIMUM	* WITHIN			14	1.05		
MINIMUM	* WITHIN						

SAMPLE SIZE	*TEST	SOURCE	SUM SQS.	DF	MEAN SQ.	F	P
51	*BROWN-	BETWEEN		2	.43	1.12	.3476
	*FORSYTHE	WITHIN		19	.38		

XXXXXXXXXXXX  
HISTOGRAM OF X PME1 X (VARIABLE 9). CASES DIVIDED INTO GROUPS BASED ON VALUES OF X MEIRT X  
XXXXXXXXXXXX

	LESSUC	SUCC	HISUCC
MIDPOINTS	.....+.....+.....+		
1.120)			
1.050)			
.980)XXXXXXXX		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX
.910)		N	
.840)			
.770)N			
.700)			
.630)			
.560)			
.490)			
.420)			
.350)			
.280)			
.210)			
.140)			
.070)			
.000)XX		XXX	

GROUP MEANS ARE DENOTED BY M'S IF THEY COINCIDE WITH X'S, N'S OTHERWISE

MEAN	.800	.906	1.000
STD.DEV.	.422	.296	.000
R.E.S.D.	.423	.216	.000
S. E. M.	.133	.052	.000
MAXIMUM	1.000	1.000	1.000
MINIMUM	.000	.000	1.000
SAMPLE SIZE	10	32	9

ALL GROUPS COMBINED		***** ANALYSIS OF VARIANCE TABLE *****							
(EXCEPT CASES WITH		X	TEST	SOURCE	SUM SQS.	DF	MEAN SQ.	F	P
UNUSED VALUES FOR		X	STANDARD	BETWEEN	.191	2	.10	1.06	.3538
VARIABLE MEIRT )		X		WITHIN	4.319	48	.09		
		***** LEVENE TEST FOR EQUAL VARIANCES *****							
MEAN	.902	X		BETWEEN		2	.24	4.91	.0115
STD.DEV.	.300	X		WITHIN		48	.05		
R.E.S.D.	.224	***** TESTS NOT ASSUMING EQUAL VARIANCES *****							
S. E. M.	.042	X	WELCH	BETWEEN		2	.28	.27	.7655
MAXIMUM	1.000	X		WITHIN		32	1.02		
MINIMUM	.000	X							
SAMPLE SIZE	51	X	BROWN-	BETWEEN		2	.19	1.09	.3657
		X	FORSYTHE	WITHIN		13	.18		

```

LESSUC          SUCC          HISUCC
.....+.....+.....+
MIDPOINTS
1.120)
1.050)
.980)XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX30 XXXXXXXX
.910)N N
.840)
.770)
.700)
.630)
.560)
.490)
.420)
.350)
.280)
.210)
.140)
.070)
.000)X XX

```

MEAN	.900	.938	1.000
STD.DEV.	.316	.246	.000
R.E.S.D.	.238	.149	.000
S. E. M.	.100	.043	.000
MAXIMUM	1.000	1.000	1.000
MINIMUM	.000	.000	1.000
SAMPLE SIZE	10	32	9

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\*\*\*\*\*  
HISTOGRAM OF \* PNE3 \* (VARIABLE 11). CASES DIVIDED INTO GROUPS BASED ON VALUES OF \* MEIRT \*  
\*\*\*\*\*

LESSUC	SUCC	HISUCC
.....+.....+.....+.....		
MIDPOINTS		
1.120)		
1.050)		
.980)*****	*****	****
.910)		
.840)		
.770)		
.700)		
.630)N		
.560)		
.490)		
.420)	N	N
.350)		
.280)		
.210)		
.140)		
.070)		
.000)****	*****	****

GROUP MEANS ARE DENOTED BY M'S IF THEY COINCIDE WITH \*'S, N'S OTHERWISE

	LESSUC	SUCC	HISUCC
MEAN	.600	.406	.444
STD.DEV.	.516	.499	.527
R.E.S.D.	.634	.614	.656
S. E. M.	.163	.088	.176
MAXIMUM	1.000	1.000	1.000
MINIMUM	.000	.000	.000
SAMPLE SIZE	10	32	9

ALL GROUPS COMBINED \*\*\*\*\* ANALYSIS OF VARIANCE TABLE \*\*\*\*\*

(EXCEPT CASES WITH	* TEST	SOURCE	SUM SQS.	DF	MEAN SQ.	F	P
UNUSED VALUES FOR	*STANDARD	BETWEEN	.286	2	.14	.56	.5765
VARIABLE MEIRT )	* WITHIN		12.341	48	.26		

\*\*\*\*\* LEVENE TEST FOR EQUAL VARIANCES \*\*\*\*\*

	* TEST	SOURCE	SUM SQS.	DF	MEAN SQ.	F	P
MEAN	.451	* BETWEEN	2	.00	.07	.9349	
STD.DEV.	.503	* WITHIN	48	.01			
R.E.S.D.	.627	***** TESTS NOT ASSUMING EQUAL VARIANCES *****					
S. E. M.	.070	*WELCH	BETWEEN	2	.55	.52	.6021
MAXIMUM	1.000	* WITHIN	16	1.04			
MINIMUM	.000	* WITHIN	24	.54			
SAMPLE SIZE	51	*BROWN-	BETWEEN	2	.29	.53	.5927
		*FORSYTHE	WITHIN	24	.54		

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HISTOGRAM OF \* DEGREE \* (VARIABLE 12). CASES DIVIDED INTO GROUPS BASED ON VALUES OF \* MEIRT \*

LESSUC	SUCC	HISUCC
MIDPOINTS		
2.100)		
2.030)*****	*****	*****
1.960)		
1.890)N		
1.820)		
1.750)		
1.680)		N
1.610)	N	
1.540)		
1.470)		
1.400)		
1.330)		
1.260)		
1.190)		
1.120)		
1.050)		
.980)*****	*****	***

GROUP MEANS ARE DENOTED BY M'S IF THEY COINCIDE WITH \*'S, N'S OTHERWISE

	LESSUC	SUCC	HISUCC
MEAN	1.900	1.625	1.667
STD.DEV.	.316	.492	.500
R.E.S.D.	.238	.597	.591
S. E. M.	.100	.087	.167
MAXIMUM	2.000	2.000	2.000
MINIMUM	1.000	1.000	1.000
SAMPLE SIZE	10	32	9

ALL GROUPS COMBINED \*\*\*\*\* ANALYSIS OF VARIANCE TABLE \*\*\*\*\*

(EXCEPT CASES WITH	* TEST	SOURCE	SUM SQS.	DF	MEAN SQ.	F	P
UNUSED VALUES FOR	*STANDARD	BETWEEN	.580	2	.29	1.34	.2716
VARIABLE MEIRT )	*	WITHIN	10.400	48	.22		

MEAN	STD.DEV.	R.E.S.D.	S. E. M.	MAXIMUM	MINIMUM	SAMPLE SIZE
1.686	.469	.545	.066	2.000	1.000	51

* TEST	SOURCE	SUM SQS.	DF	MEAN SQ.	F	P
*BROWN-	BETWEEN	.58	2	.29	1.54	.2353
*FORSYTHE	WITHIN	.38	23	.03		

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\*\*\*\*\*  
 HISTOGRAM OF \* DEGFLD \* (VARIABLE 13). CASES DIVIDED INTO GROUPS BASED ON VALUES OF \* MEIRT \*  
 \*\*\*\*\*

LESSUC	SUCC	HISUCC
.....+.....+.....+.....+		
MIDPOINTS		
10.800)		
10.200)*		
9.600)		
9.000)		
8.400)		
7.800)		
7.200)		
6.600)		
6.000)		
5.400)		
4.800)	*****	***
4.200)	****	*
3.600)		
3.000)	**	N
2.400)N	N	
1.800)**	***	**
1.200)*****	*****	***

GROUP MEANS ARE DENOTED BY M'S IF THEY COINCIDE WITH \*'S, N'S OTHERWISE

MEAN	2.100	2.594	2.889
STD.DEV.	2.807	1.739	1.833
R.E.S.D.	2.087	2.044	2.199
S. E. M.	.888	.307	.611
MAXIMUM	10.000	5.000	5.000
MINIMUM	1.000	1.000	1.000
SAMPLE SIZE	10	32	9

ALL GROUPS COMBINED \*\*\*\*\* ANALYSIS OF VARIANCE TABLE \*\*\*\*\*  
 (EXCEPT CASES WITH \* TEST SOURCE SUM SQS. DF MEAN SQ. F P  
 UNUSED VALUES FOR \*STANDARD BETWEEN 3.120 2 1.56 .39 .6785  
 VARIABLE MEIRT ) \* WITHIN 191.508 48 3.99

\*\*\*\*\* LEVENE TEST FOR EQUAL VARIANCES \*\*\*\*\*  
 MEAN 2.549 \* BETWEEN 2 .01 .01 .9890  
 STD.DEV. 1.973 \* WITHIN 48 1.24  
 R.E.S.D. 2.113 \*\*\*\*\* TESTS NOT ASSUMING EQUAL VARIANCES \*\*\*\*\*  
 S. E. M. .276 \*WELCH BETWEEN 2 .27 .26 .7753  
 MAXIMUM 10.000 \* WITHIN 15 1.04  
 MINIMUM 1.000 \*  
 SAMPLE SIZE 51 \*BROWN- BETWEEN 2 3.12 .31 .7406  
 \*FORSYTHE WITHIN 19 10.23

\*\*\*\*\*  
 HISTOGRAM OF \* LOGASC \* (VARIABLE 14). CASES DIVIDED INTO GROUPS BASED ON VALUES OF \* MEIRT \*  
 \*\*\*\*\*

LESSUC	SUCC	HISUCC
MIDPOINTS		
11.200)		
10.500)		
9.800)*		
9.100)	X	X
8.400)		
7.700)	XXX	
7.000)*	X	
6.300)	XXX	
5.600)		X
4.900)*		
4.200)	X	
3.500)		
2.800)*	X	X
2.100)*	M	M
1.400)		
.700)*	XXX	XXX
.000)***	XXXXXXXXXXXXXXXXXXXX	XXX

GROUP MEANS ARE DENOTED BY M'S IF THEY COINCIDE WITH \*'S, N'S OTHERWISE

	LESSUC	SUCC	HISUCC
MEAN	2.800	2.188	2.333
STD.DEV.	3.490	3.157	3.162
R.E.S.D.	3.646	3.432	3.250
S. E. M.	1.104	.558	1.054
MAXIMUM	10.000	9.000	9.000
MINIMUM	.000	.000	.000
SAMPLE SIZE	10	32	9

ALL GROUPS COMBINED \*\*\*\*\* ANALYSIS OF VARIANCE TABLE \*\*\*\*\*  
 (EXCEPT CASES WITH \* TEST SOURCE SUM SQS. DF MEAN SQ. F P  
 UNUSED VALUES FOR \*STANDARD BETWEEN 2.858 2 1.43 .14 .8718  
 VARIABLE MEIRT ) \* WITHIN 498.475 48 10.38

\*\*\*\*\* LEVENE TEST FOR EQUAL VARIANCES \*\*\*\*\*  
 MEAN 2.333 \* BETWEEN 2 .28 .10 .9065  
 STD.DEV. 3.166 \* WITHIN 48 2.83

R.E.S.D. 3.392 \*\*\*\*\* TESTS NOT ASSUMING EQUAL VARIANCES \*\*\*\*\*  
 S. E. M. .443 \*WELCH BETWEEN 2 .12 .12 .8895  
 MAXIMUM 10.000 \* WITHIN 16 1.04  
 MINIMUM .000 \*  
 SAMPLE SIZE 51 \*BROWN- BETWEEN 2 2.86 .13 .8774  
 \*FORSYTHE WITHIN 24 21.74

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XXXXXXXXXXXXX  
 HISTOGRAM OF \* RATING \* (VARIABLE 15). CASES DIVIDED INTO GROUPS BASED ON VALUES OF \* MEIRT \*  
 XXXXXXXXXXXXX

LESSUC	SUCC	HISUCC
.....+.....+.....+		
MIDPOINTS		
2.100)		
2.030)XXXX	XXXXXX	XX
1.960)		
1.890)		
1.820)		
1.750)		
1.680)		
1.610)		
1.540)		
1.470)		
1.400)N		
1.330)		
1.260)		
1.190)	N	N
1.120)		
1.050)		
.980)XXXXX	XXXXXXXXXXXXXXXXXXXXX	XXXXXX

GROUP MEANS ARE DENOTED BY M'S IF THEY COINCIDE WITH \*'S, N'S OTHERWISE

MEAN	1.400	1.219	1.222
STD.DEV.	.516	.420	.441
R.E.S.D.	.634	.435	.460
S. E. M.	.163	.074	.147
MAXIMUM	2.000	2.000	2.000
MINIMUM	1.000	1.000	1.000
SAMPLE SIZE	10	32	9

ALL GROUPS COMBINED XXXXXXXXXXXX ANALYSIS OF VARIANCE TABLE XXXXXXXXXXXX  
 (EXCEPT CASES WITH \* TEST SOURCE SUM SQS. DF MEAN SQ. F P  
 UNUSED VALUES FOR \*STANDARD BETWEEN .262 2 .13 .67 .5179  
 VARIABLE MEIRT ) \* WITHIN 9.424 48 .20

XXXXXXXXXXXXX LEVENE TEST FOR EQUAL VARIANCES XXXXXXXXXXXX  
 MEAN 1.255 \* BETWEEN 2 .08 1.58 .2167  
 STD.DEV. .440 \* WITHIN 48 .05  
 R.E.S.D. .481 XXXXXXXXXXXX TESTS NOT ASSUMING EQUAL VARIANCES XXXXXXXXXXXX  
 S. E. M. .062 \*WELCH BETWEEN 2 .52 .50 .6137  
 MAXIMUM 2.000 \* WITHIN 16 1.04  
 MINIMUM 1.000 \*  
 SAMPLE SIZE 51 \*BROWN- BETWEEN 2 .26 .60 .5598  
 \*FORSYTHE WITHIN 23 .44

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\*\*\*\*\*  
HISTOGRAM OF \* PCE \* (VARIABLE 16). CASES DIVIDED INTO GROUPS BASED ON VALUES OF \* MEIRT \*  
\*\*\*\*\*

LESSUC	SUCC	HISUCC
MIDPOINTS		
13.300)	XX	X
12.600)		
11.900)XX	X	
11.200)X	XX	
10.500)		
9.800)X	XXX	
9.100)X	X	XX
8.400)		
7.700)N	MXXXXX	M
7.000)X	XXX	
6.300)X	XXX	XXXX
5.600)		
4.900)XX	XXXXXX	
4.200)	XXXXX	X
3.500)		
2.800)		
2.100)X		

GROUP MEANS ARE DENOTED BY M'S IF THEY COINCIDE WITH \*'S, N'S OTHERWISE

MEAN	7.900	7.375	7.444
STD.DEV.	3.414	2.744	2.651
R.E.S.D.	3.831	2.895	2.724
S. E. M.	1.080	.485	.884
MAXIMUM	12.000	13.000	13.000
MINIMUM	2.000	4.000	4.000
SAMPLE SIZE	10	32	9

ALL GROUPS COMBINED \*\*\*\*\* ANALYSIS OF VARIANCE TABLE \*\*\*\*\*

TEST	SOURCE	SUM SQS.	DF	MEAN SQ.	F	P
* STANDARD	BETWEEN	2.123	2	1.06	.13	.8792
* WITHIN	WITHIN	394.622	48	8.22		

\*\*\*\*\* LEVENE TEST FOR EQUAL VARIANCES \*\*\*\*\*

TEST	SOURCE	SUM SQS.	DF	MEAN SQ.	F	P
* BETWEEN	BETWEEN	2	2	2.01	.90	.4134
* WITHIN	WITHIN	48	48	2.24		

\*\*\*\*\* TESTS NOT ASSUMING EQUAL VARIANCES \*\*\*\*\*

TEST	SOURCE	SUM SQS.	DF	MEAN SQ.	F	P
* WELCH	BETWEEN	2	2	.10	.09	.9102
* WITHIN	WITHIN	16	16	1.04		

SAMPLE SIZE	51	*BROWN-	BETWEEN	2	2.12	.12	.8891
		*FORSYTHE	WITHIN	23	17.96		

Appendix H: MEI Ratings Received

MAJCOM: XX  
Wing/Base

Functional Units

	Sup	Trans	Log Plans	Compt	Contract
1	S	S	S	S	E
2	S	E	S	S	S
3	S	S	S	E	S
4	S	S	S	S	S
5	S	S	S	S	S
6	S	S	S	S	S
7	S	S	S	E	S
8	S	S	M	E	S
9	S	E	E	S	S
10	S	S	E	S	M
11	E	S	S	S	S
12	S	S	S	S	S
13	S	S	S	S	S
14	S	S	S	O	S
15	S	S	S	S	E
16	S	S	S	S	S
17	E	S	S	E	S
18	S	E	S	O	S
19	S	NR	S	S	NR
20	E	S	U	E	S
21	S	S	E	E	M
22	S	E	S	S	S

23	E	E	E	E	NR
24	M	E	E	S	S
25	S	M	S	S	S
26	S	NR	S	M	NR
27	S	S	S	S	E
28	S	E	S	S	S
29	S	S	S	E	NR
30	S	S	S	M	S
31	S	S	E	S	S
32	S	S	S	S	E
33	S	S	M	S	M
34	E	S	E	S	M
35	S	S	S	M	S
36	S	S	E	E	NR
37	O	S	S	E	NR
38	S	S	E	S	S
39	S	E	M	M	S
40	S	S	M	S	E
41	S	S	S	S	E
42	S	S	S	S	S
43	S	S	S	S	S
44	S	E	S	S	S
45	NR	M	S	NR	NR
46	S	S	E	E	E
47	S	S	S	S	E
48	S	S	S	S	E



49	S	S	S	S	S
50	S	S	S	E	S
51	E	S	S	E	NR

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AD-A160 843

WHO IS THE AIR FORCE DEPUTY COMMANDER FOR RESOURCE  
MANAGEMENT: AN EMPIRIC. (U) AIR FORCE INST OF TECH  
WRIGHT-PATTERSON AFB OH SCHOOL OF SYST.. D M CRINIEL  
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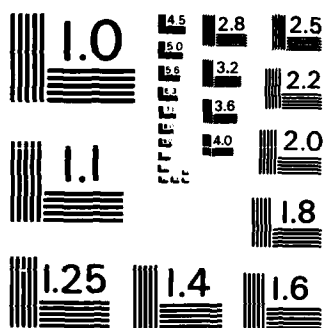
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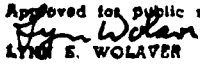
First Lieutenant Dennis M. Crimiel was born on 20 February 1958 in McComb Mississippi. He graduated from McComb High School in 1976. In August of 1976, he enrolled in Alcorn State University, and graduated December 1979. He received a Bachelor of Science Degree in Business Administration. In May 1980, he enlisted in the Air Force and was assigned to Offutt AFB, Neb as an administrative specialist in the 3902 Supply Squadron. He received his commission as a Second Lieutenant through Officer Training School, November 30, 1982. He was then assigned to the 92nd Supply Squadron, Fairchild AFB, WA where he served as the Materiel Management Officer. He entered the School of Systems and Logistics, Air Force Institute of Technology, in June 1984.

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SECURITY CLASSIFICATION OF THIS PAGE

## REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION <b>UNCLASSIFIED</b>			1b. RESTRICTIVE MARKINGS <b>AD-A120 843</b>	
2a. SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution unlimited	
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE				
4. PERFORMING ORGANIZATION REPORT NUMBER(S) <b>AFIT/GLM/LSM85S-16</b>			5. MONITORING ORGANIZATION REPORT NUMBER(S)	
6a. NAME OF PERFORMING ORGANIZATION <b>School of Systems and Logistics</b>		6b. OFFICE SYMBOL (If applicable) <b>AFIT/LS</b>		7a. NAME OF MONITORING ORGANIZATION
6c. ADDRESS (City, State and ZIP Code) <b>Air Force Institute of Technology Wright Patterson AFB OH 45433</b>			7b. ADDRESS (City, State and ZIP Code)	
8a. NAME OF FUNDING/SPONSORING ORGANIZATION		8b. OFFICE SYMBOL (If applicable)		9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER
8c. ADDRESS (City, State and ZIP Code)			10. SOURCE OF FUNDING NOS.	
			PROGRAM ELEMENT NO.	PROJECT NO.
			TASK NO.	WORK UNIT NO.
11. TITLE (Include Security Classification) <b>See Block 19</b>				
12. PERSONAL AUTHOR(S) <b>Dennis M. Crimiel, B.S., 1st Lt, USAF</b>				
13a. TYPE OF REPORT <b>MS Thesis</b>		13b. TIME COVERED FROM _____ TO _____		14. DATE OF REPORT (Yr., Mo., Day) <b>1985 September</b>
				15. PAGE COUNT <b>99</b>
16. SUPPLEMENTARY NOTATION				
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)	
FIELD	GROUP	SUB. GR.		
			<b>Logistician, Logistics, Logistics Management Resource Management</b>	
19. ABSTRACT (Continue on reverse if necessary and identify by block number)				
<p>Title: <b>WHO IS THE AIR FORCE DEPUTY COMMANDER FOR RESOURCE MANAGEMENT AN EMPIRICAL STUDY OF RESOURCE MANAGERS</b></p> <p>Thesis Chairman: <b>David E. Lloyd, Lt Col, USAF Assistant Professor of Logistics Management</b></p> <p style="text-align: right;">Approved for public release: IAW AFR 100-17.    <b>LYNN E. WOLAYER</b> 208 87          Dean for Research and Professional Development          Air Force Institute of Technology (AFIT)          Wright-Patterson AFB OH 45433</p>				
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <b>UNCLASSIFIED/UNLIMITED <input checked="" type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS <input type="checkbox"/></b>			21. ABSTRACT SECURITY CLASSIFICATION <b>UNCLASSIFIED</b>	
22a. NAME OF RESPONSIBLE INDIVIDUAL <b>David E. Lloyd, Lt Col, USAF</b>		22b. TELEPHONE NUMBER (Include Area Code) <b>(513) 255-5023</b>		22c. OFFICE SYMBOL <b>AFIT/LSM</b>



It is critically important that today's Air Force have logistics managers that are capable of making the most efficient uses of our resources. Many concerns have surfaced recently as to whether the Air Force is properly grooming individuals to fill its senior level logistics positions. This study focused upon the Deputy Commander for Resource Management (DCR), a senior logistician at the wing/base level. The purpose of this research was to describe the current DCRs, and also explore the issue of "stovepiping", a concern raised by Lt Gen Leo Marquez. An attempt was made to determine if a correlation exists between the level of success attained by the DCRs and their individual backgrounds in logistics.

To provide insight as to how well the Air Force is meeting its objectives in the selection of DCRs, descriptive files were established for each of the DCRs in the total population. The descriptive statistics computed from this population were compared to the selection criteria established by AFR 36-1. The issue of "stovepiping" suggests individuals have followed a narrow and vertical career pattern without developing a broad logistics knowledge base. The career patterns of the DCRs were analyzed to test this issue. In addition, Discriminant Analysis was used to test for a relationship between the level of success by the DCR and his or her background in logistics. MEI ratings from five DCR subfunctions were used to establish a measure of success. The DCRs in this study come from five MAJCOMS.

The results showed that 55 percent of the DCRs in the population had been "stovepiped" in their careers, 8 percent of the DCRs multi-disciplined background in logistics, and 36 percent had no backgrounds in logistics. The Discriminant Analysis could not establish a relationship between the level of success attained by a DCR and his or her background in logistics. Further research in this critical area is warranted and several recommendations are made.

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