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THESIS

**DATA ANALYSIS TO SUPPORT A LIMITED
OBJECTIVE TEST/EXPERIMENT OF A BILLET
MARKETPLACE FOR MARINE OFFICERS**

by

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June 2020

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TEST/EXPERIMENT OF A BILLET MARKETPLACE FOR MARINE
OFFICERS**

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ABSTRACT

Effective talent management is an invaluable process within an organization. The Department of Defense rotates roughly one-third of its officers every year. The United States Marine Corps is seeking an efficient method to address this issue, while accounting for the preferences of each Marine officer. This research assists in that endeavor by exploring other similar methods in use across the Department of Defense and civilian sector. We analyze an officer assignment process survey to identify and assess focus areas for a new billet marketplace system using a wide range of analytic techniques. Our study evaluates data from three officer mover's surveys provided to officers seeking permanent change of station orders to isolate distributional trends in billet preference among various officer groups. Through our research of the assignment process, we identify an association between an officer's dissatisfaction with the assignment process and company grade officer's desire to resign. Our research provides insight into the necessity of a billet marketplace and illustrates the implications of the current billet assignment process. We recommend improving the transparency of the officer assignment process and developing a data collection and analysis methodology to track the performance of the billet marketplace.

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LIST OF ACRONYMS AND ABBREVIATIONS

AIM	Assignment Interactive Module
ANOVA	Analysis of Variance
ATAP	Army Talent Alignment Process
BMOS	Billet Military Occupational Specialty
CONUS	Continental United States
CMC	Commandant of the Marine Corps
DA	Department of the Army
DMR	Delete or Merge Regression
DOD	Department of Defense
DON	Department of the Navy
EFMP	Exceptional Family Member Program
FAC	Forward Air Controller
HHQ	Higher Headquarters
HQMC	Headquarters Marine Corps
IRB	Institutional Review Board
JDA	Joint Duty Assignment
MAGTF	Marine Air-Ground Task Force
MASS	Monitor Assignment Support System
MCC	Monitored Command Code
MCRC	Marine Corps Recruiting Command
MMOA	Manpower Management Officer Assignments
MNA	MyNavy Assignment
MOS	Military Occupational Specialty
MSC	Major Subordinate Command
NPS	Naval Postgraduate School
NRMP	National Resident Matching Program
NRP	Naval Research Program
OAIS	Officer Assignment Information System
OCD	Overseas Control Date
OCONUS	Outside Continental United States

OEMA	Office of Economic and Manpower Analysis
PII	Personally Identifiable Information
PMOS	Primary Military Occupational Specialty
SCN	Survey Control Number
TIS	Time In Service
TOS	Time On Station
USMC	United States Marine Corps

EXECUTIVE SUMMARY

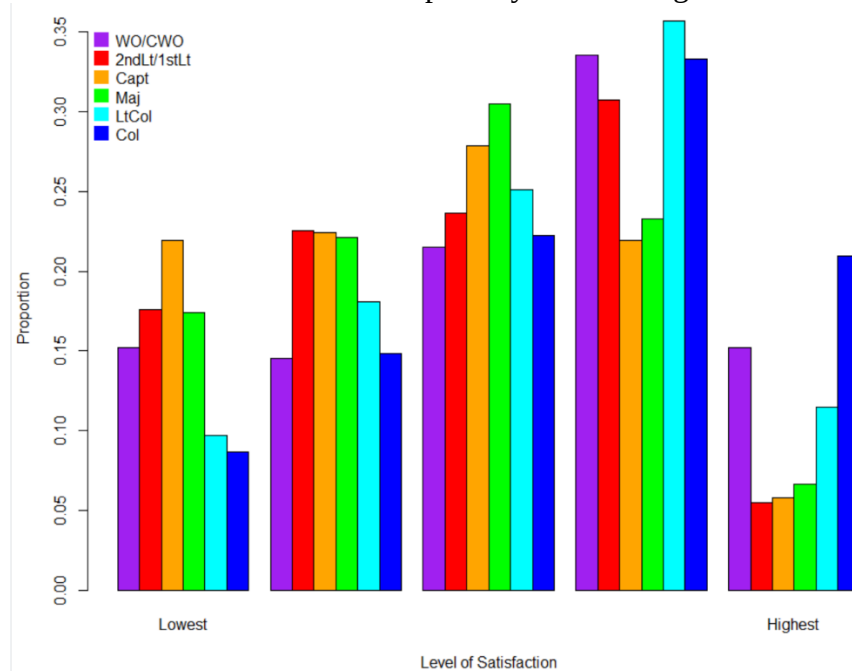
The U.S. Marine Corps (USMC) assigns officers to billets using a manual assignment process conducted by primary military occupational specialty (PMOS) monitors. Using this process, monitors strive to balance the requirements of the USMC, the objectives of the billet holders, and the preferences of Marine officers. To assist in this effort, PMOS monitors conduct mover's surveys from which they compile the billet preferences of their constituents and develop a list of prospective billets. The purpose of our thesis is to examine this survey data to provide guidance for the development of a billet marketplace system that would assign officers to billets in an automated manner.

Automated systems for assigning job seekers to positions are well established both in the civilian and military sectors. Since 1951, the National Residency Matching Program developed and employed an algorithm to assist matching approximately 20,000 medical school graduates to residency programs based on their preferences (Roth and Peranson 1999). Several service branches of the Department of Defense use similar processes to match its service members to billets. In 2019, the U.S. Army employed the Army Talent Alignment Program (ATAP), this process is “a decentralized, regulated, market-style hiring system which aligns officers with jobs based on preferences. The ATAP uses more detailed information about officers and units than the traditional officer distribution system” (Army Talent Management Task Force 2019). In December 2019, the U.S. Navy implemented MyNavy Assignment which “replaces the Sailor-facing component of the Career Management System—Interactive Detailing (CMS-ID). It is the new interface to the Detailing Marketplace, providing Sailors more options, greater career flexibility and increased transparency” for the enlisted sailors (DON 2019, p. 1). Between 2018 and 2019, the U.S. Air Force reduced the number of billet rotation cycles from three to two, increasing the amount of time for assignment, and established a talent marketplace for officer assignments. According to the Air Force's Personnel Center Public Affairs Office, this system “examines officer assignment solutions by offering transparency of potential jobs available to officers, increasing visibility of officers' assignment preferences to commanders and incorporating gaining commander input into the action” (Bailey 2019).

The Marine Corps is seeking to develop a similar system that balances the needs of all parties involved in the assignment process.

Our research illustrates the desirability of a billet marketplace based on survey data collected by Manpower Management Officer Assignments (MMOA). We use the MMOA Billet Assignment Process survey data to analyze the satisfaction with the officer assignment process to identify factors that contribute to the satisfaction of Marine officers with the assignment process. MMOA conducted this survey from June 4, 2019 to June 17, 2019 and received responses from 1,792 officers. Figure ES-1 displays the satisfaction with the Marine Corps assignment process by rank. There is a significant difference in the responses of captains and majors, who tend toward low satisfaction, and those of lieutenant colonels and colonels, who tend toward high satisfaction.

Figure ES-1. Satisfaction with the Transparency of the Assignment Process by Rank



We use a modeling approach to predict the satisfaction of officers based on a set of predictor variables, including rank, time as a commissioned officer, career aspirations, prior enlisted status, and occupational field. Developing statistical models using the survey data allows us to identify what factors differentiate satisfaction ratings among officers. We

find that an officer's level of satisfaction with the assignment process is associated with his or her stated intention to resign from the Marine Corps and the next opportunity. This effect is measurable even after accounting for the officer's level of satisfaction with the Marine Corps in general. This finding illustrates the importance of accounting for the objectives of all stakeholders in making billet assignments. In contrast to the billet assignment process as it currently exists, a billet marketplace that uses an optimization approach to making assignments provides a mechanism for balancing the objectives of Marines officers, billet owners, and the Marine Corps in a manner that is systematic and transparent.

We also assess the current billet preferences of the officer community using three officer mover surveys. The surveys solicit responses from prospective officers ready to select their next assignment and each survey contains unique questions and structure to collect these preferences. Based on the survey responses, we assess the desirability of billets or attributes surrounding a billet, such as location or billet type. Our analysis displays the billets, locations, billet types, and other information that officers desire most often and we underscore several billet factors with the lowest preference.

Our research illustrates the dissatisfaction with the current billet assignment process and the specific areas the billet marketplace should consider. We make several recommendations for the billet marketplace concept, such as increasing the transparency of available billets, constraining responses to those eligible for certain billets, and the creation of performance metrics to measure the effectiveness of the marketplace. Given that we look at the assignment process from the perspective of a Marine officer seeking orders, areas for future research include analysis of satisfaction with job preferences and past individual performance, analysis of past job placement with the current assignment process, and the formulation of the weighting of preferences for a billet-matching optimization model.

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I. INTRODUCTION

A. BACKGROUND

The U.S. Marine Corps (USMC) personnel billet assignment process does not have the efficiency and transparency of similar systems available within the Department of Defense (DOD) and in civilian applications. This process requires individual Marine Primary Military Occupational Specialty (PMOS) monitors to develop their own methods for solving the problem of assigning Marines officers to their next billet. Each rotation cycle, PMOS monitors process thousands of officer assignment changes. Similar challenges exist across the DOD and in the civilian sector and in most cases, solutions to assist these processes are in place or in development. Matching algorithms to solve such problems pre-date the invention of the microprocessor used to solve them. This issue extends far beyond creating an efficient solution to reduce the workload of our human resources professionals and directly impacts each Marine Corps officer.

The 38th Commandant of the Marine Corps' (CMC) Planning Guidance states that “The essence of all manpower systems is to encourage those you need and want to stay, and separate who are not performing to standards. Our current system lacks the authorities and tools to accomplish that simple outcome in anything but a blunt way” (Commandant of the Marine Corps 2019, p. 7). This acknowledgement has led the Marine Corps to explore alternatives to its manning practices. In particular, the Marine Corps is seeking to develop a platform to provide a list of available billets to Marine officers and a venue for officers to provide preferences for their next assignment. This tool may allow Marine Corps units with job openings to view and rank rotation-eligible officers that meet billet requirements. Additionally, Marine Corps monitors will have access to a program designed to provide an initial assignment based on the preferences of the officers and units with availabilities.

Our research seeks to assist this process by analyzing current systems and data about the billet assignment process. The goal of this project is to demonstrate how the Marine Corps can improve its billet assignment process based on similar applications and

through the synthesis of Marine officer survey feedback. We also identify factors officers consider when stating their preferences for billet assignment. As a result of this research, we provide recommendations for improvements to the Marine Corps billet assignment process and the supporting systems.

B. SPONSORSHIP

Navy and Marine Corps topic sponsors can leverage the abilities of Naval Postgraduate School (NPS) faculty and students through the Naval Research Program (NRP). Our thesis is sponsored by Manpower Management Officer Assignments (MMOA) 3, Plans and Programs. The objective of MMOA-3's broader research effort is to optimize assignments of Marine Corps officers to billets by balancing the preferences of the Marine Corps, billet owners, and officers.

C. RESEARCH QUESTIONS

There are two principal research questions guiding our research effort. First, what are the perceptions of Marine Corps officers about the Marine Corps officer billet assignment process? This question explores officers' satisfaction with the Marine Corps assignment process. We develop understanding of how the perceptions of the assignment process compare to the perceptions of the Marine Corps in general. Second, do the perceptions about the officer billet assignment process have tangible implications for the Marine Corps? With this question, we determine if there are important associations between Marine officers who are dissatisfied with the current Marine Corps officer billet assignment process and their career aspirations. A tertiary question we explore in this research is: what are the stated billet preferences among Marine Corps officers? This question addresses the current billet considerations and supports our recommendations on the future Marine Corps billet assignment process.

D. SCOPE AND LIMITATIONS

The purpose of our investigation is to provide insight to how a Marine Corps billet marketplace can be shaped. To this end, we explore the billet assignment processes used across the DOD and talent marketplace concepts used in the civilian sector. Our analysis

incorporates data from four surveys administered to Marine Corps officers to elicit their evaluations of the billet assignment process. This data reveals factors considered when a Marine officer provides job, or billet, preferences to their monitor. A monitor is the Marine officer responsible for placing Marines, in their purview, into their next billet. The data also includes information regarding current satisfaction with the Marine Corps billet assignment process. We examine this data to provide recommendations for the requisite data fields on a future billet assignment survey and recommendations on a future talent management infrastructure for the Marine Corps assignment process. This infrastructure is referred to as a “billet marketplace” herein.

Our research includes four surveys from MMOA. The survey data we examined was collected between 2019 and 2020. These surveys pertain to the Marine Corps assignment process and officer billet preferences. These surveys do not collect how a respondent’s answers may change over time. We use three mover’s surveys to understand officer billet preferences. There are many more mover’s surveys used by the Marine Corps that target other officer populations than those discussed in our research.

E. ORGANIZATION OF THE THESIS

The balance of this thesis is organized as follows. Chapter II discusses policies, literature, and research involving the USMC billet assignment process, the common considerations for an officer making a billet selection, and billet assignment processes used throughout the DOD. Chapter III details the survey data that contributed to this research effort, including the process to obtain the data, a description of the survey, a summary of survey responses, and the methodology used to analyze this data. Chapter IV explores the results of the survey analysis and provides a discussion of the implications of those results on a billet marketplace. Chapter V conveys the research summary, general conclusions, recommendations, and areas for continued or future research.

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II. BACKGROUND AND LITERATURE REVIEW

A. INTRODUCTION

In this chapter we begin by describing the current Marine Corps officer billet assignment process in detail, including relevant considerations pertaining to various Marine Corps billets. This establishes a baseline for some of the factors contributing to the preferences of Marine Corps officers in their next billet. We follow this by reviewing the billet assignment processes used by the other United States military services, and studies that have been conducted on processes that manage billet or job placements in both the military and civilian sectors.

B. UNITED STATES MARINE CORPS OFFICER BILLET ASSIGNMENT PROCESS

Each year MMOA processes permanent changes of station or assignments of next set of orders for approximately 7,200 officers (Manpower Management, Officer Assignments 2020). The MMOA roadshow marks the beginning of the officer billet assignment process. “The purpose of the MMOA Roadshow is to provide commands with information pertaining to manpower management policies, procedures, and assignments, and facilitate opportunities for Marines to discuss future assignments with their Primary Military Occupational Specialty (PMOS) monitor” (Manpower & Reserve Affairs 2019). During the time leading up to a Marine’s rotation, the officer corresponds with their monitor to determine job openings and to communicate preferences. Additionally, eligible Marines participate in board proceedings for a wide range of assignments, such as advanced education, command selection, or various recruiting opportunities. Based on the interactions with the monitors and selection boards, monitors assign Marines to their next billets.

Marine Corps Order (MCO) 1300.8 sets forth the personnel assignment policy for Marine enlisted and officer. Chapter 1 states that “A valid Marine Corps staffing requirement must exist as the basis for transferring a Marine anywhere worldwide. Marines will be assigned to valid requirements based on their qualifications and ability to fill them.

Factors such as availability, volunteer status, Time on Station (TOS) and other criteria are secondary in nature” (Headquarters Marine Corps [HQMC] 2014, p. 1-1). Chapter 2, which applies to officer assignments, states that monitors must make officer assignments in accordance with the following concerns:

1. Needs of the Marine Corps.
2. Career progression (Operating Forces, Supporting Establishment, Seniority).
3. Overseas Control Date (OCD).
4. Individual preference.
5. Restricted officers (warrant officers and limited duty officers) must only be assigned to restricted officer billets within their respective MOSs. (HQMC 2014, p. 2-1)

This demonstrates that there is a priority given to individual preferences, although it cannot supersede the needs of the Marine Corps, OCD, or career progression milestones.

The Marines Corps uses the Monitor Assignment Support System (MASS) to assist in the assignment process. “MASS is a military personnel management and budgeting system designed to support the assignment and manpower distribution process” (HQMC 2004, p. 2). This system provides a platform to generate and issue orders to Marines. MASS also helps the monitors determine the Marine Corps officer staffing goal distribution by running this model twice annually (Renfrow 2020). Renfrow observes that MASS does not meet the flexibility requirements of a system where the billet vacancy list changes day to day (2020).

C. COMMON CONSIDERATIONS FOR BILLET ASSIGNMENT

Marine Corps officers have several considerations to communicate to their monitors for their next set of orders. Because Marines move to duty stations located across the United States and abroad, an important consideration is geographic location. Location often divides into two broader categories: within the Continental United States (CONUS) and outside the Continental United States (OCONUS). The list of CONUS duty stations is extensive considering the variety of possibilities given a Marine’s rank, MOS, family situation, or other special cases. The OCONUS locations for Marines are Hawaii, Japan, South Korea, Australia, and Djibouti, among other options. The list of potential duty

stations expands when Marines consider, or are considered for, a Joint Duty Assignment (JDA) to serve with another component of the DOD. Joint billets span another list of geographic locations. The Joint Staff and CMC manage the procedure to serve in a JDA and selection for such a billet requires the officer to be nominated (HQMC 2014).

The Marine Air-Ground Task Force (MAGTF) “is the Marine Corps’ principle [sic] organization for the conduct of all missions across the range of military operations” (HQMC 1998, p. 2-1). A MAGTF consists of a command element, an aviation element, a ground element, and a logistics element. Marine officers typically consider the type of unit they are pursuing for assignment. The term “type” refers to the function of a given unit. Examples of unit types are the four elements of the MAGTF at all levels or one of the various organizations within Headquarters Marine Corps (HQMC). Each of these unit types contribute to a Marines’ operational experience, job fulfillment, and career milestones in different capacities. Marines may also consider specifying beyond the type of unit and may request assignment to a particular Marine Corps unit. Some reasons Marines may pursue certain units are unit history, unit reputation, deployment schedule, geographic location, or notorious personnel within the unit. While this is the most detailed form of billet preference, this also requires the most research or knowledge to make educated assessments and comparisons of many Marine Corps units.

Another important factor Marine officers consider in their next assignment is the billet military occupational specialty (BMOS). The BMOS signifies the MOS required to hold a specific assignment or job. There are BMOSs that correspond directly to PMOSs, a BMOS of 0302 signifies an infantry officer, or officer with a PMOS of 0302, is eligible to hold that billet. There are also BMOSs that correspond to a group of MOSs; BMOS 7505 corresponds to any officer that holds a PMOS signifying a helicopter pilot from second lieutenant to lieutenant colonel (HQMC 2019). The BMOS is important because it signifies an expectation for the role the Marine will fill within the unit and is an indication for the skills required for that billet. If the BMOS is 8006, signifying this billet is unrestricted based on MOS, then the expectation is that the job may be broader than a billet with a BMOS identical to a PMOS.

D. OTHER UNITED STATES MILITARY BILLET ASSIGNMENT PROCESSES

1. Navy Billet Assignment Process

The Naval Military Personnel Manual (MILPERSMAN) 1301-100 explains the United States Navy's billet assignment policy. This manual articulates the priorities for assignment or distribution of officers as being the needs of the U.S. Navy first, the career needs of the individual second, and the desires of the individual third (Department of the Navy [DON] 2016). MILPERSMAN 1301-102, Officer Distribution - Process, contains the Assignment Process Cycle and gives details to the nuances of the assignment process (DON 2015). There are three stakeholders involved in the U.S. Navy's assignment process: the sailor, the detailee, and the placement officer. The placement officer represents the command that has a billet that will soon become vacant. The detailee, also known as the assignment officer, represents the sailor who is eligible to rotate assignments and fill a vacant billet. According to MILPERSMAN 1301-102, the U.S. Navy's process for assignment consists of the following six steps:

1. Gaining placement officer posts billet for fill.
2. Assignment officer proposes officer to gaining placement [officer] for assignment to the billet.
3. The gaining placement officer then [accepts or declines the proposal].
4. Once the proposal is accepted, the placement officer will make the incumbent available for transfer.
5. The losing placement officer conducts losing placement review and approves detachment of officer from present activity.
6. Assignment officer completes orders and forwards for review and transmission. (DON 2015, pp. 2-5)

This process uses the Online Distribution Information System and the Officer Assignment Information System (OAIS) to identify when sailors are due to rotate assignments and to complete the nomination and assignment process (DON 2015). The remainder of the process involves communication between the detailee and the placement officer using OAIS. Detailers communicate with officers eligible for rotation by phone or email and there is no existing platform or infrastructure for communication between the naval officers and the monitor. This communication includes the detailee notifying officers

of available billets, officers providing preferences on the available billets, and monitors confirming placement in a specific billet at a minimum.

The Navy enlisted sailors use an interface called MyNavy Assignment (MNA) for detailing. MNA “replaces the Sailor-facing component of the Career Management System—Interactive Detailing (CMS-ID). It is the new interface to the Detailing Marketplace, providing Sailors more options, greater career flexibility and increased transparency” (DON 2019, p. 1). The MNA Smart Sheet details the list of improvements from the previous system including more job search tools, improved application process, enhanced messaging tools, a resume application, and an upgraded graphical user interface (DON 2019). This tool allows enlisted sailors to communicate their preferences directly into a system and to apply for jobs based on current and future availabilities. This minimizes a portion of the person to person interactions commonly seen in the Navy officer assignment process.

2. Army Billet Assignment Process

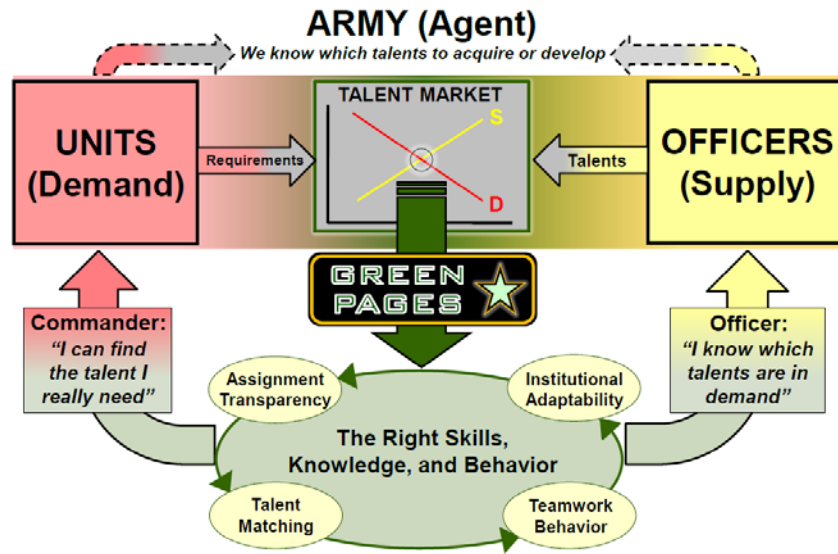
Army Regulation 614-100 details the Army assignment and transfer processes. Chapter 5 refers to officer reassignments within the United States and OCONUS. The “Primary CONUS considerations in reassigning an officer will be the officer’s current qualifications and ability to fill a valid requirement. Other factors, such as availability, volunteer status, and TOS will be secondary. When an officer with the required qualifications is identified, then the secondary criteria and other factors will be considered” (Department of the Army [DA] 2019, p. 12). This regulation also details the conditions for eligibility for reassignment. The Army implements their reassignment process using the Army Talent Alignment Process (ATAP). This process is “a decentralized, regulated, market-style hiring system which aligns officers with jobs based on preferences. The ATAP uses more detailed information about officers and units than the traditional officer distribution system” (Army Talent Management Task Force 2019). This system matches officers to available job assignments based on their preferences, including knowledge, skills, and behaviors, and the preferences of their organization.

Prior to ATAP, the Army examined two other programs to enhance their talent management process. From 2010 to 2012, the Army conducted a pilot study of the Green Pages concept. Green Pages is “an experimental, web-based talent management environment” (Office of Economic and Manpower Analysis [OEMA] 2012, p. i). The operating concept for Green Pages is illustrated in Figure 1. The five step process corresponding to the Green Pages operating concept is as follows:

1. Supply (officers) and Demand (commanders) populate the market with information.
2. Green Pages captures the information and makes it available to both sides.
3. Supply shops for jobs, Demand shops for talent. Both adjust and indicate preferences.
4. [Human Resources Command] HRC uses talent information and informed preferences to assign job matches.
5. The market interchange provides granular and accurate data on talent supply and demand. (OEMA 2012, p. 8)

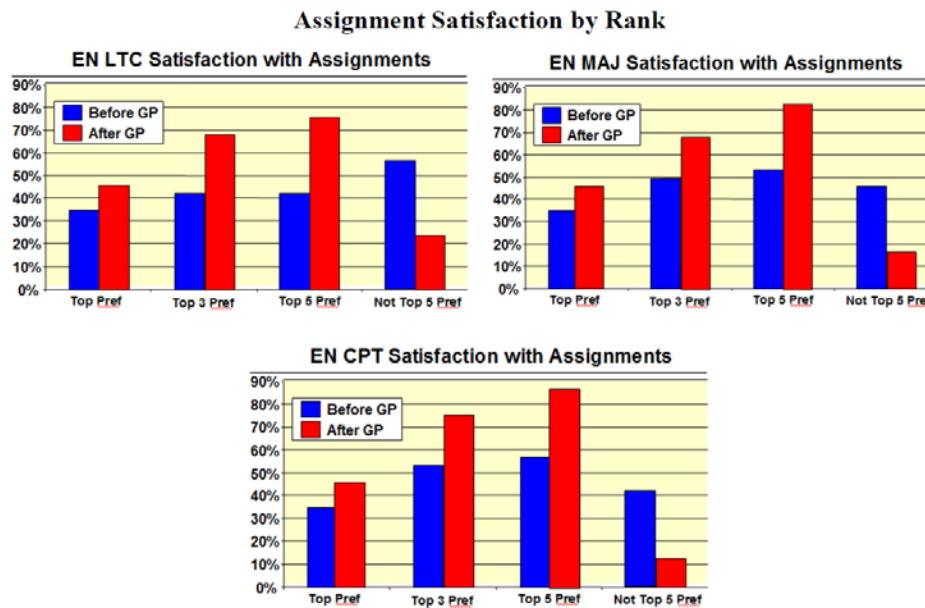
This pilot study details numerous significant findings regarding the U.S. Army’s talent management process, the attributes of their officers, and the potential utility of a similar system (OEMA 2012). Figure 2 illustrates the improvements the Green Pages pilot study made to the number of officers who receive assignments in their top preferences and demonstrates a decrease in the number of officers who receive an assignment outside their top five preferences (OEMA 2012).

Figure 1. Green Pages Operating Concept. Source: OEMA (2012).



The study concludes by offering some feedback on future similar systems and making the caveat that this environment was intended for experimental use only.

Figure 2. Assignment Satisfaction during Green Pages Pilot Study. Source: OEMA (2012).



The U.S. Army next implemented Assignment Interactive Module (AIM) 2.0 and “distributed orders to over 12,000 officers during the 19-02 (Summer) distribution cycle” (Army Talent Management Task Force 2019, p. 1). AIM 2.0 is “a web based information system designed to enhance the effectiveness and efficiency of the officer management process, and facilitate communication between Soldiers (e.g., officers and warrant officers with talents), Units (e.g., commanders with requirements) and the Officer Personnel Management Directorate” (Officer Personnel Management Directorate 2017). The U.S. Army currently uses ATAP which uses “AIM 2.0 to access the ATAP until it becomes available in the Integrated Personnel and Pay System—Army” (DA 2020). U.S. Army officers use AIM 2.0 to communicate their knowledge, skills, and behaviors to commanders with billet vacancies (Suciu 2019). Commanders use this new information to develop educated preferences on the available officers who may fill a vacant billet within their command. After the first cycle of ATAP, the U.S. Army reported over 55% of officers received their top billet choice, while more than 80% of officers received a choice in their top 10% (Kimmons 2020). This same article reported “47% of assignments had one-to-one matches, meaning the officer and the unit made one another their top preference” (Kimmons 2020). The Green Pages pilot study reported a 24% one-to-one match rate (OEMA 2012, p. 36). In general, ATAP assists the U.S. Army in allocating its officers, gives the officers more control and transparency over their billet assignment, and provides commanders the opportunity to vet and select desired job applicants.

3. Air Force Billet Assignment Process

The U.S. Air Force took two steps to improve their talent management and officer assignment processes. First, the U.S. Air Force decreased the number of cycles in their annual assignment process from three to two (Bailey 2018). Two cycles per year means that officer have two windows each year to change assignments, summer and winter. Officers and their families have more time to assess billets and will have presumably more billets to look at during their assignment cycle.

Next, the U.S. Air Force developed and implemented “the Talent Marketplace web-based platform as their assignment system for the Winter 2019-2020 officer assignment

cycle” (Bailey 2019). According to the Air Force’s Personnel Center public affairs office, this system “examines officer assignment solutions by offering transparency of potential jobs available to officers, increasing visibility of officers’ assignment preferences to commanders and incorporating gaining commander input into the action” (Bailey 2019). This allows officers to have better cognizance of available billets and gives commanders the ability to vet a list of potential personnel, like the U.S. Army’s model.

E. CIVILIAN APPLICATIONS

1. National Resident Matching Program

The billet marketplace concept has existed for nearly 70 years. In 1951, an early concept for a billet marketplace formed as the National Resident Matching Program (NRMP) algorithm to place graduating physicians in their resident program (Roth and Peranson 1999). In a separate journal article in the *Journal of Political Economy*, Roth describes the history and creation of this algorithm. The article, titled “The Evolution of the Labor Market for Medical Interns and Residents: A Case Study in Game Theory,” demonstrates the original authors of the NRMP, then known as the National Internship Matching Program, was a group of students seeking to improve the current system (Roth 1984). The necessity for such a system is described here:

The entry-level labor market for new physicians in the United States is organized via a centralized clearinghouse called the National Resident Matching Program (NRMP). Each year, approximately 20,000 jobs are filled in a process in which graduating physicians and other applicants interview at residency programs throughout the country and then compose and submit Rank Order Lists (ROLs) to the NRMP, each indicating an applicant’s preference ordering among the positions for which she has interviewed. (Roth and Peranson 1999, p. 748)

The purpose of the matching algorithm is very similar to that of this study. “The goal of the design was to construct an algorithm that would produce stable matchings as favorable as possible to applicants, while meeting the specific constraints of the medical market” (Roth and Peranson 1999, p. 751). One of the key contributors to the NRMP algorithm is the author of the previously quoted study, Alvin E. Roth. In 2012, Roth was awarded The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel

for his “empirical investigations, experiments and practical design” leading to a diverse field of research and improved efficiency across many sectors (The Nobel Prize 2012). This foundational effort revolutionized the matching process for applicants to jobs.

2. Talent Management Software

While most large companies do not experience the need to move one-third of its work force each year, their challenges in talent management, recruiting, and job placement remain similar to the DOD. In particular, software companies seek to address this problem. One European company, Talentsoft, created what it touts as the “leading cloud-based talent management software” (Talentsoft 2020). This software assists in advertising jobs postings, facilitates and manages internal hiring requests, and evaluates applicants based on employer-defined criteria.

Another example of a company focused on providing state-of-the-art talent management software is PeopleFluent, a part of Learning Technologies Group public limited company. “PeopleFluent provides best-of-breed talent management software and learning solutions that help you realize the full value of your workforce. Deployed separately or as integrated solutions, our software spans talent acquisition, performance, compensation, succession, and learning” (PeopleFluent 2020). In either case, software solutions are used to augment personnel management processes with challenges akin to the Marine Corps billet assignment cycles.

F. MARINE CORPS BILLET MARKETPLACE

The Marine Corps is developing a system to support, formalize, and standardize the billet assignment process. The billet marketplace concept is a combination of the systems described in this chapter. A marketplace idea consists of the infrastructure to post billet openings to a common area, a portal for personnel subject to rotation to view assignment options and rank them, and a model for determining an optimal distribution of officers to billets. Like ATAP, the billet marketplace improves the transparency and efficiency of the Marine Corps assignment process while providing better alignment of assignments with Marine preferences. Our research is a part of this effort.

G. CHAPTER SUMMARY

This chapter highlighted some key aspects of the USMC billet assignment process. We emphasized the key considerations that contribute to a Marine officer's billet preferences. A significant portion of this chapter and research discussed the nuances of the billet assignment approaches used by other services within the DOD. Last, we discussed the genesis of the billet marketplace concept and explained civilian applications of related work.

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III. DATA AND METHODOLOGY

A. INTRODUCTION

This chapter describes the data used in our study and statistical techniques that we apply to it. We explain the role of each of the four datasets, obtained from separate surveys, in our analysis. These surveys consist of the MMOA Billet Assignment Survey, the FY20 Aviation LtCol Movers Survey, the FY20 Ground Officers Movers Questionnaire, and the FY20 Rotary Wing Movers Survey. The MMOA Billet Assignment Survey was promulgated to collect information on the satisfaction and improvement of the officer assignment process. The remaining three surveys are surveys intended for officers beginning the billet assignment process and serves to communicate their billet preferences to their respective PMOS monitors. For each survey, we describe its purpose and the questions asked of survey participants. Finally, we explain the methodology used to analyze the survey responses to address the objectives of this thesis.

B. DATA COLLECTION PROCESS

To obtain data from Manpower and Reserve Affairs, each survey requires an Institutional Review Board (IRB) Human Subject Research Determination of whether the proposed analysis of the data constitutes Human Subject Research (HSR). Because our study does not require personally identifiable information (PII) from the survey responses, and is not considered to be generalizable outside the Marine Corps, the IRB determined that our work is not classified as HSR for each data set that we requested. These determinations by the NPS IRB were forwarded to the Marine Corps IRB for concurrence, which was granted. This determination was made with the understanding that PII from the data sources and textual responses that contained identifiable information would be removed prior to the data being sent to NPS to support our research.

C. MMOA BILLET ASSIGNMENT SURVEY

1. Survey Description

The first data set we examine in this study is a survey designed by MMOA and administered to all USMC officers from the ranks of warrant officer (WO/CWO) to colonel, with the purpose of eliciting opinions about the quality of the billet assignment process. The MMOA Assignments Survey questions are presented in Appendix A of this thesis. The purpose of this survey is “to collect information that will be used to inform future decisions regarding the Marine Corps officer assignments process” (Appendix A, p. 1). This survey was administered between June 4, 2019 and June 17, 2019.

The MMOA Assignments Survey begins by asking 10 questions about the background of the respondent, including rank, MOS, commissioning source, time in service (TIS), career intentions, and career aspirations. The survey then asks a series of questions regarding the officer’s satisfaction with the assignments process. Responses to these questions are on a five-point Likert-scale, with one being least satisfied and five being most satisfied. These questions are followed by another series of questions that elicit the officer’s agreement with statements about the assignments process; response options are “Strongly Disagree”, “Disagree”, “Neutral”, “Agree”, and “Strongly Agree”. The next section asks questions particular to monitor interactions, again on a one to five Likert-scale. The survey requests that participants rank “what is most important to you in consideration of your next assignment from most important to least important” (Appendix A). The options for this ranking are personal stability (e.g., knowing how long the Marine will remain at a duty station without being moved), geographic preference, specific unit preference, and unit type. The survey asks a series of questions regarding the MMOA roadshow and interview process with Likert-scale responses. Lastly, the survey asks three textual questions for feedback on the MMOA roadshow, the assignment process, and any remaining feedback the participants have for senior leadership within MMOA.

The data from this survey was consolidated into a comma-separated values (CSV) file and exported to Microsoft Excel. This file contains 49 variables (columns), one for each of the data fields within the survey and 34 additional fields providing information

about the survey response such as time to respond to specific questions, date of survey, and survey language. There are 1,892 rows, each corresponding to a survey respondent. Of those responses, there are 1,720 complete surveys and 172 partially answered surveys.

2. Data Formatting

The MMOA Assignments Survey CSV data file was read to a script file in the R programming language as a data frame object (R Core Team 2018). According to Crawley, “A dataframe [*sic*] is an object with rows and columns (a bit like a matrix). The rows contain different observations from your study, or measurements from your experiment (these are sometimes called cases). The columns contain the values of different variables (these are often called fields)” (Crawley 2013, p. 159). The MMOA Assignments Survey data generated a data frame with 1,892 rows and 83 columns. Like the source CSV file, each column of the data frame consists of one data field for the survey, for example every respondent’s MOS. Each row corresponds to the survey responses from one individual with the top row being the header information with a description of that data field, for example “MOS.” Given some of the data field descriptions exceeded 100 characters, each column was renamed as an “A” followed by an integer from one to 83 (A1, A2, ..., A83). The new column names and corresponding data field descriptions were written into a text document to assist in identifying particular columns. We use this system to maintain brevity in manipulating the data within R.

The next step in formatting the data is to remove columns from the data frame that contain no data. Some examples of these columns are first name, last name, phone number, survey seed number, and survey language. Records from respondents who did not list their rank were removed from the data frame. We also removed four records that contained the respondent’s rank but were otherwise incomplete. Upon completion of this simplification process, the final data frame contains 1,792 records (rows) and 50 variables (columns).

D. FY20 AVIATION LIEUTENANT COLONEL MOVERS SURVEY

1. Survey Description

The second survey from MMOA that we consider is the Fiscal Year 2020 (FY20) Aviation Lieutenant Colonel Movers Survey. An example of this survey is shown in Appendix B of this thesis. This survey was open between December 9, 2019 and February 17, 2020. The purpose of this survey is to obtain billet preferences from lieutenant colonels or majors selected for promotion to lieutenant colonel with aviation MOSs. There are responses to this survey from Marines with 16 different MOSs. This survey allows each aviation lieutenant colonel eligible for the orders slating process to communicate their preferences to the Marine Corps aviation lieutenant colonel monitor. Those preferences directly contribute to the billet slate for the survey respondents as constructed by the monitors prior to the delivery of official orders.

This survey begins by asking for name, identification number, MOS, and rank. The officers rate their top 15 billets from a list of 165 possible billets. The format for each of the billets is MCC / MOS Code / MSC description. These codes allow officers to obtain an understanding of the billet and which MOSs are eligible to fill the billet. Within the top 15 billets, at least five must have a BMOS of 8006, meaning the billet is unrestricted for any particular MOS. The respondents weight their preferences by awarding points to each selection from one to 100, where more points given to a billet signifies a strong desire for that assignment. Zero points to a billet signifies the officer does not rate that billet.

The survey responses are organized into one CSV data file with 208 columns, indicating the various data fields of the survey. Seven of the 208 columns are data fields with information on the survey response date. The file contains 360 rows, the first row being the header for the proceeding rows. The 359 rows below the header are the survey responses, each row corresponding to one individual. Of the 359 personnel who initiated the survey, 216 respondents awarded points to at least one billet and 143 respondents awarded no points.

2. Data Formatting

The FY20 Aviation Lieutenant Colonel Movers Survey formatting is similar to that of the MMOA Assignments Survey. The CSV data file is read to an R script file as a data frame. The columns are renamed in the same manner as before, with only 10 columns removed. Of the remaining columns, one represents rank, one represents MOS, and the next 196 columns correspond to the listed billets and the weighting each respondent applied to that billet. We include an additional column to this data frame to sum the total number of points awarded by each officer. We remove all rows with zero total points because in this case we assume the officer did not complete their response (rather than he or she had no preference for their next assignment). The new data frame resulted in 216 responses (rows) and 199 variables (columns).

E. FY20 GROUND OFFICERS MOVERS QUESTIONNAIRE

1. Survey Description

The FY20 Ground Officers Movers Questionnaire is the third survey in this study. The questions pertaining to this survey are shown in Appendix C of this thesis. This survey was open between November 25, 2019 and December 20, 2019 and applies to officers from second lieutenant to lieutenant colonel with ground officer MOSs. Ground monitors use this survey data to generate their respective slates and subsequent billet assignments.

This survey includes four sections: contact information, family considerations, career considerations, and additional comments. The contact information section includes name, phone number, email address, rank, and monitor information. The family considerations include spouse's military service status (Active Duty, Reserve, or None), branch of spouse, spouse's monitor information, and an Exceptional Family Member Program (EFMP) notice for Marine officers with family members who qualify for the EFMP. The career considerations incorporate geolocation preferences, outside contiguous United States (OCONUS) preferences, Major Subordinate Command (MSC) preferences, the member's top 15 Monitor Command Codes (MCC), interest in a joint tour, and interest in instructor duty. The survey includes a section for additional, textual comments; these were removed from the data prior to the survey responses being sent to NPS.

The responses are organized into a CSV format with 2,023 rows and 87 columns. The columns correspond to the various data fields and include additional columns for survey response dates and times. 31 of the 87 columns relate to data fields used to collect information on the survey response date and the time to answer various sections of the survey. The rows consist of a header row and 2,022 survey responses. Of the 2,022 rows, 1,844 correspond to complete surveys and 178 correspond to incomplete surveys.

2. Data Formatting

We structure the FY20 Ground Officers Movers Questionnaire data in the same manner as the FY20 Aviation Lieutenant Colonel Movers Survey. The original data frame includes 2,022 rows and 87 columns. We remove 46 of the columns as they contain no data or data not useful to this study. We also remove all rows with no rank input. This deletes 148 survey responses from the data frame. We remove all surveys with a response of “N/A” for a question with only “Yes” or “No” options since all these surveys are also incomplete. This removes 30 additional responses from the data and the remaining data frame contains 41 data fields and 1,844 responses.

F. FY20 ROTARY WING MOVERS SURVEY

1. Survey Description

The FY20 Rotary Wing Movers Survey is the fourth survey we use in this study. The questions pertaining to this survey are shown in Appendix D of this thesis. This survey was open between November 26, 2019 and February 12, 2020. This survey applies to all officers from second lieutenant to lieutenant colonel with MOSs designating a rotary wing pilot. Similar to the surveys discussed previously, the intent of this survey is to “produce an equitable slate, considering the needs of the Marine Corps, career progression, and personal desires” (Appendix D).

This survey divides into the same four sections as the FY20 Ground Officers Movers Questionnaire; they are contact information, career considerations, family consideration, and additional comments. The contact information includes name, phone, email, monitor information, and MOS. The career considerations entail date of rank, career

objectives, qualifications/designations, Professional Military Education status, location rankings, MSC rankings, MCC rankings, and deployment status. Family considerations are spouse's service status, spouse's service branch, spouse's monitor information, and EFMP status. The additional comments section is a text block for the respondent to provide additional information. The name, contact information, and spouse's information is deleted from the survey data to maintain the anonymity of the service members. Due to the very specific answers given in the additional comments section, these responses were removed from the data file.

MMOA provided these data to the research team in the CSV file format. This file contains 143 columns corresponding to the data fields and 1,069 rows corresponding to each survey response. Data fields used to collect information on the survey response date and the time to answer various sections of the survey make up 52 of the 143 columns. Of the 1,069 recorded responses in the file, 362 responses are at least partially complete. The remaining 707 rows are blank or unanswered surveys.

2. Data Formatting

We use similar formatting methods on the FY20 Rotary Wing Movers Survey as with previous surveys. We remove 62 columns from the original 143 because they contain data not useful to this study. If the response records a blank for the "Current unit" field, there was no additional information in that survey response. We remove all 707 rows that met this condition. The final data frame consists of 362 rows (responses) and 81 columns (data fields).

G. METHODOLOGY

This section describes the techniques we use to analyze the various data involved in this study. Herein, we discuss test of hypotheses and other statistical or analytic techniques we use including delete or merge regression (DMR), blocked data analysis, regular expression matching, and sentiment analysis.

1. Tests of Hypotheses

Devore defines a hypothesis as “a claim or assertion either about the value of a single parameter (population characteristic or characteristic of a probability distribution), about the values of several parameters, or about the form of an entire probability distribution” (Devore 2016, p. 311). He further defines a test of hypotheses as “a method for using sample data to decide whether the null hypothesis should be rejected” (Devore 2016, p. 311). One such hypothesis test that we use is a test of population proportions. This test focuses on the probability parameter (p) of a series of Bernoulli trials that arise from answering questions that allow two possible responses.

The toss of a fair coin yields a 50 percent probability of a heads. To determine if a coin is fair, we toss a coin many times and count the number of heads. We then conduct a test relating the results of our coin tossing to the binomial distribution where the probability of success is equal to 0.5, assuming the trials are independent. The goal of this test is to determine if the number of heads obtained is consistent with the null hypothesis that the probability of a heads is actually 0.5. This is the most basic form of the sign test. The sign test can be applied to a wide range of situations where the problem being addressed can be made analogous to coin tossing. Sprent and Smeeton (2001) explain that the sign test is a nonparametric approach that can be used to answer questions about the median of a numerical random variable. A sign test removes the magnitude of observations and counts observations above theorized median value, below that value, and equal to that value. We use the sign test compare Likert-scale survey response questions from a set of respondents. For example, we examine whether a survey respondent expresses lower satisfaction with the billet assignment process than with the Marine Corps in general using a sign test. We subtract the response to question two from question one, which gives either a positive number, a negative number, or a zero. We count the total number of positives, negatives, and zeros respectively and conduct a test of proportions based on these signs. There are two parameters for this test. The first is x , the number of successes. In our example, this is the total number of negative differences. The second parameter is n , the number of trials, in our example this is the total number of pairs of responses. In this test, we count ties or differences of zero as contributing to the total sample size. While the sign test is relatively

simple, it provides great insight into survey responses and the differences between the responses to various Likert-scale questions.

A special case of the sign test is the McNemar test. In this test, we remove the cases with ties or no difference as contributing to the total number of trials. This isolates differences between the number of positive and negative responses when there are many ties (Sprent and Smeeton 2001).

We use the Wilcoxon-Mann-Whitney (WMW) test to compare magnitudes of response from two independent samples (Sprent and Smeeton 2001). The WMW test, which is based on ranks, takes the sum of ranks for each sample, and determines if one sample dominates the other or if they are statistically indistinguishable (Sprent and Smeeton 2001). This test is used to determine if two distinct groups answer the same Likert-scale question with generally higher, lower, or equivalent responses.

The Kruskal-Wallis test generalizes “the WMW test using the Wilcoxon formulation to three or more samples” (Sprent and Smeeton 2001, p. 206). In the Kruskal-Wallis test, we assume that all samples come from the same probability distribution. The test then ranks all observations from all samples and computes the test statistic, T . Equations (1) and (2) present the calculation of the test statistic (Sprent and Smeeton 2001, p. 206). The parameter N in Equation (1) corresponds to the total number of observations across all samples. The terms s_i and n_i correspond to the sum of the ranks for sample i and the number of observations in sample i , respectively. The subscript k refers to the number of random samples.

$$T = \frac{12 S_k}{N(N+1)} - 3(N+1) \quad (1)$$

$$S_k = \sum_i \left(\frac{s_i^2}{n_i} \right) \quad (2)$$

For moderate or large samples, T in Equation (1) has approximately a chi-squared distribution with the degrees of freedom equal to the number of independent samples minus one. If ties are present in the rankings, we use a slight modification of the test statistic as shown in Equation (3) (Sprent and Smeeton 2001, p. 208). In this equation, C is the

correction for the mean and S_r is the “total sums of squares for ranks” (Sprent and Smeeton 2001, p. 208). The calculation for S_r and C is shown in Equation (4) and Equation (5) respectively (Sprent and Smeeton, p. 208).

$$T = \frac{(N-1)(S_k - C)}{S_r - C} \quad (3)$$

$$S_r = \frac{N(N+1)(2N+1)}{6} \quad (4)$$

$$C = \frac{N(N+1)^2}{4} \quad (5)$$

We use an extension of the WMW test to bring clarity to the results of the Kruskal-Wallis test (Sprent and Smeeton 2001). This method, the Jonckheere-Terpstra test, conducts a difference in centrality test when the samples are ordered, meaning we determine if there is a difference in the median of the distributions of independent, ordered samples. An example is distinguishing survey responses by rank. Rank is inherently ordered given there is a hierarchy in the rank structure. The Jonckheere-Terpstra test allows us to explore the distributional differences across the ranks while looking for patterns from low to high rank or high to low rank.

When conducting multiple pairwise comparisons, we generate multiple confidence intervals all at a given confidence level. When aggregating these multiple comparisons, the true confidence level is the intersection of the confidence level for each pairwise comparison. For example, if we produce two 95 percent confidence intervals on a given parameter, the probability both confidence intervals contain the parameter equals 0.95^2 if the two samples are independent. To produce two intervals which both contain the parameter simultaneously, the confidence level for each would have to be increased to $0.95^{0.5}$ which is approximately 0.975. Without independence it is not possible to make an exact adjustment to achieve the desired level of simultaneous coverage. To account for this lower confidence interval, we use the Holm method to adjust the p-value to account for the previously mentioned multiplicity which ensures that the simultaneous coverage of the confidence intervals is at least 0.95 (or whatever the desired coverage is) (Holm 1979).

2. Delete or Merge Regression

We develop statistical models to examine how explanatory variables influence the response to a survey question. We use logistic regression with Likert-scale response variables by combining the scale into two categories. For example, the responses “Strongly Disagree” and “Disagree” to the statement “I believe that in general the Marine Corps does a good job in the assignment process” are combined into a single category that we call “dissatisfied.” All other responses are categorized as “not dissatisfied.” Explanatory variables that we consider include the rank of an officer, MOS or occupational field, and whether the officer was prior enlisted. An occupational field is a grouping of MOSs that results in fewer categories. But even with this reduction occupational field has 34 distinct categories. Including all of them raises the possibility that statistical models will overfit the data. We also use respondents’ satisfaction with the Marine Corps as an explanatory variable in order to isolate effects conditional on this variable.

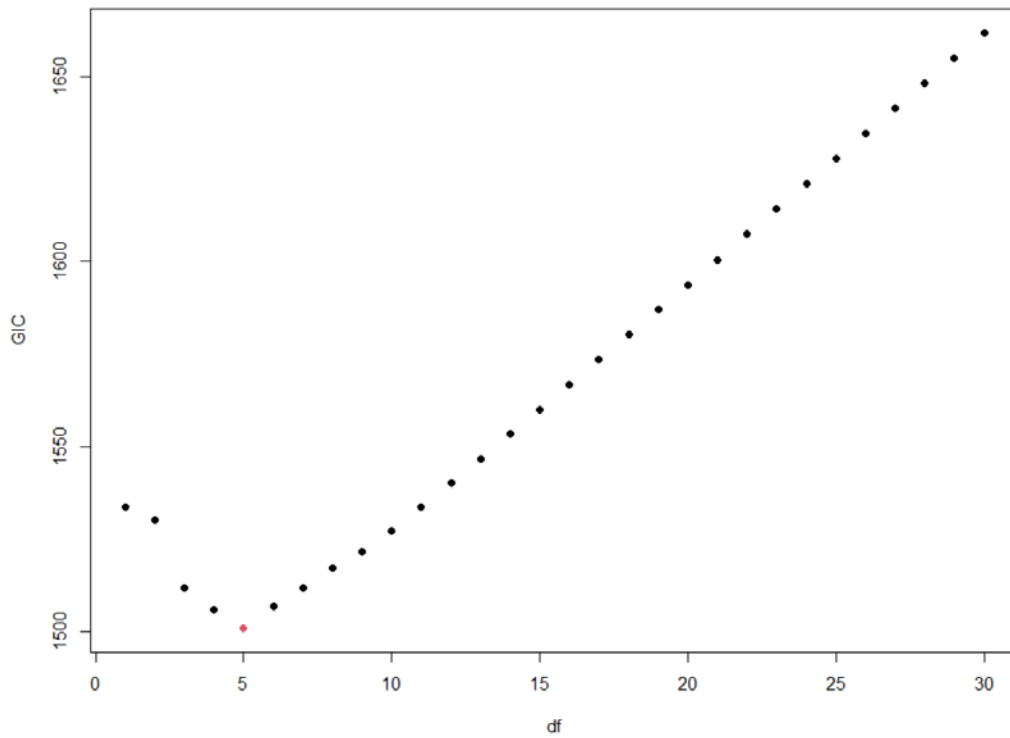
To avoid the problem of overfitting, we use a technique known as delete or merge regression (DMR) to include the categories of variables in the model-selection process (Prochenka and Pokarowski 2018). DMR is similar to other stepwise regression procedures that consider deletion only; i.e., whether to include or exclude a particular predictor variable from the model. Merging considers whether two levels of a categorical variable should be treated as having the same effect in the model, which if true would require a common coefficient for both of them, resulting in a simpler model. DMR uses deletion and merging in a unified, stepwise algorithm, guided at each step by a criterion that penalizes the apparent improvement obtained by using a more complex model. The algorithm converges when no further deletions or merges can improve the criterion.

Specifically, the optimal model is the one with the lowest generalized information criteria (GIC) based on Equation (6) (Maj-Kańska et al. 2015, p. 12). GIC_M refers to the generalized information criteria of the model, n is the number of parameters in the model, RSS_M is the residual sum of squares, $|M|$ designates the size of the model, and r_n is the penalty corresponding to model of n size.

$$GIC_M = n \log RSS_M + r_n |M| \quad (6)$$

Figure 3 illustrates how GIC_M guides model selection. The stepwise selection process results in a sequence of models with an increasing number of coefficients (degrees of freedom). The model that achieves the minimum value is selected as the best model. In this example, the selected model has five degrees of freedom resulting from both the deletion of weak predictor variables and the merging of categories of two categorical predictor variables.

Figure 3. Illustration of DMR Model Selection



We evaluate these models using a receiver operating characteristic (ROC) curve using the **pROC** package in R (Robin et. al 2011). The area under a ROC curve provides a determination for the correctness of the new model as a number from zero to one. We also gain insight from the coefficients of the groups that occur from the merging process. Various predictors merge to have one coefficient and the DMR model contains one or more groupings of predictors. The coefficients associated with the groupings are the contribution of that group to the odds of the outcome or response variable. Faraway explains “Odds are

sometimes a better scale than probability to represent chance” (2006, p. 35). Equation (7) is the general calculation for the odds, where o is the odds and p is the probability (Faraway 2006, p. 35).

$$o = \frac{p}{1-p} \quad (7)$$

A logistic regression, like the output of the DMR technique, produces the logarithm of the odds (log-odds) as the response variable. Each coefficient in the model contributes to the log-odds as a positive or negative number. A positive coefficient improves the chances of the outcome variables and a negative coefficient decreases the odds of the outcome variable.

3. Blocked Data Analysis

When looking at data that requires ranking more than two outcomes, we use the term blocked data to describe each set of rankings. The Friedman test analyzes blocked data for distributional homogeneity with respect to the median at any time point (Sprent and Smeeton 2001). In general, we test to determine if the ranks are equally likely within each block. If we reject the null hypothesis, it means we determine there is at least one ranking that is not equally likely to the others.

4. Regular Expression Matching

Our study uses search methods to find textual responses that include a word or root word. This analysis helps isolate which words officers use most often and what ranks use these words most often. We use regular expression commands from the **base** R package (R Core Team 2018) to search for root words in the comments. This method requires searching for words using both upper and lower case. We also search with shortened words to identify all variations of that word. An example of this is using “transparen” to search for the words transparent and transparency. This technique allows the user to determine a basis for the frequency of keywords.

5. Sentiment Analysis

The textual responses to surveys often contain emotion or sentiment to emphasize the point of the comment. In our research, we use the **sentimentr** package (Rinker 2019) and the **SentimentAnalysis** package (Feuerriegel and Proellocks 2019). The **sentimentr** package “attempts to take into account valence shifters (i.e., negators, amplifiers (intensifiers), de-amplifiers (downtoners), and adversative conjunctions) while maintaining speed” (Rinker 2020). With this package, we break each response into sentences, and calculate a polarity score for each sentence. We then take an average across all sentences in a response to provide an aggregate sentiment score for each response. With a sentiment score for each response, we order the responses from most negative to most positive and isolate comments designated as most negative. We also use this data to plot the average sentiment for each comment as a method of displaying the general trend in comments regarding positivity. We conduct this analysis for each of the three questions with textual comments in the MMOA Assignments Survey.

The **SentimentAnalysis** package “utilizes various existing dictionaries, such as QDAP, Harvard IV or Loughran-McDonald. Furthermore, it can also create customized dictionaries. The latter uses LASSO regularization as a statistical approach to select relevant terms based on an exogenous response variable” (Feuerriegel 2019). With this package, we calculate and sort the sentiment for each survey response. This provides a scale of most negative to most positive comments we use for closer inspection of the negative comments.

H. CHAPTER SUMMARY

In this chapter, we discussed the process to obtain each of the survey data repositories. We explained the broad contents of each dataset and illustrated how we prepared the data for analysis. Last, we described the techniques we used to analyze the data.

IV. RESULTS

A. INTRODUCTION

In this chapter, we summarize the results of the analysis of the responses from each of the four surveys. We then provide a discussion of the results as a way of connecting these findings to the billet marketplace concept.

B. ANALYSIS OF THE MMOA BILLET ASSIGNMENT SURVEY

1. Analysis of Satisfaction Ratings by Rank

This section discusses the results of the MMOA Billet Assignment Survey. Table 1 displays the number of respondents of each rank. It is worth noting that most respondents are captains and majors.

Table 1. Number of Respondents by Rank

RANK	NUMBER OF RESPONDENTS
Warrant Officer/Chief Warrant Officer	164
Second Lieutenant/First Lieutenant	194
Captain	589
Major	524
Lieutenant Colonel	238
Colonel	83
TOTAL	1,792

This survey was given to Marines from 108 different MOSs that aggregate to 34 occupational fields. The number of respondents for each occupational field is shown in Table 2. As shown in the table, the occupational fields with the most responses are pilots/ naval flight officers, infantry, intelligence, logistics, and communications. The reduction from 108 to 34 occupational fields assists in modeling and regression approaches we discuss later in this section.

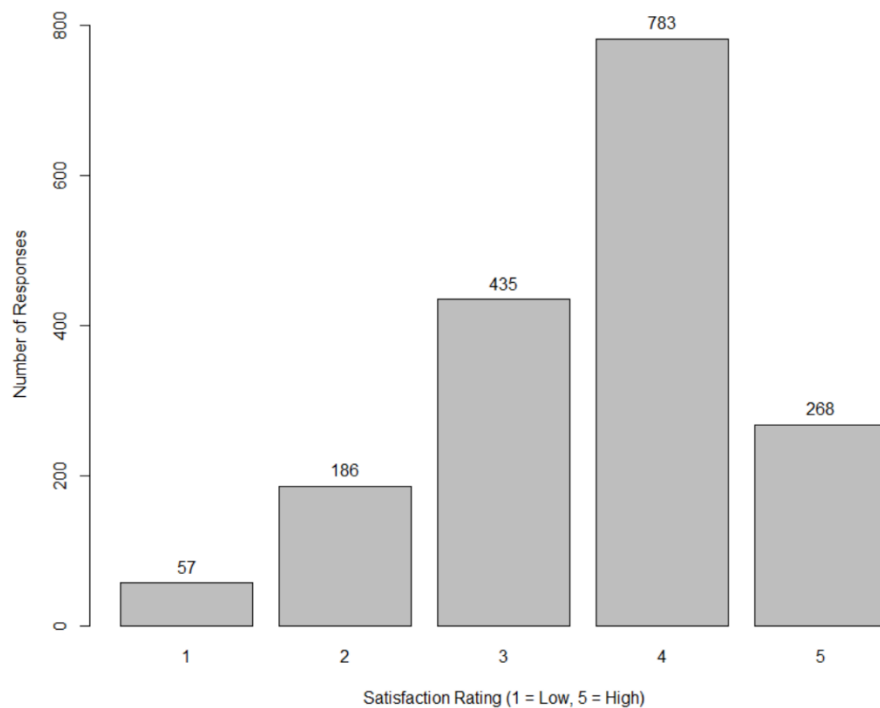
Table 2. Number of MMOA Billet Assignment Survey Respondents by Occupational Field

OCCUPATIONAL FIELD	TOTAL	OCCUPATIONAL FIELD	TOTAL
01—Manpower and Admin	89	35—Motor Transport	6
02—Intelligence	148	43—Communications Strategy and Operations	1
03—Infantry	186	44—Legal Support	65
04—Logistics	148	45—Communications Strategy and Operations	24
06—Communications	130	57—Chemical, Biological, Radiological, and Nuclear Defense	12
08—Field Artillery	97	58—Military Police, Investigations, and Corrections	29
13—Engineer, Construction, Facilities, and Equipment	63	59—Aviation Command and Control Electronics Maintenance	9
17—Cyberspace Operations	17	60—Aircraft Maintenance	38
18—Tank, Amphibious Assault Vehicle, Amphibious Combat Vehicle	33	63—Organizational Avionics Maintenance	11
21—Ground Ordnance Maintenance	15	65—Aviation Ordnance	9
23—Ammunition and Explosive Ordnance Disposal	12	66—Aviation Logistics	19
26—Signals Intelligence	9	68—Meteorology and Oceanography	2
28—Ground Electronics Maintenance	9	70—Airfield Services	1
30—Supply Chain Material Management	58	72—Aviation Command and Control Operations	64
31—Distribution Management	3	73—Navigators and Unmanned Aircraft System Officers / Operators	7
33—Food Service	2	75—Pilots / Naval Flight Officers	381
34—Financial Management	28	80—Miscellaneous Requirements MOS	67
		TOTAL	1,792

Some Marine officers join the Marine Corps as enlisted prior to commissioning as an officer. The USMC requires warrant officers to serve as enlisted before being eligible for appointment as a warrant officer. The survey responses are from 639 officers who were enlisted prior to appointment or commissioning and 1,153 officers who were not enlisted prior to commissioning. Of the 164 warrant officers and chief warrant officers, 163 stated they were prior enlisted.

The first question on the MMOA Billet Assignment Survey asks, “How satisfied are you with the Marine Corps in general?” (Appendix A). The rating scale for this question is a one to five Likert-scale, with one being least satisfied and five being most satisfied. Figure 4 shows the distribution of responses for this question.

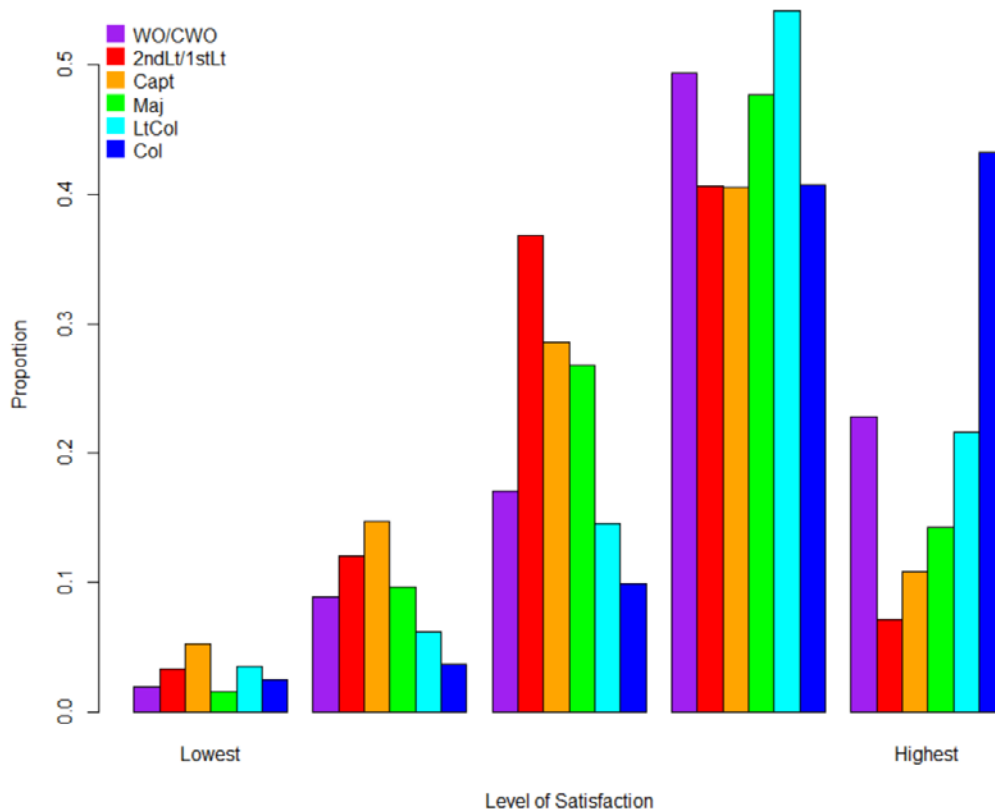
Figure 4. Plot of Responses to Satisfaction with the Marine Corps in General



As shown in Figure 4, there are a high number of respondents who are satisfied with the Marine Corps in general. Figure 5 displays the responses to this same question as proportions of responses for each rank. Comparatively, warrant officers, lieutenant

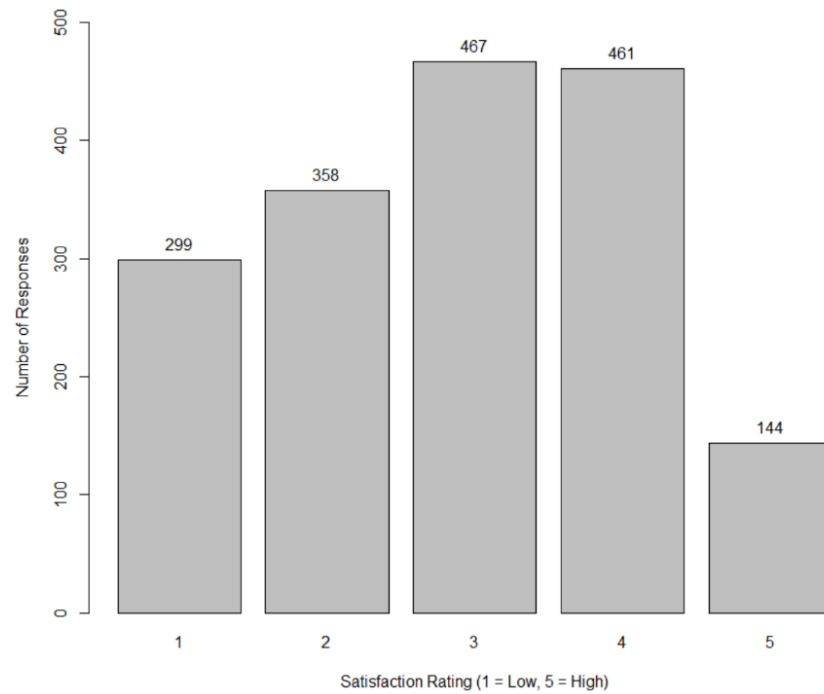
colonels and colonels convey high satisfaction with the Marine Corps. Lieutenants, captains, and majors express moderately high satisfaction with the Marine Corps as well, but these respondents select slightly lower proportions of the highest level of satisfaction.

Figure 5. Satisfaction with Marine Corps in General by Rank



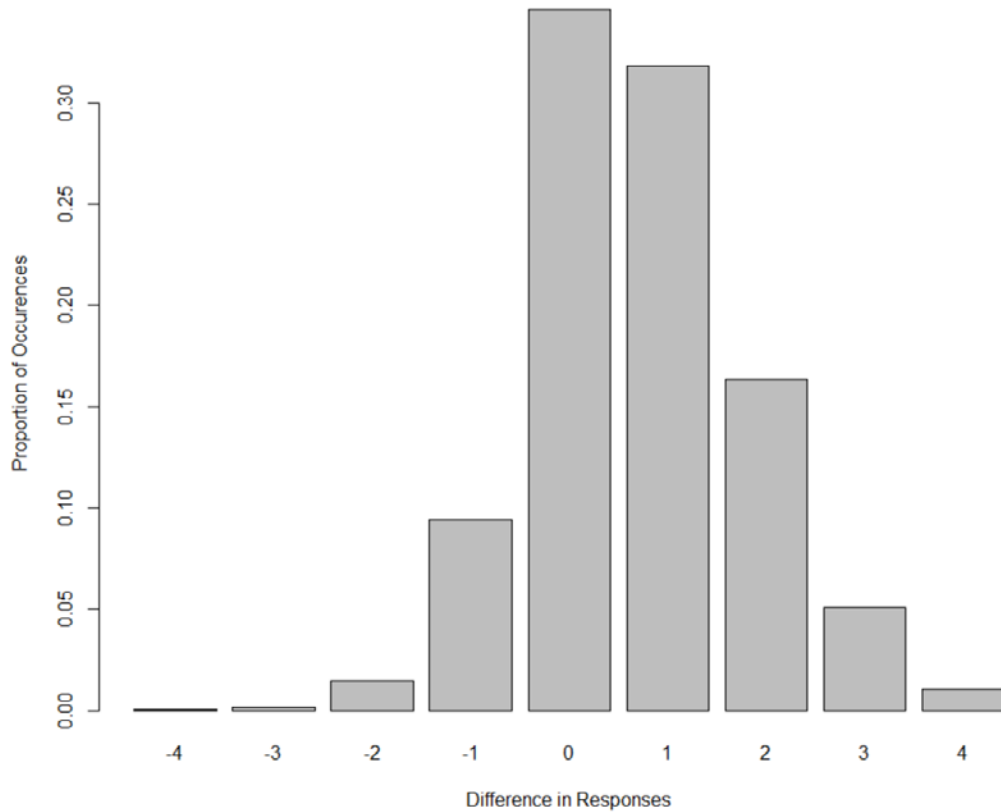
The next question on the MMOA Assignment Survey is “How satisfied are you with the Marine Corps officer assignment process?” (Appendix A). Figure 6 displays the distribution of responses for this question. In general, we see more responses indicating low satisfaction and less responses stating high satisfaction with the assignment process compared to the satisfaction with the Marine Corps in general. This thesis, as a part of the billet marketplace concept, seeks to address the stated dissatisfaction with the assignment process.

Figure 6. Marine Officer Satisfaction with Assignment Process



To determine if there is a statistical difference between the general satisfaction with the Marine Corps and the satisfaction with the assignment process, we take the difference in the responses for each respondent. We then conduct a sign test, as discussed in Chapter 3 of this thesis, using a binomial distribution and show there is a statistical decrease in satisfaction from the Marine Corps in general to the assignment process. To conduct this test, we subtract the Likert response for satisfaction with the Marine Corps assignment process from the Likert response for satisfaction with the Marine Corps in general; we do this for each Marine's response. The distribution of the difference in responses is shown in Figure 7. Many respondents provide a difference of positive one, meaning they rate the Marine Corps in general one point higher on the Likert-scale than the assignment process. Generally, respondents regard the Marine Corps with higher satisfaction than the assignment process.

Figure 7. Difference in Satisfaction with Marine Corps in General and Billet Assignment Process



We simplify the results shown in Figure 7 by stating a positive outcome is any situation where the difference in response yields a positive number and a negative outcome is any responses where the difference in response produces a negative number. Table 3 displays the differences as positive, negative or zero. Positive differences indicate greater preference for the Marine Corps compared to the assignment process.

Table 3. Difference Between Satisfaction with the Marine Corps in General and the Assignment Process

Negative	Zero	Positive
192	598	939

We do not consider zero differences in this test and use the McNemar approach to the sign test as mentioned in Chapter 3. This helps to isolate the respondents whose

satisfaction differs between the Marine Corps in general and the assignment process. The McNemar test focuses on the changes on the margins as opposed to allowing the significant number of ties to mitigate the relatively lower number of respondents who have variable opinions. The null hypothesis states the median difference between the responses is less than or equal to zero, given they rate the Marine Corps and the assignment process different. More generally, the null hypothesis states the assignment process is rated the same or better than the Marine Corps in general. The resulting p-value from the McNemar test with 939 positive values out of 1,131 trials is less than 0.00001. This test rejects the null hypothesis that the median of the difference between the responses is less than or equal to zero at the 95 percent confidence threshold. In general, we show Marines are comparatively less satisfied with the assignment process than with the Marine Corps as a whole, given the respondent provides a different response. Using only the responses with non-zero differences, allows us to differentiate if the Marine Corps in general or the assignment process is rated favorably, provided the respondent rates the two questions different. This lends insight into what factors contribute to a Marine separating from the Marine Corps since we demonstrate that Marines are less satisfied with the assignment process compared to the Marine Corps in general.

If we include the values where there is no difference in scores and conduct the standard sign test, we report a p-value of 0.0004. While this result is still sufficient to reject the null hypothesis at the 95 percent confidence level, the inclusion of the ties significantly increases the p-value, meaning it is more difficult to differentiate if Marines favor the Marine Corps or the assignment process.

We continue examining Marines' satisfaction with the assignment process by examining the responses according to the respondent's military rank, Figure 8 illustrates these responses.

Figure 8. Satisfaction with Marine Corps Assignment Process by Rank

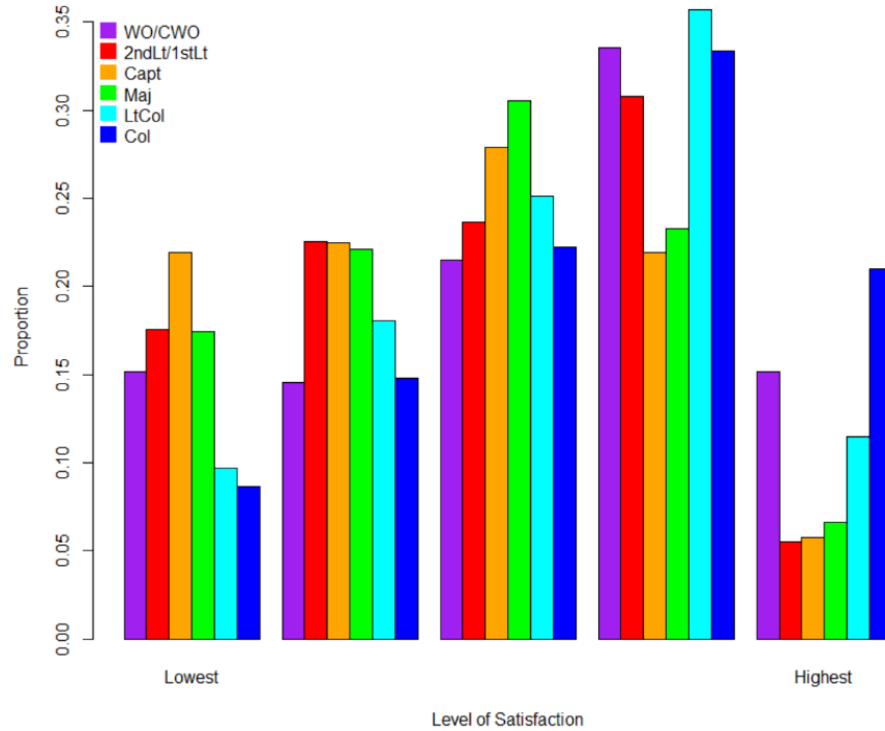


Figure 8 displays the responses normalized as a proportion of the responses for each rank. The distribution of responses is not the same across all responses. Majorities of warrant officers, lieutenant colonels, and colonels state moderate to high satisfaction with the assignment process. Captains and majors respond with the majority showing moderate to low satisfaction with the assignment process. We conduct a Kruskal-Wallis test to confirm that the distribution of responses is not the same across military ranks. This test yields a p-value less than 0.00001 and we reject the hypothesis that the responses have similar distributions by rank.

We then conduct pairwise comparisons between each of the military ranks to determine which of the ranks have like-distributions of responses. Given this test includes multiple comparisons, we adjust the p-values using the **p.adjust** function in the **base** R package (R Core Team 2018) using the Holm method. Table 4 displays these adjusted p-values for each of the pairwise comparisons. All ranks in Table 4 with an adjusted p-value below 0.05 signify an explicit difference in distribution based on the WMW test. As shown

in the table, captains and majors state a different level of satisfaction with the assignment process when compared against lieutenant colonels and colonels. This is consistent with our assertions based on Figure 8. These comparisons demonstrate the officer ranks who respond similarly to their satisfaction with the assignment process.

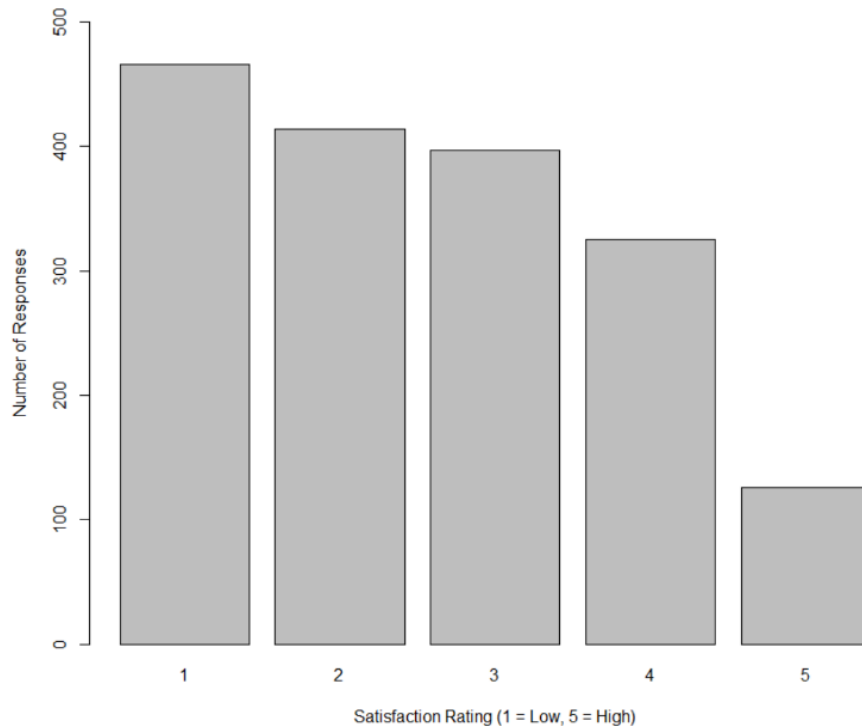
Table 4. Adjusted P-Values for Pairwise Comparisons of Satisfaction with the Assignment Process by Rank

	WO/ CWO	2NDLT/ 1STLT	CAPT	MAJ	LTCOL	COL
WO/CWO	-					
2NDLT/1STLT	0.060	-				
CAPT	0.000*	0.506	-			
MAJ	0.003*	1.000	0.506	-		
LTCOL	1.000	0.019*	0.000*	0.000*	-	
COL	0.563	0.003*	0.000*	0.000*	0.513	-

Table 4 demonstrates the adjusted p-value for the pairwise comparisons of satisfaction based on rank. The asterisk signifies statistically significant comparisons, meaning the responses from the two compared ranks likely come from different distributions. Any p-value greater than 0.05 signifies responses from two ranks that produce statistically indistinguishable distributions at the 95 percent confidence threshold. A p-value of 0.000 signifies a p-value less than 0.001. A p-value of 1.000 signifies a p-value greater than 0.999.

One of the motivations for developing a billet marketplace is to have a process that is straightforward and readily understood by Marine officers seeking orders. The next question we evaluate from this survey asks respondents about their satisfaction with the transparency of the current assignment process (Appendix A). Figure 9 summarizes the responses to this question.

Figure 9. Satisfaction with Transparency of the Assignment Process



We conduct the sign test to detect if there is a significant decrease in satisfaction between the assignment process and the transparency of the process. We subtract each respondent's satisfaction of the transparency from the satisfaction with the assignment process and produce Figure 10. A difference that is a positive number signifies a respondent who has higher satisfaction with the assignment process in general compared to their satisfaction with the transparency of the assignment process; there are 642 respondents who make this distinction. A difference that is a negative number signifies a respondent who has lower satisfaction with the assignment process in general compared to the transparency of the assignment process; there are 188 respondents who make this distinction. We conduct a McNemar test based on these results and produce a p-value less than 0.00001. Based on this result, we conclude, with 95 percent confidence, there is significantly less satisfaction with the transparency of the assignment process than with the overall satisfaction of the assignment process in general. Our findings suggest that a key contributor to dissatisfaction of the assignment process is its transparency. This is an

important factor in the construction of a billet marketplace that addresses issues within the assignment process.

Figure 10. Difference in Satisfaction with the Transparency of the Assignment Process and Satisfaction with the Assignment Process

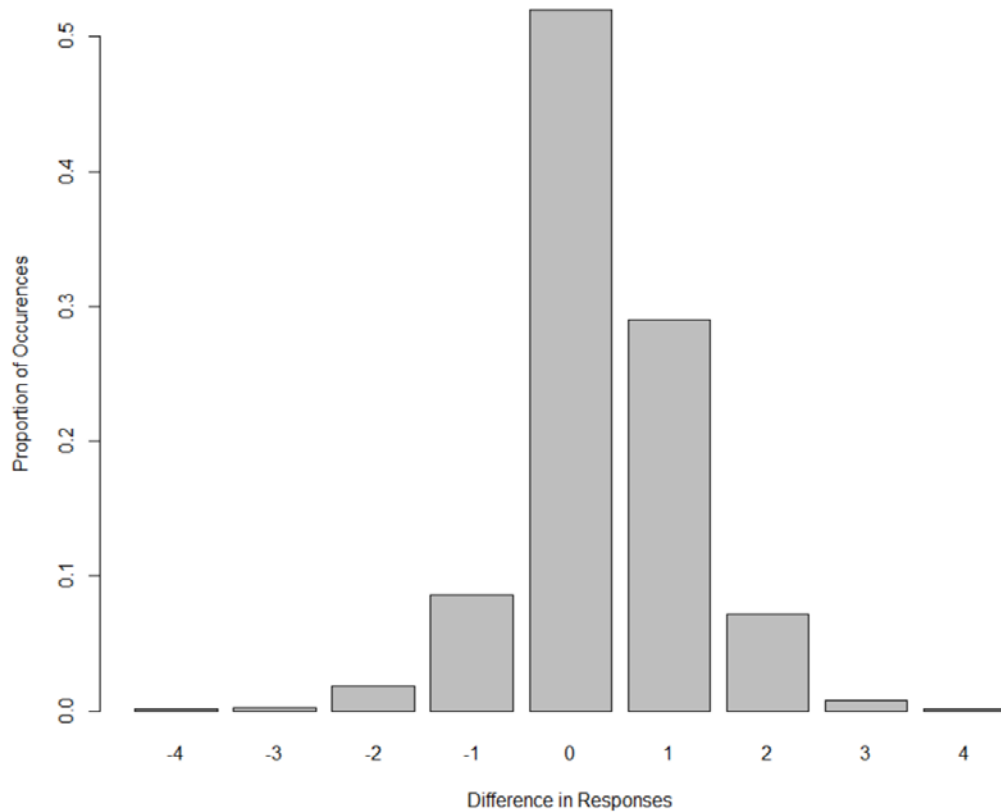


Figure 11 displays the responses to the respondent's satisfaction with the transparency of the assignment process according to military rank. Only captains and majors have the most pronounced dissatisfaction with the transparency of the assignment process, roughly one-third of all captains state the highest degree of dissatisfaction with the transparency of the assignment process. This histogram also shows that lieutenant colonels and colonels tend to be highly satisfied more often than other ranks. We remove the warrant officers from this test considering their career is not as linear compared to commissioned officers. We then conduct a Jonckheere-Terpstra test to determine if the responses for satisfaction increases as seniority or rank also increases. We conduct 100,000

permutations within this test and produce a p-value at approximately 0.00001. As such, we reject the null hypothesis that there is no trend as rank increases and accept the alternative that Marine officers of higher rank are generally more satisfied with the transparency of the assignment process. This result shows that Marines in the early to middle stages of their career are least satisfied with the transparency of the assignment process. Marines further into their careers tend to be more satisfied with the transparency of the process. This suggests that as Marines promote, either transparency in the assignment process improves, dissatisfied Marines attrite, or promoted officers care less about the transparency of the assignment process. In terms of the billet marketplace, the preponderance of the effort needs to target mid-grade officers, particularly captains and majors, to establish a higher degree of transparency and, ultimately, a higher degree of satisfaction with the assignment process.

Figure 11. Satisfaction with Transparency of the Assignment Process by Rank

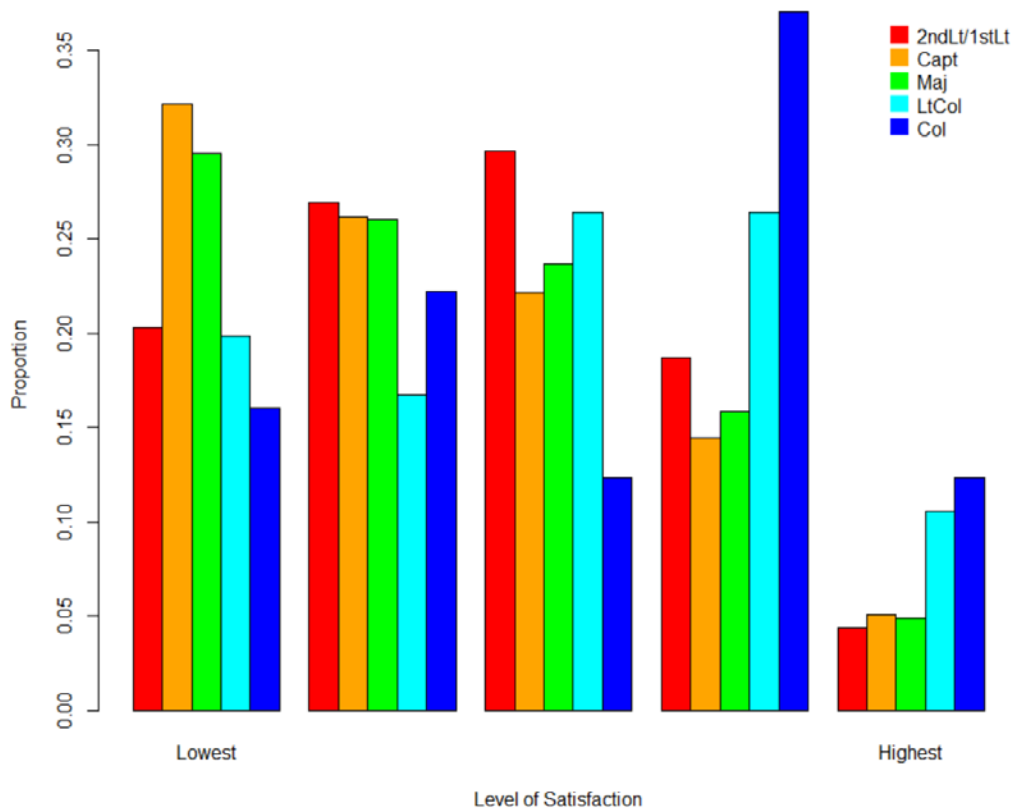


Figure 12 displays the responses to this question. For the sake of logistic regression, we create a two-state response to this question as either strongly disagree or do not strongly disagree.

Figure 12. The Marine Corps Does a Good Job in the Assignment Process Responses

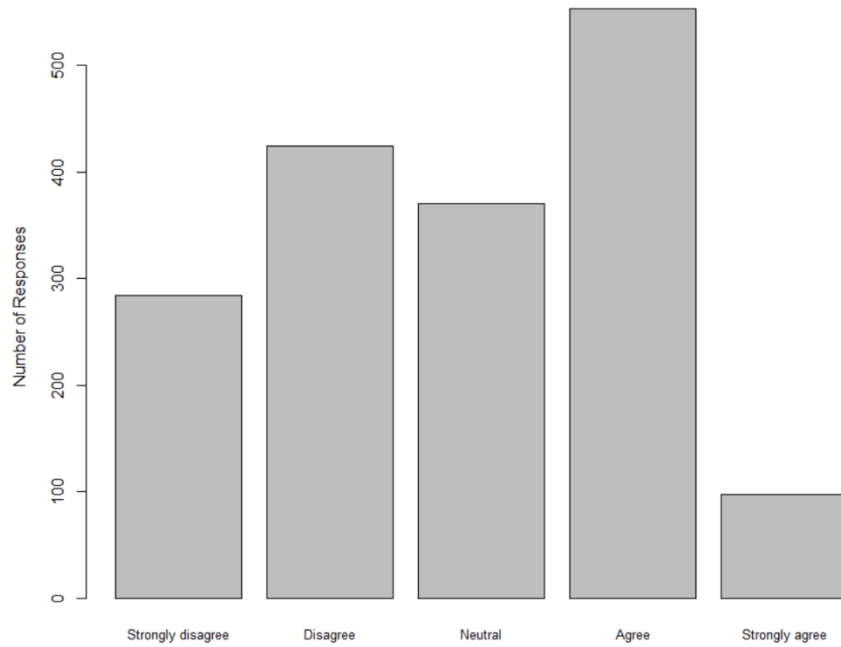
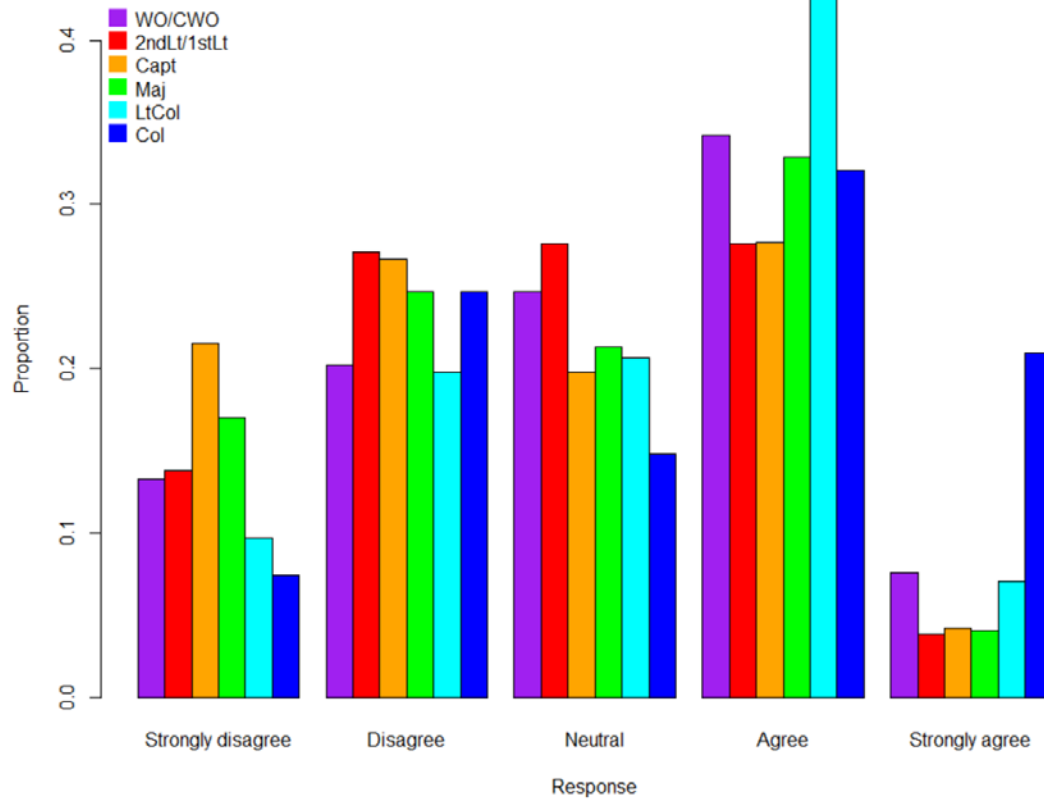


Figure 13 displays the results to the previous question as a function of rank. We conduct a Kruskal-Wallis test to determine if the distributions for each rank are homogeneous. The p-value from this test is 0.001424. Based on this p-value, we conclude the distributions are statistically dissimilar at the 95 percent confidence level.

Figure 13. The Marine Corps Does a Good Job in the Assignment Process
Responses by Rank



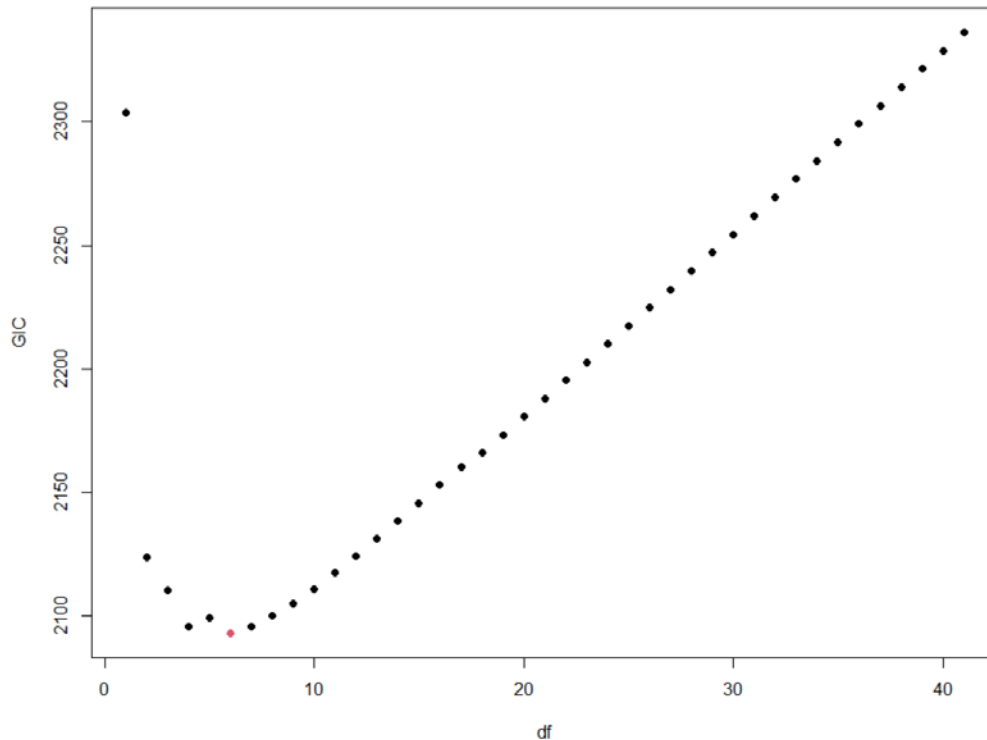
2. Prediction Modeling of Officer Dissatisfaction with the Assignment Process

In previous analyses, we use one predictor variable, such as rank, to determine information about the responses. This survey provides other classification data such as MOS, occupational field, and prior enlisted status. We implement a logistic regression approach to include more predictors in our analysis. For the purpose of predicting the response, we create a two-state response variable to the Likert-scale question indicating satisfaction with the Marine Corps assignment process. The response variable is now dissatisfied with the assignment process or not dissatisfied with the assignment process.

We use delete or merge regression, as discussed in Chapter 3, to demonstrate a modeling approach that provides predictability for the responses of given demographics of respondents (Maj-Kańska et al. 2015). The advantage of using DMR is its ability to

optimally reduce the number of predictor variable by deleting the coefficients of variables by setting them to zero or it merges predictors to common coefficients, thus reducing the total number of unique predictor coefficients. In this example, we fit a model where the predictors include occupational field, rank, prior enlisted status, and a two-state variable indicating the respondent's dissatisfaction with the Marine Corps in general; a total of 44 predictor variables. There are 34 occupational fields contributing to 33 degrees of freedom, 6 ranks contributing 5 degrees of freedom, 2 options for prior enlisted status contributing to 1 degree of freedom, and 2 options for dissatisfaction with the Marine Corps in general contributing 1 degree of freedom. Figure 14 displays the degree of freedom reduction using the generalized information criteria (GIC) for this model.

Figure 14. Model Degree of Freedom Reduction using GIC for DMR Model on Dissatisfaction with Marine Corps Assignment Process



As shown in Figure 14, we select a model with six degrees of freedom as the final model. This means our model has six unique coefficients after deleting or merging the

predictors. A coefficient of zero is not considered a unique coefficient since that predictor does not contribute to the response variable.

Table 5 displays the coefficients of the predictors for the model with six degrees of freedom. The coefficients in this table show the contribution of the predictor to the log-odds, as mentioned in Chapter 3, of the respondent expressing dissatisfaction with the assignment process. We make a series of observations based on this table and the coefficients of the predictors. First, there are three groups of occupational fields. The first group has 17 occupational fields and a negative coefficient, meaning these respondents are less likely to state dissatisfaction with the Marine Corps assignment process. The second group has five occupational fields and a positive coefficient, meaning these respondents express the most dissatisfaction with the assignment process. This model deletes the remaining 11 occupational fields as they do not express clear satisfaction or dissatisfaction with the assignment process. Second, warrant officers, lieutenant colonels, and colonels state the least dissatisfaction with the assignment process. This supports our previous analysis stating that these ranks are generally more satisfied with the assignment process. Third, the highest indicator of dissatisfaction with the assignment process is the respondent stating dissatisfaction with the Marine Corps in general. This variable has a positive coefficient of 2.003 as shown in Table 5.

Table 5. DMR Model Predictor Coefficients for Dissatisfaction with the Marine Corps Assignment Process

PREDICTOR	COEF.	PREDICTOR	COEF.
Rank-WO/CWO, LtCol, Col	-0.578	Occ Field-01, 04, 13, 21, 26, 30, 44, 58, 59, 63, 66, 75	0.000
Occ Field-02, 03, 06, 08, 17, 18, 28, 31, 34, 45, 60, 65, 68, 70, 72, 73, 80	-0.446	Rank-2ndLt/1stLt, Capt, Maj	0.000
Intercept	-0.353	Occ Field-23, 33, 35, 43, 57	1.431
Prior Enlisted-Yes	-0.279	Not Satisfied with the Marine Corps in General	2.003

Based on this DMR model, junior ranking officers (Second lieutenant through major) tend to be less satisfied with the assignment process compared to the more senior ranks (Lieutenant colonel and colonel) and warrant officers. The occupational fields group into those that are least satisfied, moderately satisfied, and most satisfied with the assignment process. Table 6 displays the number of respondents from each of these occupational-satisfaction groups separated by the senior and junior rank groups.

Table 6. Satisfaction with Assignment Process DMR: Number of Respondents by Occupational Field and Rank Groupings

	Junior Rank	Senior Rank
Lowest Satisfaction Occ Fields	3	29
Moderate Satisfaction Occ Fields	670	198
High Satisfaction Occ Fields	590	239

We then determine the percentage of those respondents who are satisfied with the assignment process as shown in Table 7. As shown in the table, the occupational fields grouped in the lowest satisfaction category based on the previous DMR model exhibit the lowest satisfaction with the assignment process, this is intuitive but supports the groupings in the model.

Table 7. Satisfaction with Assignment Process DMR: Proportion Satisfied with Assignment Process by Occupational Field and Rank Groupings

	Junior Rank	Senior Rank
Lowest Satisfaction Occ Fields	0.333	0.414
Moderate Satisfaction Occ Fields	0.536	0.692
High Satisfaction Occ Fields	0.636	0.787

We develop Table 8 to control for variability in the respondent's satisfaction with the Marine Corps in general. This table displays the number of respondents who state satisfaction with the Marine Corps in general and those who state dissatisfaction separately, based on Table 6.

Table 8. Satisfaction with Assignment Process DMR: Number of Respondents by Occupational Field, Rank Groupings, and Satisfaction with the Marine Corps

SATISFIED WITH THE MARINE CORPS IN GENERAL		
	JUNIOR RANK	SENIOR RANK
Lowest Satisfaction Occ Fields	3	27
Moderate Satisfaction Occ Fields	559	178
High Satisfaction Occ Fields	502	217
DISSATISFIED WITH THE MARINE CORPS IN GENERAL		
	JUNIOR RANK	SENIOR RANK
Lowest Satisfaction Occ Fields	0	2
Moderate Satisfaction Occ Fields	111	20
High Satisfaction Occ Fields	88	22

Based on Table 8, we determine the proportion of respondents who state satisfaction with the Marine Corps assignment process and display these proportions in Table 9. In all cases except the group of occupational fields who group into having moderate satisfaction with the assignment process, the group of junior officers displays a lower satisfaction with the assignment process compared to the senior ranks. The one exception is likely due to sampling variability due to the small sample of only 20 officers. This shows that once we control for the respondent's satisfaction with the Marine Corps in general, there is a measurable effect on satisfaction with the assignment process due to factors such as occupational field, rank, and prior enlisted status.

Table 9. Satisfaction with Assignment Process DMR: Proportion Satisfied with Assignment Process by Occupational Field, Rank Groupings, and Satisfaction with the Marine Corps

SATISFIED WITH THE MARINE CORPS IN GENERAL		
	JUNIOR RANK	SENIOR RANK
Lowest Satisfaction Occ Fields	0.333	0.444
Moderate Satisfaction Occ Fields	0.599	0.753
High Satisfaction Occ Fields	0.709	0.829
DISSATISFIED WITH THE MARINE CORPS IN GENERAL		
	JUNIOR RANK	SENIOR RANK
Lowest Satisfaction Occ Fields	N/A	0.000
Moderate Satisfaction Occ Fields	0.216	0.150
High Satisfaction Occ Fields	0.216	0.364

3. Prediction Modeling of Officer Intent to Resign at Earliest Opportunity

Based on the results of the previous DMR model, we develop a second model with an additional predictor variable and a different outcome variable. The goal of this model is to determine what factors contribute to a respondent stating their career aspiration is to resign at the earliest opportunity. We do this to expand on the idea that lower satisfaction with the Marine Corps assignment process correlates directly with a Marine's desire to attrite from the Marine Corps. The predictor variables in this model are rank, occupational field, prior enlisted status, the respondent's satisfaction with the Marine Corps in general, and the respondent's satisfaction with the Marine Corps assignment process. We transpose the Likert-scale responses to binary variable by stating the respondent is dissatisfied if they rate their satisfaction with a two or less and not dissatisfied if they answer with a three or more. There are 42 degrees of freedom in the model when using all predictors. The response variable is the respondent's career aspiration is to resign at the earliest opportunity. This regression based on the GIC produces Figure 15. This figure displays the optimal model, based on GIC, is one with seven degrees of freedom, meaning seven unique coefficients after deleting or grouping the predictors.

Figure 15. DMR Model Selection for Desire to Resign at Earliest Opportunity

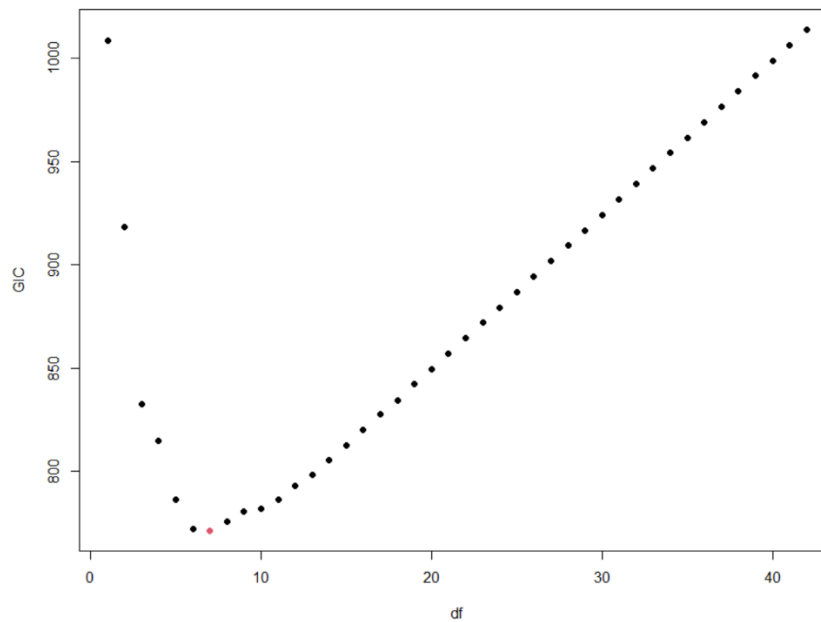


Table 10 displays the coefficients from the model we select in Figure 15. The negative coefficients signify respondents who are less likely to resign at the earliest opportunity. Some of these coefficients reinforce intuition or support our previous analysis. For example, warrant officers, lieutenant colonels and colonels produce the lowest odds of the desire to resign. Relatively speaking, Marines with these ranks are often closer to retirement than needing to resign. Of the 153 respondents who state they desire to resign at the earliest opportunity, only two of the respondents fall into one of these ranks. Previously enlisted officers are also closer to a retirement status than having a necessity to retire so the same logic is rational for why they do not desire to resign. There are two groupings of occupational fields as a result of this regression as show in Table 10. One grouping has no effect on the odds of desire for resignation and the other contributes to an increase in the odds for a desire to resign. The two of the highest coefficients correspond to the Likert-scale responses to the satisfaction with the Marine Corps in general and the satisfaction with the Marine Corps assignment process, respectively. These positive coefficients imply a respondent is more likely to desire resignation if they display dissatisfaction with the assignment process or the Marine Corps in general. Moreover, if a respondent replies with low satisfaction toward the Marine Corps and then replies with low satisfaction toward the Marine Corps assignment process, the odds of their desire for resignation increases by each of these coefficients.

Table 10. Desire to Resign DMR Model Predictor Coefficients

PREDICTOR	COEF.	PREDICTOR	COEF.
Rank-WO/CWO, LtCol, Col	-3.069	Occ Field 01, 03, 13, 21, 23, 26, 28, 30, 31, 33, 34, 35, 43, 44, 45, 58, 59, 60, 63, 65, 68, 70, 73, 80	0.000
Intercept	-2.959	Dissatisfaction with Assignment Process	0.952
Prior Enlisted-Yes	-1.524	Occ Field 02, 04, 06, 08, 17, 18, 57, 66, 72, 75	0.976
Rank-Maj	-1.498	Dissatisfaction with the Marine Corps in General	1.310
Rank-2ndLt/1stLt, Capt	0.000		

As mentioned previously, there is one group of 10 occupational fields that are more likely to resign. These occupational fields are intelligence, logistics, communications, field artillery, cyberspace operations, tank, assault amphibious vehicle and amphibious combat vehicle, chemical, biological, radiological and nuclear defense, aviation logistics, aviation command and control operations, and pilots / naval flight officers. We explore the occupational field groupings further by differentiating on the rank groupings from the previous DMR. Table 11 illustrates the proportion of respondents who state a desire to resign based on these groupings. As shown in the table, the occupational field groupings with the higher coefficient based on the DMR have a higher proportion of officers who desire resignation. The rank group with the highest desire for resignation (2ndLt/1stLt and captain) combined with the 10 occupational fields who most desire resignation have approximately 21.4 percent (98 officers) of their respondents who desire to resign at the next opportunity.

Table 11. Desire to Resign DMR: Proportion of Respondents Who Desire Resignation by Occupational Field and Rank Groupings

	Least Desire Rank	Moderate Desire Rank	Most Desire Rank
Least Desire Occ Field	0.004	0.012	0.085
Most Desire Occ Field	0.005	0.055	0.214

We use the results shown in Table 11 and control for satisfaction with the Marine Corps in general. Table 12 displays the proportion of officers who state they desire at the next opportunity for those who state satisfaction with the Marine Corps in general separated from those who state dissatisfaction with the Marine Corps in general. The group of second lieutenants, first lieutenants, and captain within the group of occupational fields that most desire resignation who also state dissatisfaction with the Marine Corps in general have roughly 46.9 percent (45 officers) of their respondents state a desire to resign. This table also shows a strictly increasing trend for the percentage of respondents who desire resignation.

Table 12. Desire to Resign DMR: Proportion of Respondents Who Desire Resignation by Occupational Field, Rank Groupings and Satisfaction with the Marine Corps in General

SATISFIED WITH THE MARINE CORPS IN GENERAL			
	Least Desire Rank	Moderate Desire Rank	Most Desire Rank
Least Desire Occ Field	0.004	0.007	0.052
Most Desire Occ Field	0.005	0.036	0.144
DISSATISFIED WITH THE MARINE CORPS IN GENERAL			
	Least Desire Rank	Moderate Desire Rank	Most Desire Rank
Least Desire Occ Field	0.000	0.077	0.273
Most Desire Occ Field	0.000	0.182	0.469

Table 13 displays the number of respondents from second lieutenant through captain divided by their occupational field groupings, dissatisfaction with the Marine Corps in general, and dissatisfaction with the Marine Corps assignment process.

Table 13. Desire to Resign DMR: Number of Respondents Occupational Field, Satisfaction with the Marine Corps in General, and Satisfaction with the Marine Corps Assignment Process

SATISFIED WITH THE ASSIGNMENT PROCESS		
	Satisfied w/ USMC	Dissatisfied w/ USMC
Least Desire Occ Field	157	14
Most Desire Occ Field	233	22
DISSATISFIED WITH THE ASSIGNMENT PROCESS		
	Satisfied w/ USMC	Dissatisfied w/ USMC
Least Desire Occ Field	93	30
Most Desire Occ Field	127	76

Table 14 displays the total proportion of respondents who state a desire to resign based on the same criteria as Table 13. As shown in the table, 52.6 percent of respondents who are dissatisfied with the Marine Corps and the assignment process and who fall into one of the 10 occupational fields who most desire resignation want to resign at the next opportunity. This regression illustrates the association of satisfaction with the Marine

Corps assignment process, satisfaction with the Marine Corps in general, and a Marine officer's desire to resign from the Marine Corps.

Table 14. Desire to Resign DMR: Proportion of Respondents Who Desire Resignation by Occupational Field, Satisfaction with the Marine Corps in General, and Satisfaction with the Marine Corps Assignment Process

SATISFIED WITH THE ASSIGNMENT PROCESS		
	Satisfied w/ USMC	Dissatisfied w/ USMC
Least Desire Occ Field	0.019	0.143
Most Desire Occ Field	0.103	0.273
DISSATISFIED WITH THE ASSIGNMENT PROCESS		
	Satisfied w/ USMC	Dissatisfied w/ USMC
Least Desire Occ Field	0.108	0.333
Most Desire Occ Field	0.220	0.526

4. Text Analysis of Comment Fields

Textual comments are often time consuming to read, synthesize, and analyze considering the wide range of responses, improper use of grammar, common fragmented sentence structure, and responses with emotion or sarcasm. Often, these comments contain invaluable information. We extract information from these textual responses by sorting the comments based on the general sentiment (positivity or negativity) of the response. Using the **sentimentr** package (Rinker 2019) in R, we calculate a sentiment score for each sentence in a comment field. With a sentiment score for each sentence, we calculate an average sentiment score across all sentences from a given respondent. We then order these responses based on their sentiment score, lowest scores correspond to most negative sentiment and highest scores correspond to most positive comments and extract the bottom 5 percent of scores. This process identifies 53 comments for analysis. We conduct a visual analysis of this bottom 5 percent of comments to determine if these are negative comments. Our analysis focuses directly on the question “If you could change anything about the assignments process, what would you change?” (Appendix A). After reviewing the responses visually, we classify 73 percent of the responses as demonstrating negative

sentiment. The other comments either display indifference with the assignment process, constructive feedback (often with many acronyms) or a comment stating the respondent has no issue with the system.

We use similar rationale and processes with the **SentimentAnalysis** package (Feuerriegel and Proellocks 2019). The key difference between the **sentimentr** and **SentimentAnalysis** packages is that the **SentimentAnalysis** package calculates the aggregate sentiment score for each comment, reducing the steps and assumptions we make to produce sentiment scores for each textual response. After producing the most negative 5 percent of scores, we conduct a manual evaluation of the negativity of each comment as a binary response, either the comment is negative or not. Based on comparisons with our evaluations, we classify 67 percent of the responses from the **SentimentAnalysis** as displaying negative sentiment.

We compare the responses in the most negative 5 percent of **sentimentr** analysis with the responses in the most negative 5 percent of the **SentimentAnalysis** output. Each analysis package selects 32 unique comments in their bottom 5 percent and 21 comments appear in the bottom 5 percent from both algorithms. Of the 21 common comments, 16 comments meet our visual criteria for negative sentiment.

Without manually searching the 1,084 comments, there is limited ability to determine if the algorithms score and select the most negative comments. To accomplish this task in an efficient manner, we filter the comments based on respondents who answer with dissatisfaction (either a one or two rating) with the Marine Corps in general and the most dissatisfaction with the assignment process. This process isolates 88 comments, of which only 6 comments intersect comments we identify with the **SentimentAnalysis** algorithm (Feuerriegel and Proellocks 2019) and only 7 comments intersect the bottom 5 percent output of the **sentimentr** package (Rinker 2019).

Figure 16 displays two boxplots containing the distribution of sentiment scores. The boxplot labeled “sentimentr” displays the distribution from the output of the **sentimentr** algorithm. The boxplot labeled correlated comments displays how **sentimentr** scores the comments correlated with negative responses. As seen in the boxplot, the median

and majority of the comments isolated with the correlation process score with positive sentiment. This suggests that officers who answer previous questions in a survey do not always provide textual responses with negative sentiment.

Figure 16. Boxplot Comparison of Sentimentr Algorithm and Comments Correlated with Negative Responses

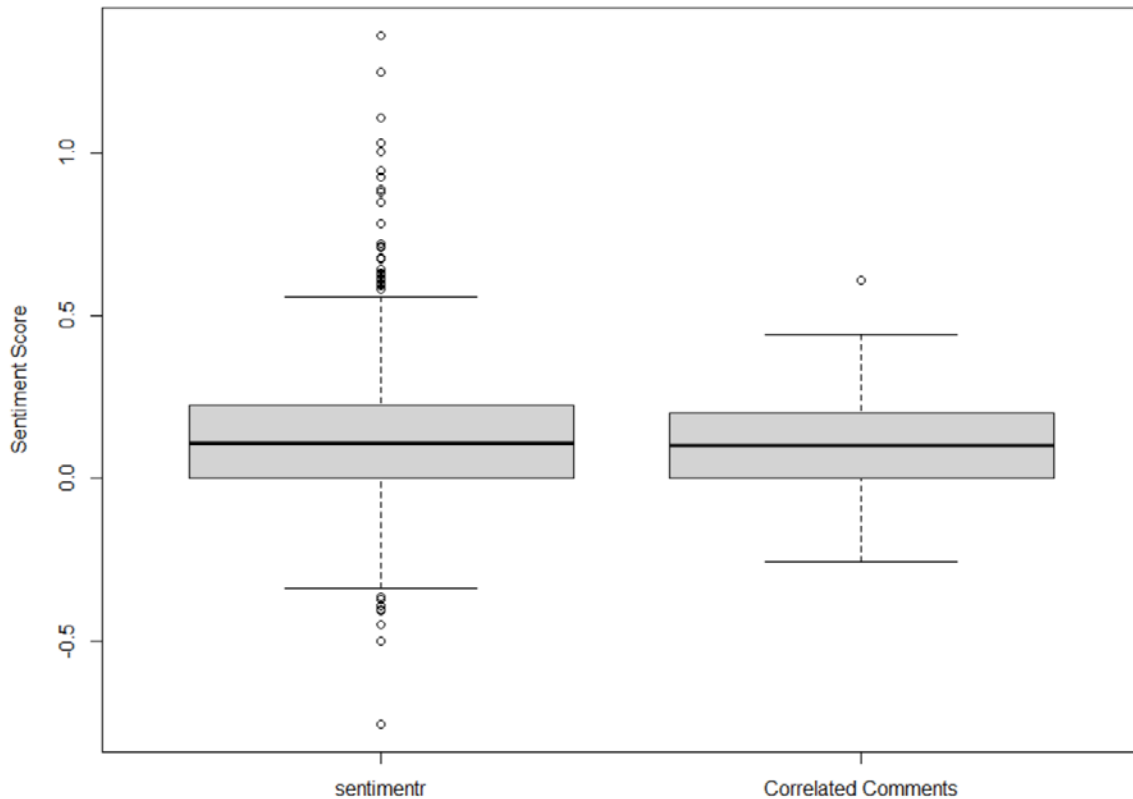
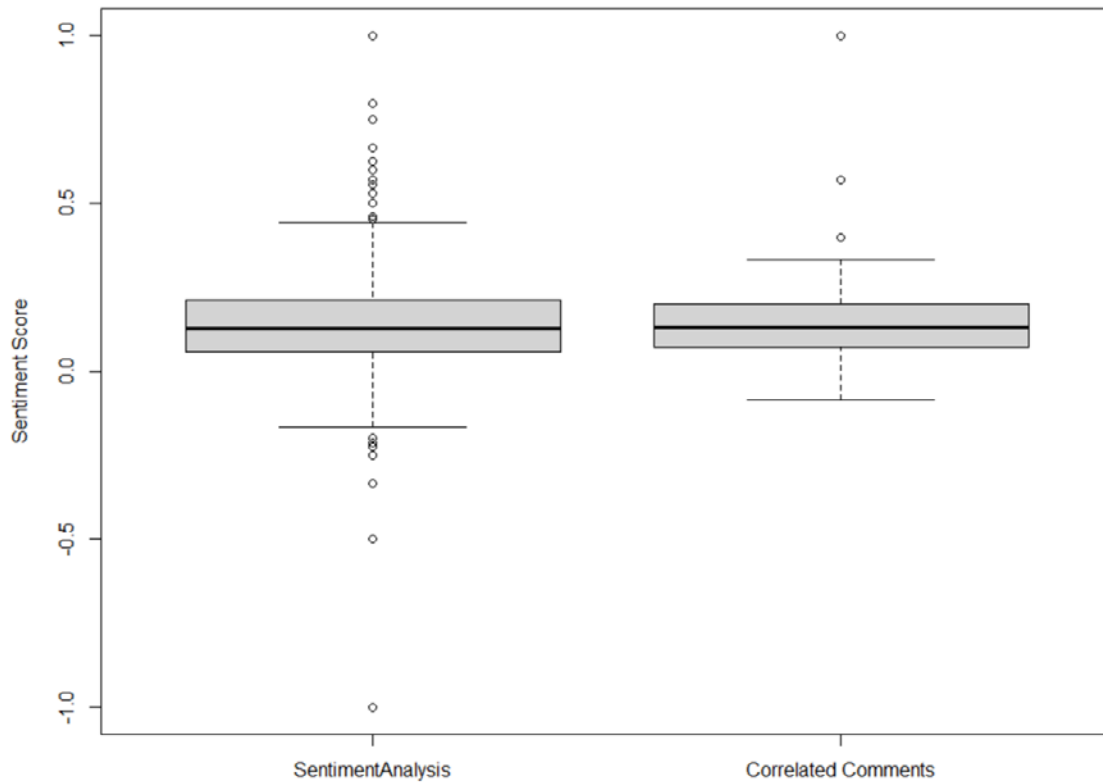


Figure 17 repeats the process we use in Figure 16 and compares the distribution of the negatively correlated comments with the output of the **SentimentAnalysis** package. These boxplots also show the median and majority of comments score with positive sentiment compared to the entire distribution of sentiment scores and the ones deemed most negative.

Figure 17. Boxplot Comparison of SentimentAnalysis Algorithm and Comments Correlated with Negative Responses



After reading the comments, we find using a method of selecting comments correlated with negative responses to key questions provides more candid and constructive responses than either sentiment analysis technique. It also provides roughly 80 percent accuracy on selecting negative comments when the respondent provides feedback based on visual classification of responses by the research team. Improvement to the sentiment analysis requires a more detailed supervision algorithm and user inputs for the words that demonstrate negative sentiment compared to which words are military jargon and do not convey negative sentiment, such as the term restricted officer. A challenge of analyzing this question is this particular question does not solicit negativity and rather asks how to improve the assignment process.

C. ANALYSIS OF MOVERS' SURVEYS

1. FY20 Aviation LtCol Movers Survey

The FY20 Aviation LtCol Movers Survey data contains 216 responses, collected between December 9, 2019 and February 17, 2020. The respondents belong to 16 different MOSs, which are shown in Table 15. Most of these MOSs reside within Occupational Field 75, Pilot/Naval Flight Officers. The survey respondents include 98 majors selected for promotion to lieutenant colonel and 118 lieutenant colonels.

Table 15. FY20 Aviation LtCol Movers Survey Respondents by Rank

MOS	NUMBER OF RESPONDENTS	MOS	NUMBER OF RESPONDENTS
6002	17	7532	20
6602	13	7557	17
7202	24	7562	6
7315	2	7563	17
7509	12	7564	2
7518	2	7565	35
7523	7	7566	26
7525	10	7588	6
		TOTAL	216

Our first step in analyzing this survey is to compare the guidelines for responding to the survey with the answers provided in the survey. Respondents are told to rate a total of 15 billets. Only 117 of the 216 respondents rate exactly 15 billets. Of the respondents who do not comply, some respondents record less than 15 billets, 5 respondents rate only 1 billet and some respondents rate more than 15 billets, 1 respondent rates 105 of the 196 billets. The survey asks officers to include five “any officer billets” (billets designator for MOS 8006, unrestricted officer) within their list of rated billets. Only 191 of 216 officers complied with this request and incorporate at least five of these billets in their rankings. There are two conclusions from these findings. First, officers do not comply with rankings instructions. Second, the survey does not constrain officers to follow the directions providing incongruence in the responses.

We next examine the points given by respondents to billets with a BMOS of 8006, unrestricted. We do this by calculating the proportion of points given to unrestricted billets against the total points each respondent awards. Figure 18 is a histogram with these proportions along the x-axis. Out of all the responses, over 20 respondents awarded over 95 percent of their points to 8006-coded billets. This figure also shows the individuals who award little to no points to those coded billets.

Figure 18. LtCol Movers Proportion of Points Given to 8006 Billets

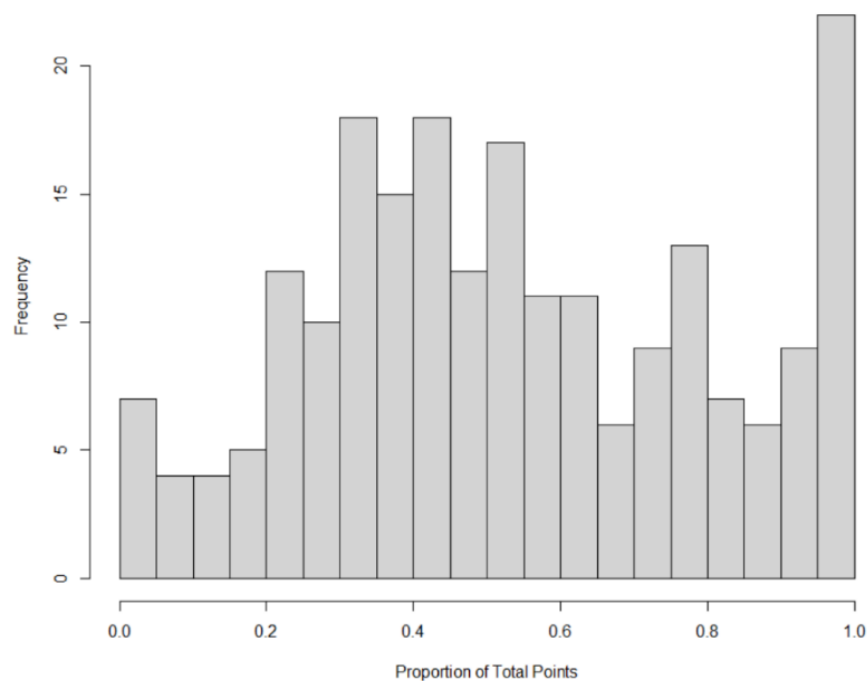


Table 16 illustrates the rounded proportion of points awarded according to MOS. All Marines with MOS 7202, Air Command and Control Officer, provide over 75 percent of their points to 8006-coded billets as shown in Table 16. This is likely attributed to fewer billets with a BMOS of 7202 for lieutenant colonels compared to other MOSs.

Table 16. Rounded Percent of Points Awarded to Unrestricted Officer Billets by MOS

		Percent of Total Points Awarded to Unrestricted Officer Billets										
		0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
MOS	6002	0	1	0	1	2	1	2	3	2	2	3
	6602	0	0	1	0	0	1	1	2	3	1	4
	7202	0	0	0	0	0	0	0	0	6	9	9
	7315	0	0	0	1	0	1	0	0	0	0	0
	7509	0	0	0	4	3	3	0	1	1	0	0
	7518	0	0	0	0	0	1	1	0	0	0	0
	7523	0	0	1	0	2	1	2	0	0	0	1
	7525	0	0	0	1	3	0	3	2	0	0	1
	7532	0	2	5	4	2	3	1	1	1	1	0
	7557	2	2	3	4	3	3	0	0	0	0	0
	7562	0	0	0	0	0	4	1	0	1	0	0
	7563	0	1	0	4	6	1	3	1	1	0	0
	7564	0	0	0	0	0	0	1	0	0	1	0
	7565	2	1	4	5	7	4	5	2	3	0	2
	7566	1	1	3	4	3	4	2	3	2	1	2
	7588	2	0	0	0	2	2	0	0	0	0	0

2. FY20 Ground Officers Movers Questionnaire

The FY20 Ground Officers Movers Questionnaire circulated from November 25, 2019 to December 20, 2019 and includes a total of 1,844 responses. This survey includes responses from ground officers with ranks from second lieutenant to lieutenant colonel. Table 17 displays the number of responses by rank.

Table 17. Ground Officer Response Rate by Rank

RANK	NUMBER OF RESPONDENTS
Second Lieutenant	6
First Lieutenant	467
Captain	481
Captain (in zone for major)	150
Major	150
Major (selected for lieutenant colonel)	121
Lieutenant Colonel	150
TOTAL	1,844

This survey asks Marines to record their PMOS monitor in lieu of their MOS. Table 18 displays the distribution of responses by monitor. Of note, one respondent does not provide their specific monitor information.

Table 18. Ground Officer Response Rate by PMOS Monitor

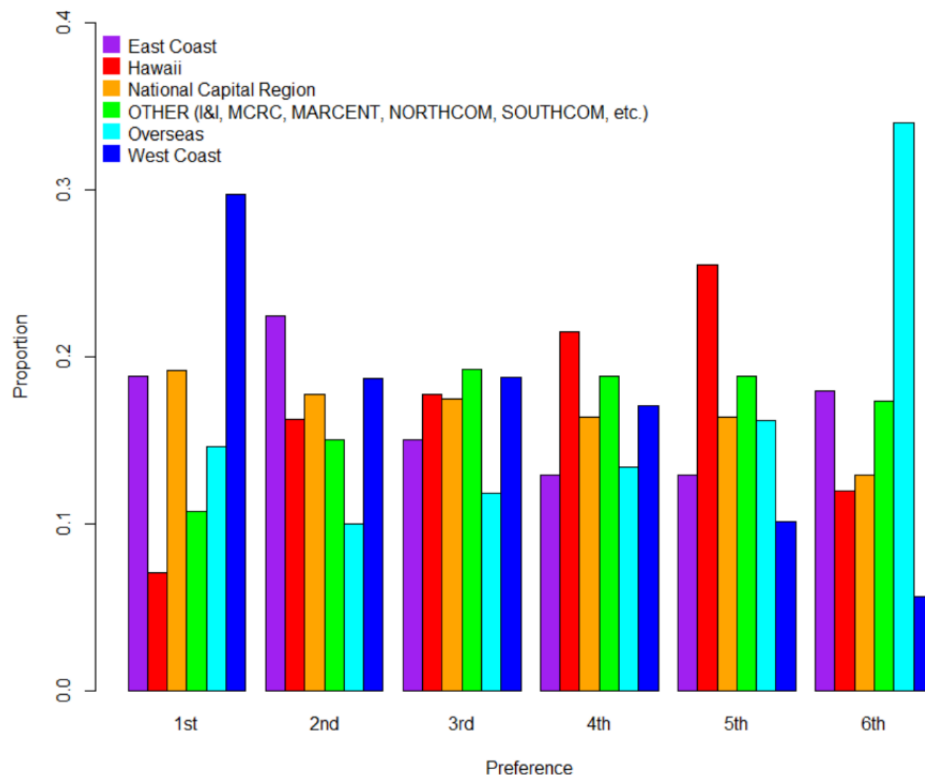
PMOS MONITOR	NUMBER OF RESPONDENTS
No Response	1
Combat Arms LtCol Monitor	79
Combat Service Support LtCol Monitor	187
Company Grade Adjutant/Lawyer/Military Police	179
Company Grade Combat Arms Monitor	165
Company Grade Communications/ComStrat/Cyber Monitor	133
Company Grade Infantry Monitor	126
Company Grade Intel/Financial Manager Monitor	139
Company Grade Logistics/Supply Monitor	269
Ground Major Combat Arms Monitor	187
Ground Major Combat Service Support Monitor	244
Ground Major Information Monitor	135
TOTAL	1,844

The first question we investigate is “Which is more important to you?” and the valid responses are billet type or geolocation (Appendix C). Of the total responses, 762 Marines state billet type is more important, and 1,079 state geolocation is more important. Three respondents did not record an answer to this question. We conduct a binomial test on this data to determine if the difference in responses is significant or if there is a reasonable probability that there could be more responses indicating billet type is more important. This test produces a p-value very close to zero (less than 0.00001) and therefore we conclude it is statistically more likely that officers prefer geolocation to billet type. We produce a Clopper-Pearson confidence interval on the binomial probability the Marine prefers geolocation as (0.5632, 0.6087). This confidence interval displays statistically that more Marines prefer geolocation and we state with 95 percent confidence the average percentage of Marines who share this preference is within this confidence interval. While this is an

important result, there are many other considerations that contribute to a Marine's preference for location over billet type.

The Ground Officers Movers Questionnaire asks Marines to identify their geolocation preferences. There are six choices for geolocation in this survey; they are East Coast, West Coast, National Capital region, other, Hawaii, or overseas. Figure 19 displays the stated geolocation preferences from first to sixth by each region. Two remarkable observations from the graph are the high number of respondents who select the West Coast as their first choice (547 out of 1,844) and the high number of respondents who select overseas as their last choice (625 out of 1,844). This suggests a billet marketplace will need to account for variable geographic preferences as the proportion of Marines who desire West Coast duty stations may outnumber the number of available billets in this region.

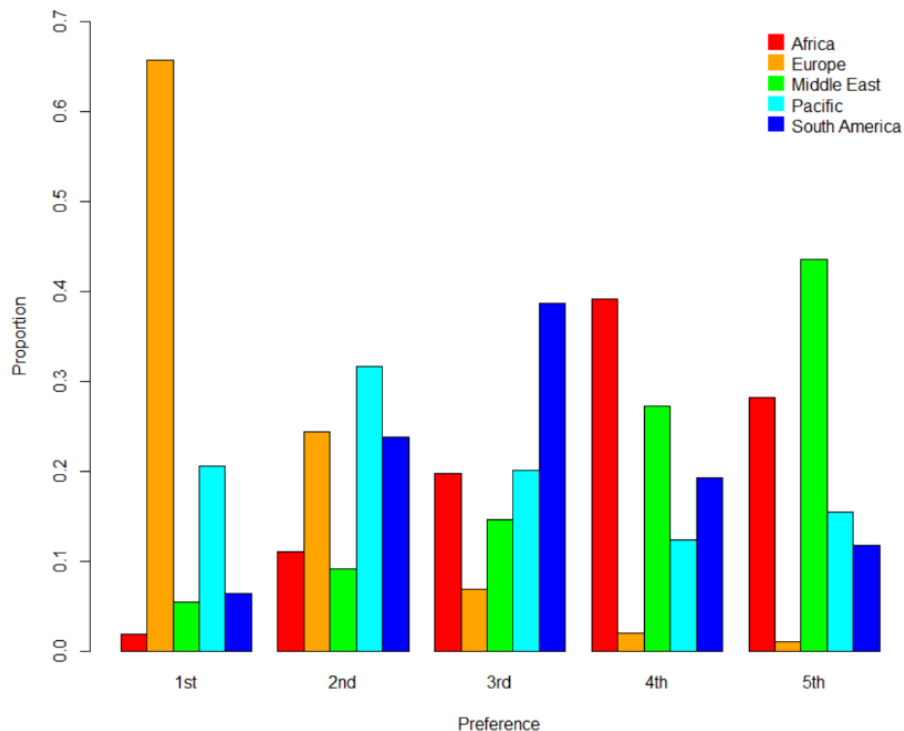
Figure 19. Ground Officer Geolocation Preferences



We use these data and construct blocks for each of the combinations of responses. With these blocks, we conduct a Friedman test to determine if the response combinations are stochastically similar or not. This test produces a p-value very close to zero and we reject the null hypothesis that these blocks are similar, meaning there are heterogeneous answers to this survey question.

The next section of the survey asks Marine ground officers their OCONUS preferences in a similar manner to the previous question. A summary of these responses is shown in Figure 20. As shown, Europe dominates the first-choice preference and the Middle East is the prominent last choice. We conduct the Friedman test, as before, and produce a p-value less than 0.00001, reaching the conclusion that there are dissimilar responses in these blocks of responses.

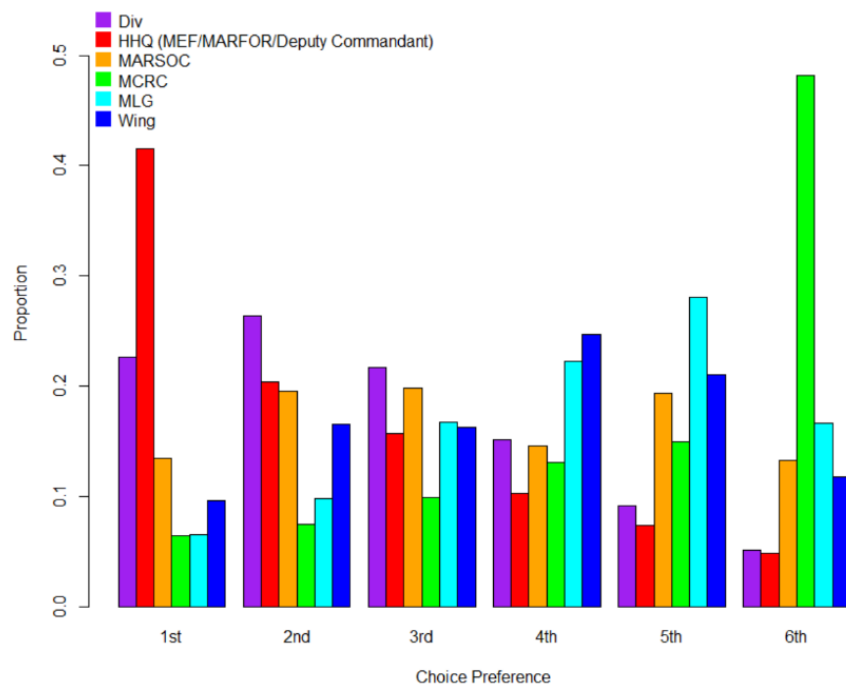
Figure 20. Ground Officer OCONUS Preferences



The FY20 Ground Officers Movers Questionnaire also asks officers to rate their MSC preferences. We display these preferences in Figure 21. This shows the highest

preferred MSC as a Higher Headquarters (HHQ) unit and the least preferred unit as Marine Corps Recruiting Command (MCRC). We conduct a Friedman test on these blocked data and reach the same conclusion as the previous blocked responses; the responses in this section are heterogeneous, meaning the preferences of the respondents are not the same across the different choices. This shows that officers have unique preferences and that some grouping or preference orders occur more often and that other orderings are least likely but still need to be accounted for in the billet assignment process.

Figure 21. Ground Officer MSC Preferences

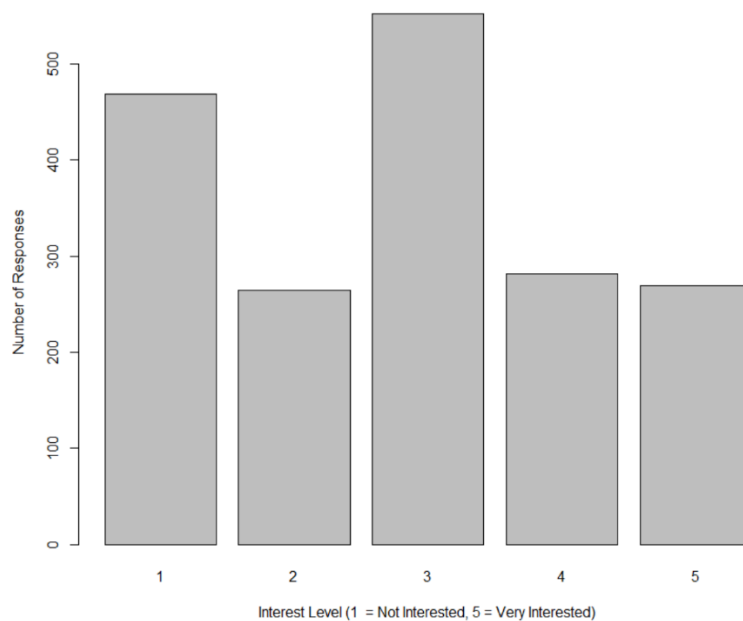


This survey asks officers if they are interested in a joint tour. Of the 1,844 respondents, 1,382 indicate interest in a joint tour and 462 indicate no interest in a joint tour. We conduct a binomial test on these responses to determine if there is a statistically higher probability that an officer is interested in a joint tour than not. The p-value of this test is less than 0.00001 suggesting that with 95 percent confidence, it is more likely that an officer has interest in a joint tour than not. The 95 percent confidence interval on the

percentage of officers interested in a joint tour is (0.729, 0.769). From this, we say with high confidence that roughly 75 percent of officers have interest in a joint tour.

The last question of the survey asks ground officers to rate their interest being an instructor at one of the many instructor duty assignments. Figure 22 displays the number of responses in each of the interest categories, from not interested to very interested on a one to five scale. As shown, most respondents show little to moderate interest in instructor duty. Conversely, this also shows there are Marine officers who are very interested in instructor duty. The goal of a billet marketplace is to identify and match Marines who display interest with the billets in which they are interested.

Figure 22. Ground Officer Interest in Instructor Duty



3. FY20 Rotary Wing Movers Survey

The FY20 Rotary Wing Movers Survey includes responses from 362 Marine Rotary Wing officers. Of these respondents, 177 are company grade officers (second lieutenant through captain) and 185 are majors or captains selected for promotion to major. There are Marine respondents from five MOSs as shown in Table 19.

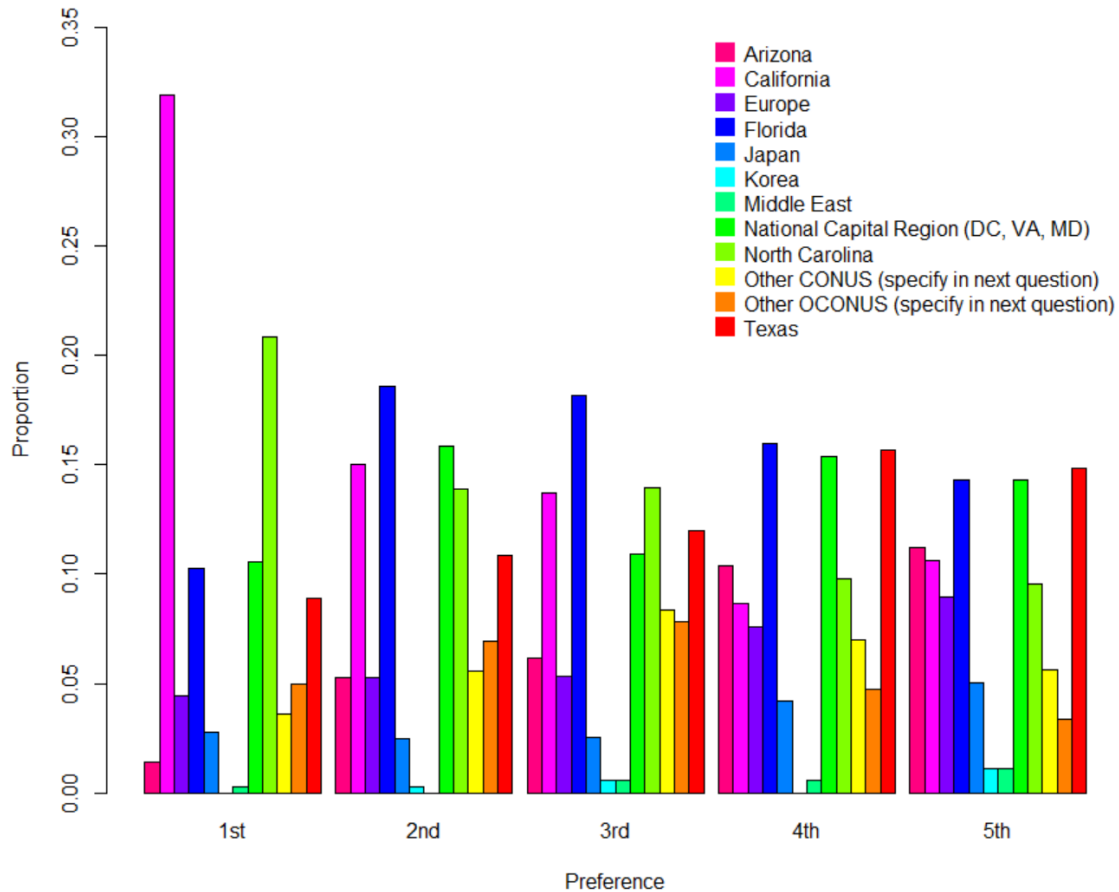
Table 19. Rotary Wing Survey Respondents by MOS

MOS	NUMBER OF RESPONDENTS
7532	121
7562	3
7563	60
7565	100
7566	78
TOTAL	362

Like the Ground Officers Movers Questionnaire, this survey asks respondents if billet or location is more important to them. Of the 362 respondents, 1 does not provide a response, 204 respondents state billet is more important, and 157 respondents select location as more important. We conduct a binomial test to determine if the proportion of officers who select billet is statistically significant. This test produces a p-value of 0.01536 meaning we reject the null hypothesis that the probability of an officer selecting billet as more important equals 0.5. The 95 percent Clopper-Pearson confidence interval on the probability of selecting billet is (0.5122, 0.6169). This provides additional support to show that the majority of Marines consider geographic preference a higher priority than particular billet.

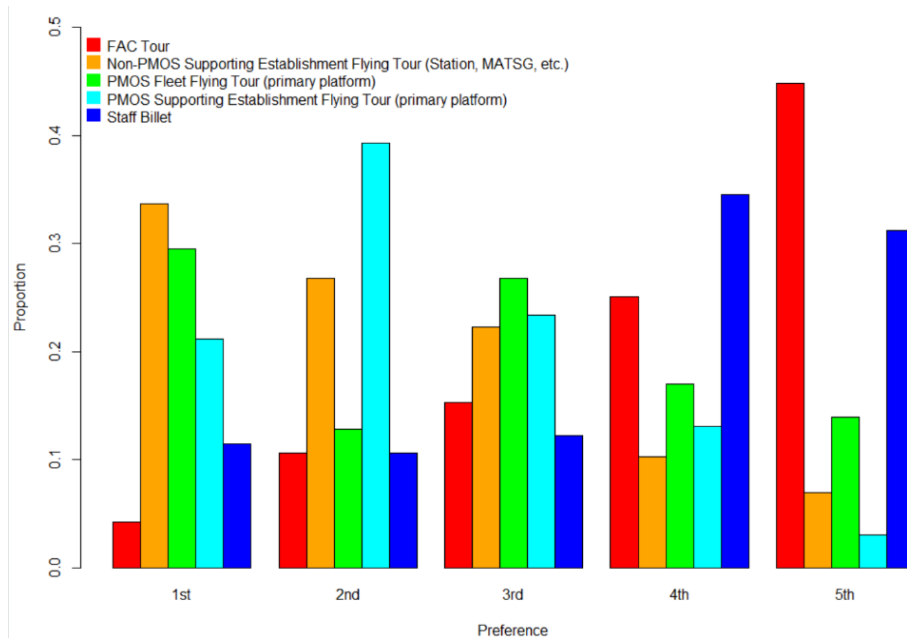
The survey asks respondents to rank their top 12 location preferences. The options are North Carolina, California, National Capital Region, Japan, Florida, Texas, Arizona, Middle East, Europe, Korea, other CONUS, or other OCONUS. The officers specify their selection for other CONUS or other OCONUS by including a text response of the other locations. Figure 23 displays the distribution of responses for the top five choices. As shown in Figure 23, California is the most sought-after location for the first choice followed by North Carolina. Respondents do not select Korea for their first choice and less than 5 percent select the Middle East, Arizona, Japan, or Europe as their top choice.

Figure 23. Rotary Wing Officer Location Preferences



The FY20 Rotary Wing Movers Survey also asks respondents to rank their preferences for their next billet type. The possible responses for this question are forward air controller (FAC), non-PMOS supporting establishment flying tour, PMOS fleet flying tour, PMOS supporting establishment flying tour, or a staff billet. Figure 24 displays the proportion of officers who select each of the options from their first to fifth choice. The FAC tour falls lowest on the first choice and highest as the last choice by significant margins. Non-PMOS supporting establishment flying tours are designated as a respondent's first choice most often followed by PMOS fleet flying tour. In general, we see the flying tour billets as the top preferences for rotary wing pilots.

Figure 24. Rotary Wing Officer Billet Type Preferences

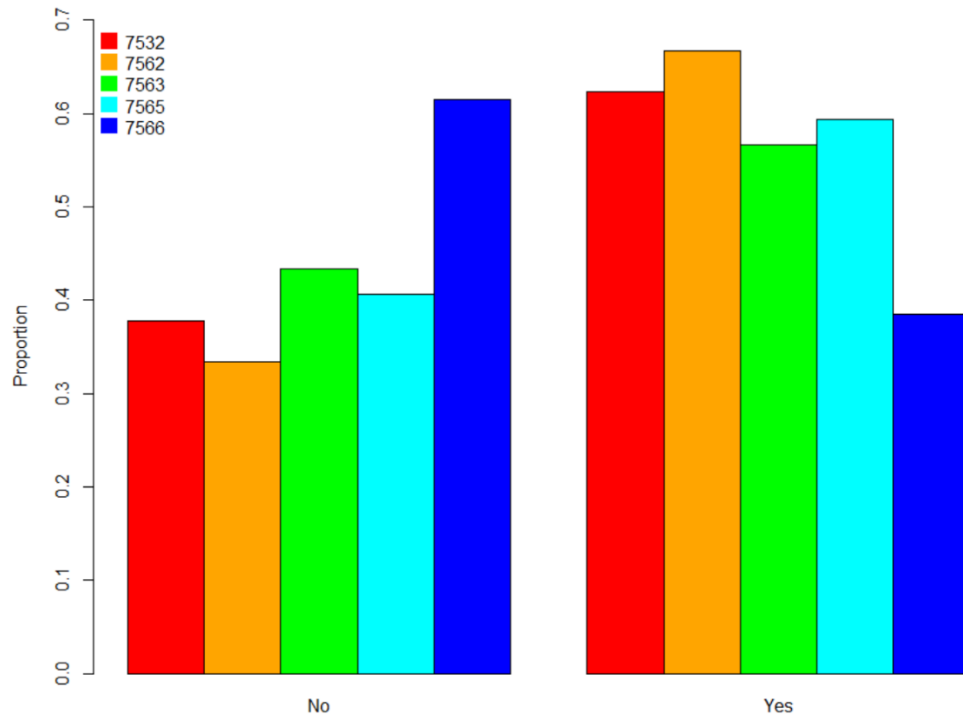


The next question of the survey asks officers if they are interested in a joint tour. Of the 362 respondents, 82 state “No,” 102 state “Yes,” and 178 respond “N/A” or do not respond. Upon further inspection, 177 of the 178 responses of “N/A” correspond to company grade officers (second lieutenant through captain). We then conduct a two-tail binomial test on the 82 answers stating “No” and against the 184 total responses. A two-tail binomial test means we test the null hypothesis that the probability of responding “No” is equal to 50 percent. The alternative hypothesis is the probability of responding “No” is not equal to 50 percent, meaning it can be higher or lower. This test produces a p-value of 0.1611 which corresponds to a confidence interval of (0.3725, 0.5206). As such, we are unable to draw any statistical conclusions about whether or not officers have interest in a joint tour.

Figure 25 displays the responses to interest in a joint tour as they pertain to the MOS. The bars represent the proportion of that MOS for either “Yes” or “No”. The only MOS with a visually different distribution is the MOS 7566. We conduct a Kruskal-Wallis test to determine if the distribution of these MOSs is similar. We do not include responses with “N/A” in this test. The p-value of this test is 0.048 and we reject our null hypothesis

at the 95 percent confidence level. This means that there is a statistical differentiation between the distribution of responses to this question. While the p-value suggests we have barely 95 percent confidence in this response, the distributional differences are evident and that MOS is a contributor to the desire to conduct a joint tour.

Figure 25. Rotary Wing Pilot Interest in a Joint Tour



D. DISCUSSION

This section provides a brief discussion on the general results of the four surveys. First, Marines are dissatisfied with the assignment process and its transparency. More important, Marines at points in their career where they make key decisions about remaining in or departing the Marine Corps are dissatisfied with the assignment process. Although not proven in this thesis, we show dissatisfaction translates to some level of attrition for captains and majors who are otherwise eligible and fit to serve as lieutenant colonels and beyond. A billet marketplace must address the state lack of transparency with its users. Second, any survey or billet assignment process must impose constraints on the user to

ensure accurate and thorough responses. The FY20 LtCol Aviation Mover Survey highlights the large number of survey respondents that do not adhere to survey rules. This makes adjudicating respondents outside the intent of the survey difficult and creates a sense of unfairness for those who do not manipulate a system meant to be honest. Third, there are many elements that contribute to a respondent's billet priorities. While geographic location is important to many respondents, large sums of Marine officers of all ranks, state other priorities for billet assignment. To accurately account for an officer's preferences, the billet marketplace or future surveys must require the collection of these data.

E. CHAPTER SUMMARY

In this chapter, we discussed the methods we used to the data from the four surveys. We presented the results of this analysis and drew some conclusions based on those results in brief discussions.

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V. SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND FUTURE RESEARCH

A. SUMMARY

This thesis conducts an analysis of data to support the development of a Marine Corps billet marketplace. In support of this project, we research the genesis of the billet marketplace concept, investigate similar systems in use throughout the DOD and in civilian organizations, and we explore the current Marine Corps billet assignment process. We collect data from four surveys and analyze these data to provide evidence for the attitude toward the Marine Corps officer assignment process and to better explore the preferences of Marine officers when selecting their next assignment. We use this information to inform the formation of an optimization model to support the matching of personnel to their next assignment. Our final output of this study is to provide recommendations to a billet marketplace concept and to better understand what is desired and required of such a tool.

B. CONCLUSIONS

Our research questions seek to understand Marine Corps officers' perceptions of the current officer billet assignment process and to explore if those perceptions have implications for the Marine Corps. Through this research, we provide three central conclusions. First, there exists general dissatisfaction with the assignment process and the transparency therein. While the distributions of the satisfaction may differ among Marines of different rank or MOS, a large enough population demonstrates that there is a desire and necessity for change. With a modeling approach, we see a direct correlation with a Marine's dissatisfaction with the assignment process and the desire to resign at the earliest opportunity. This is a problem worth addressing given the potential to attrite high performing individuals due to inadequate or nontransparent manning procedures.

Second, Marines have diverse priorities when considering their next assignment. Geolocation, unit type, and BMOS all contribute to the decision-making process of Marine officers when selecting a billet. These priorities may change throughout a career and are

not consistent across Marines of similar rank, MOS, occupational field, or commissioning source.

Third, delete or merge regression is an effective technique to highlight important contributors to a response variable. In the case of this research, we discover evidence to support an assumption that low satisfaction of the assignment process contributes or correlates to otherwise early attrition from the Marine Corps. DMR also assists in merging many predictors into fewer groups. This process allows reduce complex models in an efficient way while maintaining high predictability compared to the full model.

C. RECOMMENDATIONS

Based on this research, we have several recommendations regarding a billet marketplace and further data analysis to support such a concept. First, we recommend collecting as much data on survey respondents to build better fidelity into future modeling approaches. Some examples of additional useful data may be hometown, number of dependents, age, and gender. Second, we support the continuation of the billet marketplace concept. All stakeholders express a desire for improvement to the assignment process, and many examples of similar systems are currently in use across the DOD. Third, any future system for job placement should constrain Marines to a certain set of rules. Respondents should not be able to state preference for billets which they are not eligible to hold. We illustrate in the FY20 Aviation LtCol Movers survey that rules are not followed by a significant number of respondents and, therefore, the system should be constraining based on MOS, rank, or number of desired preferences.

A solution is only as good as the data on which it is based. Through a billet assignment process improvement, it is important to continue to collect data on many subjects. First, collect data on the performance of meeting the preferences of a Marine. This is a key shortfall in this analysis, we do not use data displaying the performance of the current system and there is therefore no way to verify why Marines are dissatisfied. If the current system does not provide Marines assignments in their top choices, we need to know. Additionally, as solutions arise to address or improve meeting the preferences of Marines officers, there is a need for a baseline to compare against. An important aspect of

the current billet assignment process is the rationale monitors use to make assignments. A Marine may perceive inequity when they do not receive one of their top preferences, but that Marine may also be a poor performer who demonstrates no ability to hold the positions for which they apply. Marine performance data and data contributing to an officer's assignment helps to understand why some Marines do not attain their billet assignment goals.

D. FUTURE RESEARCH

We have several concepts for future work on this project. First, the sentiment analysis techniques we use in this research show the efficiencies of using machine learning algorithms to synthesize large scores of text data. Our research needs expansion to train the algorithm on the nuances of military jargon and phrasing. This ensures sentiment within textual comments are accurately captured and the user can sort the comments to highlight specific target groups. As we discover in this research, textual comments contain valuable information and can be better leveraged in forming a billet marketplace.

Second, a thorough data collection and analysis of the current process' performance is critical assessing the performance of a future system. We recommend developing metrics and analysis techniques to determine what contributes to a successful billet assignment. We also recommend understanding the ability of the current billet assignment process to meet the needs of Marine officers. This analysis may provide justification for the billet marketplace or may serve as a performance metric against which the billet marketplace is compared.

Third, the current survey methods do not establish a link between the assessment of the assignment process and the preferences of Marines for their next assignment. This link assists in understanding which preferences contribute or correlate to poor satisfaction with the assignment process. A thorough analysis of the preferences of Marines as they pertain to their satisfaction provides a focus for areas the billet marketplace should address or is failing to address.

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APPENDIX A. MMOA ASSIGNMENTS SURVEY. SOURCE: MMOA ASSIGNMENT SURVEY (2020).

12/21/2019

MMOA Survey - MMOA Assignments Survey [SCN USMC-MRA-19049]

MMOA Assignments Survey [SCN USMC-MRA-19049]

PRIVACY ACT STATEMENT

Authority to request this information is granted under 5 U.S.C. 301, Departmental Regulations; 10 U.S.C. 5041 and 5042; and Executive Order 9397

PURPOSE: The purpose of this questionnaire is to collect information that will be used to inform future decisions regarding the Marine Corps officer assignments process.

This survey is anonymous. No effort will be made to link responses to individuals.

By clicking Submit, your responses will be forwarded to MMOA. You may return to the questionnaire to unlock (reset) your responses to change/update previously submitted responses. All responses must be submitted NLT 17 June 2019, 2359 EST. If you wish to save and return later, please click the Cancel button in this window and then Save Draft button.

There are 22 questions in this survey.

Background

Select your rank. *

● Choose one of the following answers

Please choose only one of the following:

☐ WO/CWO

☐ 2nd Lt/1st Lt

☐ Capt

☐ Maj

☐ Lt Col

☐ Col

What is your Primary MOS? *

Please write your answer here

Example: 0302

How long have you been a commissioned officer? *

● Choose one of the following answers

Please choose only one of the following:

☐ 1-4 Years

☐ 5-7 Years

☐ 8-11 Years

☐ 12-15 Years

☐ 16-20 Years

☐ 20+ Years

Are you prior enlisted? *

Please choose only one of the following:

☐ Yes

☐ No

https://surveys.mar.mil/index.php/admin/printablesurvey/survey/surveyid/724787

1/5

What was your commissioning source?

● Choose one of the following answers

Please choose only one of the following:

- ☐ PLC
☐ OCC
☐ MECEP
☐ ECP
☐ NROTC
☐ Naval Academy
☐ LDO
☐ WO Program
☐ Interservice Transfer
☐ Other
☐

Are/were you a mover in 2019? *

● Choose one of the following answers

Please choose only one of the following:

- ☐ Yes
☐ No

Were you selected by a board or panel for this assignment (includes fleet-up)? *

Only answer this question if the following conditions are met:

Answer was "Yes" at question 6 [Orders] (Are/were you a mover in 2019?)

Please choose only one of the following:

- ☐ Yes
☐ No

What type of assignment is this for the 2019 orders?

Only answer this question if the following conditions are met:

Answer was "Yes" at question 6 [Orders] (Are/were you a mover in 2019?)

● Choose one of the following answers

Please choose only one of the following:

- ☐ Operating Forces
☐ Supporting Establishment
☐ Resident PME
☐ CCLEB/CPIB Program (not resident PME)
☐ Joint
☐ Unsure
☐ Pending receipt of orders

What are your career intentions? *

● Choose one of the following answers

Please choose only one of the following:

- ☐ I am currently pending or plan to EAS/separate/retire within the next year.
☐ I intend to serve 1-3 years from this point.
☐ I intend to serve 4-8 years from this point.
☐ I intend to remain until retirement eligibility and retire soon thereafter.
☐ I am undecided.

What are your career aspirations? *

☒ Check all that apply

Please choose all that apply:

- ☐ Retire at earliest opportunity
☐ Resign at earliest opportunity
☐ Serve in USMCR
☐ Selection to more senior CWO rank(s)
☐ Selection to Maj
☐ Selection to LtCol
☐ Selection to LtCol and LtCol-level command
☐ Selection to Col
☐ Selection to Col and Col-level command
☐ Selection to General Officer ranks
☐ None of the above

Assignments Process

Please rate your satisfaction in the following areas with 1 being least satisfied and 5 being most satisfied. *

Please choose the appropriate response for each item:

	1	2	3	4	5
How satisfied are you with the Marine Corps in general?	☐	☐	☐	☐	☐
How satisfied are you with the Marine Corps officer assignments process?	☐	☐	☐	☐	☐
How satisfied are you with the transparency of the assignments process?	☐	☐	☐	☐	☐
How satisfied are you with your current unit?	☐	☐	☐	☐	☐
How satisfied are you with your current geographic location?	☐	☐	☐	☐	☐
If you received orders for 2019, how satisfied are you with the new unit to which you received orders?	☐	☐	☐	☐	☐
If you received orders for 2019, how satisfied are you with the new geographic location?	☐	☐	☐	☐	☐

Please assess each of the following statements: *

Please choose the appropriate response for each item:

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I believe that in general the Marine Corps does a good job in the assignments process.	☐	☐	☐	☐	☐
I believe the Marine Corps does a good job of keeping me competitive for promotion and command.	☐	☐	☐	☐	☐
I believe the Marine Corps has a good understanding of my individual skills and abilities.	☐	☐	☐	☐	☐
I believe that selection boards like the Commandant's Career Level Education Board (CCLEB) and Commandant's Professional Intermediate-Level Education Board (CPILB) are conducted fairly.	☐	☐	☐	☐	☐
I believe that attending resident PME is career enhancing.	☐	☐	☐	☐	☐
I believe that improvements to the assignments process would increase my likelihood of remaining in the service longer.	☐	☐	☐	☐	☐

Other services are either considering or have implemented an assignments "marketplace" that focuses on more direct communication between individuals and units. This includes being able to request specific billets (vice just units) and allows units to request officers formally by name amongst a list of movers.

Would you prefer a greater sense of control over your assignment if it meant negotiating your next assignment with specific units vice with a monitor?

*

Please choose only one of the following:

- ☐ Yes
☐ No

I like the idea of units being able to formally request me in consideration for my next assignment.

*

Choose one of the following answers

Please choose only one of the following:

- ☐ Strongly Disagree
☐ Disagree
☐ N/A
☐ Agree
☐ Strongly Agree

Monitor Interaction

Please rate your satisfaction in the following areas with 1 being least satisfied and 5 being most satisfied. *

Please choose the appropriate response for each item:

	1	2	3	4	5	N/A
If you have interacted with your monitor, how would you rate your monitor's overall performance?	☐	☐	☐	☐	☐	☐
How would you rate your monitor's level of responsiveness to your individual preferences?	☐	☐	☐	☐	☐	☐
How satisfied are you with the information available on your monitor's webpage?	☐	☐	☐	☐	☐	☐

Please rank what is most important to you in consideration of your next assignment from most important to least important.

All your answers must be different and you must rank in order.

Please select at most 4 answers

Please number each box in order of preference from 1 to 4

Personal stability (e.g., knowing how long I will remain at a duty station without being moved)

Geographic preference (e.g., Southern California)

Specific unit preferences (e.g., 1st Bn, 2d Mar)

Unit type (e.g., OPFOR unit in my MOS regardless of location)

MMOA Roadshow and Interview

Please rate your satisfaction in the following areas with 1 being least satisfied and 5 being most satisfied. *

Please choose the appropriate response for each item:

	1	2	3	4	5	N/A
How satisfied are you with the MMOA roadshow brief?	☐	☐	☐	☐	☐	☐
How satisfied are you with the interview process in being able to communicate your desires and preferences with your monitor?	☐	☐	☐	☐	☐	☐

12/12/2019

MAA Survey - MMOA Assignments Survey [SUN USMC-MMOA-19049]

I believe that conducting a face-to-face interview with the monitor is an important part of the assignments process.

*

Choose one of the following answers

Please choose only one of the following:

- ☐ Strongly Disagree
☐ Disagree
☐ N/A
☐ Agree
☐ Strongly Agree

I believe that a VTC or teleconference interview with the monitor would be as effective as meeting face-to-face.

*

Choose one of the following answers

Please choose only one of the following:

- ☐ Strongly Disagree
☐ Disagree
☐ N/A
☐ Agree
☐ Strongly Agree

How can MMOA improve the annual MMOA Roadshow?

Please write your answer here:

If you could change anything about the assignments process, what would you change?

Please write your answer here:

Do you have any additional feedback that you wish to communicate to the senior leadership within MMOA, MM, and M&RA relating to the assignments process?

Please write your answer here:

Thank you for your participation in this survey.

Semper Fidelis.

17.06.2019 - 23:59

Submit your survey.

Thank you for completing this survey.

[https://surveys.mcgill.ca/ahp/ahpAdmin/printableSurveyFeedback/surveyid/7724787](https://surveys.may.mcgill.ca/ahp/ahpAdmin/printableSurveyFeedback/surveyid/7724787)

5/5

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APPENDIX B. FY20 AVIATION LTCOL MOVERS SURVEY. SOURCE: MMOA (2020)

2/18/2020

MAX Survey - FY20 Aviation LtCol Movers [SCN USMC-MRA-PENDING]

FY20 Aviation LtCol Movers [SCN USMC-MRA-PENDING]

Welcome to the FY20 Slate Questionnaire. There are two parts to this survey:

1. Identifying info (EDIPI, Last Name, etc)

2. Billet preferences.

You'll be asked to choose and rate 15 total billets. At least 5 must be 8006/any officer billets. Do your best to convey your desires while still providing us something to work with in the event your top choice isn't available. Lack of diversity in your list may inform us your desire to fly or live out the Sound of Music, but it functionally decreases your number of choices. Your knowledge of probabilities should help you shape your survey responses.

Use the sliders to weight your 15 preferences. Large values, intuitively, indicate a high desirability for that assignment. For those officers with very few PMOS choices (e.g. 6602), you will select more than (5) 8006 billets. 8006 is an "Any Officer" billet.

Your survey should candidly reflect your interests. As a frame of reference, a weighting of 70-100 indicates you would be ecstatic about your assignment. A weighting of 40-60 would reflect contentment with the assignment. A weighting below 30 would indicate "thanks for orders, I still need a job." The weighted ranking will allow us to build an ordinal ranking of your preferences. The rest of the billets (the other 150 not selected) will be weighted with a zero.

There are 6 questions in this survey.

PERSONAL INFORMATION (NAME / RANK / EDIPI / PMOS)

Enter Last Name *

Please write your answer here:

Enter First Name *

Please write your answer here:

Enter EDIPI *

i Only numbers may be entered in this field.

Please write your answer here:

Enter your Primary MOS (6002, 7202, 7523, 7532...) *

i Only numbers may be entered in this field.

Please write your answer here:

Enter your current rank; either LtCol or Maj (LtCol Select)
*

Please write your answer here:

PREFERENCES

Choose and rate 15 total billets. At least 5 must be 8006/any officer billets.

Do your best to convey your desires while still providing us something to work with in the event your top choice isn't available. Lack of diversity in your list may inform us your desire to fly or live out the Sound of Music, but it functionally decreases your number of choices. Your knowledge of probabilities should help you shape your survey responses.

Use the sliders to weight your 15 preferences. Large values, intuitively, indicate a high desirability for that assignment. For those officers with very few PMOS choices (e.g. 6602), you will select more than (5) 8006 billets. 8006 is an "Any Officer" billet.

Your survey should candidly reflect your interests. As a frame of reference, a weighting of 70-100 indicates you would be ecstatic about your assignment. A weighting of 40-60 would reflect contentment with the assignment. A weighting below 30 would indicate "thanks for orders, I still need a job." The weighted ranking will allow us to build an ordinal ranking of your preferences. The rest of the billets (the other 150 not selected) will be weighted with a zero.

****Note:** Several of the JOINT billets have changed. This is the final list.

❗ Each answer must be between 0 and 100

❗ The sum must be at least 0

❗ Only integer values may be entered in these fields.

Please write your answer(s) here:

007 / 7506 / HQ MCCDC QUANTICO VA

022 / 7506 / MCAS CHERRY POINT NC

022 / 7596 / MCAS CHERRY POINT NC

023 / 7506 / MCAS MIRAMAR SAN DIEGO CA

032 / 7505 / MCAF QUANTICO VA

048 / 6002 / FLEET READINESS CENTER EAST CHERRY PT NC

057 / 7505 / MCAS CAMP PENDLETON CA

057 / 7505 / MCAS CAMP PENDLETON CA

070 / 5902 / MC SYSCOM QUANTICO VA

086 / 7506 / TRAINING AND EDUCATION COMMAND QUANTICO VA

111 / 6002 / HQ MARFORCOM NORFOLK VA

111 / 6302 / HQ MARFORCOM NORFOLK VA

111 / 6502 / HQ MARFORCOM NORFOLK VA

111 / 7503 / HQ MARFORCOM NORFOLK VA

142 / 7202 / 2DMAW CHERRY POINT NC

142 / 7506 / 2DMAW CHERRY POINT NC

142 / 7506 / 2DMAW CHERRY POINT NC

142 / 7506 / 2DMAW CHERRY POINT NC

142 / 7506 / 2DMAW CHERRY POINT NC

142 / 7596 / 2DMAW CHERRY POINT NC

143 / 6602 / 3DMAW MIRAMAR CA

143 / 7506 / 3DMAW MIRAMAR CA

143 / 7506 / 3DMAW MIRAMAR CA

143 / 7506 / 3DMAW MIRAMAR CA

143 / 7596 / 3DMAW MIRAMAR CA

145 / 6602 / 1STMAW OKINAWA JAPAN

145 / 7506 / 1STMAW OKINAWA JAPAN

145 / 7506 / 1STMAW OKINAWA JAPAN

145 / 7506 / 1STMAW OKINAWA JAPAN

1C0 / 7506 / HQ I MEF CAMP PENDLETON CA

1DX / 7505 / CE 5TH MEB MARFOR CENTCOM BAHRAIN

1EP / 7506 / HQ 31ST MEU OKINAWA JAPAN

1ER / 7506 / HQ 24TH MEU CAMP LEJEUNE NC

1ES / 7506 / HQ 13TH MEU CAMP PENDLETON CA

1ET / 7506 / HQ 11TH MEU CAMP PENDLETON CA

1F1 / 7506 / HQ II MEF CAMP LEJEUNE NC

1GF / 7506 / THE MARINE CORPS WARFIGHTING LAB QUANTICO VA

1JA / 7503 / HQ MAG-11 3D MAW SAN DIEGO CA

1JA / 7518 / HQ MAG-11 3D MAW SAN DIEGO CA

1JB / 7503 / HQ MAG-12 1ST MAW IWAKUNI JAPAN

1JC / 7503 / HQ MAG 13 3DMAW YUMA AZ

1JC / 7518 / HQ MAG 13 3DMAW YUMA AZ

1JD / 7503 / HQ MAG-14 2DMAW CHERRY POINT NC

1JD / 7503 / HQ MAG-14 2DMAW CHERRY POINT NC

1JE / 7505 / HQ MAG 16 3DMAW SAN DIEGO CA

1JF / 7505 / HQ MAG 24 1STMAW KANEOHE BAY,HI

1JG / 7505 / MAG-26 2DMAW JACKSONVILLE NC

1JH / 7505 / HQ MAG 29 2DMAW JACKSONVILLE NC

1JH / 7505 / HQ MAG 29 2DMAW JACKSONVILLE NC

1JL / 7505 / HQ MAG 36 1STMAW FUTENMA OKINAWA JAPAN

1JL / 7505 / HQ MAG 36 1STMAW FUTENMA OKINAWA JAPAN

1JM / 7505 / HQ MAG 39 3DMAW CAMP PENDLETON CA

1PA / 7202 / HQ MACG-28 2D MAW CHERRY POINT NC

1PH / 7506 / MWSG-27 2D MAW CHERRY POINT NC

1XH / 7506 / MWSG-37 3D MAW SAN DIEGO CA

444 / 7523 / US FLEET FORCES CMD (USFFC) NORFOLK VA

452 / 7509 / COMNAVSURFLANT FLAG ALLOW NORFOLK VA

454 / 7566 / FA COMNAVSURFPAC CORONADO CA

462 / 7523 / FLAG ALLOWANCE COMNAVAIRPAC SAN DIEGO CA

D93 / 7506 / SITE SPT CLR 4 4TH MLG FT LEWIS WA

G76 / 7315 / MAD NAS PATUXENT RIVER MD

G78 / 7506 / MATSG-21 TRNG COM NAS PENSACOLA FL

G91 / 6002 OR 6602 / MATSG-23 TRNG CMD NAS PENSACOLA FL

J34 / 6602 / NAV ED & TRN CTR NEWPORT RI

LAW / 7506 / MC REP US NAVAL WAR COLL EDU COM NEWPORT RI

QDC / 8006 / DEPUTY COMMANDANT FOR INFORMATION WASHINGTON DC

QDC / 7315 / DEPUTY COMMANDANT FOR INFORMATION WASHINGTON DC

S2A / 7202 / HQ MACG-48 4TH MAW GREAT LAKES IL

S7A / 7505 / HQTRS MAG-49 4TH MAW MCGUIRE AFB NJ

S8F / 7202 / HQTRS 4TH MAW NEW ORLEANS NAS LA

T52 / 6002 / OFC OF THE CNO OP 00 WASHINGTON DC

T52 / 6502 / OFC OF THE CNO OP 00 WASHINGTON DC

T52 / 6602 / OFC OF THE CNO OP 00 WASHINGTON DC

T52 / 7506 / OFC OF THE CNO OP 00 WASHINGTON DC

T52 / 7506 / OFC OF THE CNO OP 00 WASHINGTON DC

T52 / 7523 / OFC OF THE CNO OP 00 WASHINGTON DC

T52 / 7532 / OFC OF THE CNO OP 00 WASHINGTON DC

T9B / 6002 / NAV AIR SYS CMD PATUXENT RIVER MD

T9B / 6002 / NAV AIR SYS CMD PATUXENT RIVER MD

T9B / 6002 / NAV AIR SYS CMD PATUXENT RIVER MD

T9B / 6002 / NAV AIR SYS CMD PATUXENT RIVER MD

TD4 / 7577 / JTF HQ FOR EW/CAS NELLIS AFB NV

TF4 / 7506 / INSPECTOR GENERAL OF THE USMC ARLINGTON VA

TMG / 6002 / HQ MARFOR CENTCOM, MACDILL AFB, TAMPA, FL

TZ3 / 7506 / NAVY WARFARE DEVELOPMENT COMMAND NORFOLK VA

U61 / 7202 / FAA WASHINGTON DC

007 / 8006 / HQ MCCDC

007 / 8006 / HQ MCCDC

007 / 8006 / HQ MCCDC

007 / 8006 / HQ MCCDC

011 / 8006 / H&S BN HQMC HENDERSON HALL ARLINGTON VA

014 / 8006 / MCB CAMP PENDLETON

063 / 8006 / MARINE CORPS LOGISTICS COMMAND ALBANY GA

068 / 8006 / EDUCATION COMMAND

068 / 8006 / EDUCATION COMMAND

068 / 8006 / EDUCATION COMMAND

068 / 8006 / EDUCATION COMMAND

068 / 8006 / EDUCATION COMMAND

068 / 8006 / EDUCATION COMMAND

080 / 8006 / PMD QUANTICO - MARSH CENTER

080 / 8006 / PMD QUANTICO - MARSH CENTER

080 / 8006 / PMD QUANTICO - MARSH CENTER

080 / 8006 / PMD QUANTICO - MARSH CENTER

086 / 8006 / TRAINING AND EDUCATION COMMAND

091 / 8006 / MCB KANEOHE BAY HI

097 / 8006 / MCI EAST CAMP LEJEUNE

097 / 8006 / MCI EAST CAMP LEJEUNE
097 / 8006 / MCI EAST CAMP LEJEUNE
097 / 8006 / MCI EAST CAMP LEJEUNE
104 / 8006 / MARCOR ADVS CO SUPPORT GREAT LAKES IL
110 / 8006 / MARFORPAC CAMP SMITH HI
124 / 8006 / 3D MARDIV
129 / 8006 / MCI CAMP MUJUK (ROK) KOREA
1C0 / 8006 / I MEF
1C0 / 8006 / I MEF
1C0 / 8006 / I MEF
1CC / 8006 / 3D MEB
1CC / 8006 / 3D MEB
1EE / 8006 / COMMARFOREUR STUGGART GERMANY
1EM / 8006 / MARINE FORCES AFTRICA COMMAND GERMANY

1F2 / 8006 / CE MEF INFO GROUP II MEF

1F5 / 8006 / CE MEF INFO GROUP I MEF

1FJ / 8006 / MARFORNORTHCOM NEW ORLEANS

1FV / 8006 / MARCOR INSTALLATION COMMAND, WASHINGTON DC

1FY / 8006 / HQ MARFORSOUTH DORAL FL

1FY / 8006 / HQ MARFORSOUTH DORAL FL

1GF / 8006 / WARFIGHTING LAB

1K1 / 8006 / MARFOR STRATCOM OFFUTT

1K3 / 8006 / EOTG III MEF

1K4 / 8006 / EOTG I MEF

1WL / 8006 / MARINE CORPS LIAISON OFFICE BETHESDA

1WW / 8006 / WOUNDED WARRIOR REGIMENT QUANTICO

442 / 8006 / US PACIFIC FLEET / USNAVCENT PEARL HARBOR

442 / 8006 / US PACIFIC FLEET / USNAVCENT PEARL HARBOR

J02 / 8006 / AIR UNIVERISTY MONTGOMERY AL

J56 / 8006 / NAVAL WAR COLLEGE NEWPORT RI

JAB / 8006 / SNCO ACADEMY CAMP PENDLETON

JBf / 8006 / SNCO ACADEMY CAMP LEJEUNE

JBG / 8006 / SNCO ACADEMY CAMP BUTLER OKINAWA

KA4 / 8006 / TRAIN THE TRAINER SCHOOL CAMP LEJEUNE

QAB / 8006 / HQMC WASHINGTON DC

QAB / 8006 / HQMC WASHINGTON DC

QAB / 8006 / HQMC WASHINGTON DC

QAB / 8006 / HQMC WASHINGTON DC

QAE / 8006 / M&RA DIV HQMC

QAJ / 8006 / C4 DEPT HQMC WASHINGTON DC

QAP / 8006 / P&R WASHINGTON DC

QAP / 8006 / P&R WASHINGTON DC

QAP / 8006 / P&R WASHINGTON DC

QAP / 8006 / P&R WASHINGTON DC

QAQ / 8006 / PP&O

QAQ / 8006 / PP&O

QAQ / 8006 / PP&O

QBN / 8006 / FAMILY READINESS DEPT HQMC

QLA / 8006 / OFFICE OF LEGISLATIVE AFFAIRS

T49 / 8006 / DIR NAV COUNC OF PERS BDS WASHINGTON DC

T49 / 8006 / DIR NAV COUNC OF PERS BDS WASHINGTON DC

T52 / 8006 / OFC OF THE CNO WASHINGTON DC

T52 / 8006 / OFC OF THE CNO WASHINGTON DC

T52 / 8006 / OFC OF THE CNO WASHINGTON DC

T52 / 8006 / OFC OF THE CNO WASHINGTON DC

TCR / 8006 / DET 2 TECHNICAL SERVICES ARLINGTON VA

TDU / 8006 / USA SPACE & MISSILE DEF CMD, ARFORSTRAT, PETERSON AFB

TF4 / 8006 / INSPECTOR GENERAL OF THE USMC ARLINGTON VA

TFQ / 8005 / KUWAIT TECH ASSIST FIELD TEAM MACDILL AFB (8005 BILLET)

TFQ / 8005 / KUWAIT TECH ASSIST FIELD TEAM MACDILL AFB (8005 BILLET)

TJD / 8006 / DTRA ON SITE INSPEC DIRECT EUROPE

TKP / 8006 / US ARMY COMMAND AND STAFF COLLEGE

TLG / 8006 / CMDR EXPEDITIONARY STRIKE GROUP 3 SAN DIEGO

TM6 / 8006 / MCATSU

TMG / 8006 / MARFOR CENTCOM TAMPA

TMG / 8006 / MARFOR CENTCOM TAMPA

TRG / 8006 / MARINE CORPS CYBERSPACE OPEARTION GROUP

APH / 8006 / JTF ODRP CHIEF OPERATIONS DIVISION - PAKISTAN

JOINT / N28 / 7506 / HQ US FORCES KOREA (JT-BIL) YONGSAN

JOINT / NA6 / 7506 / HQ USEUCOM (JT-BIL) STUTGART GERMANY

JOINT / NA6 / 7506 / HQ USEUCOM (JT-BIL) STUTGART GERMANY

JOINT / NA6 / 7506 / HQ USEUCOM (JT-BIL) STUTGART GERMANY

JOINT / N26 / 8006 / NATIONAL SECURITY COUNCIL (WHITE HOUSE)

JOINT / NAG / 7506 / USPACOM (JT-BIL) CAMP SMITH HI

JOINT / NBB / 7506 / EUCOM, JUSMAG (JT-BIL) SPAIN

JOINT / NJN / 7506 / NATIONAL DEFENSE UNIVERSTIY (JT-BIL) NORFOLK VA

JOINT / NBM / 8006 / HQ USSOCOM (JT-BIL) MACDILL AFB FL

JOINT / NJV / 8059 / J8 FORCE STRUCTURE, RESOURCE, ASSESSMENT
(ARLINGTON)

JOINT / T15 / 8006 / J6 DIRECTOR FOR C4 (ARLINGTON)

JOINT / TD4 / 7577 / JOINT ELECTROMAGNETIC PREP FOR ADV COMBT
(NEVADA)

JOINT / NBP / 8006 / HQ USCENTCOM (JT-BIL) MACDILL AFB FL

JOINT / NBR / 7503 / JOINT STAFF J7 (JT-BIL) SUFFOLK VA

JOINT / NBR / 8006 / JOINT STAFF J7 (JT-BIL) SUFFOLK VA

JOINT / NBW / 8006 / JOINT CHIEFS OF STAFFJ5 (JT-BIL) WASHINGTON DC

JOINT / NBW / 8006 / JOINT CHIEFS OF STAFF J8 (JT-BIL) WASHINGTON DC

JOINT / NDS / 8006 / HQ USTRANSCOM (JT-BIL) SCOTT AFB IL
JOINT / NFN / 8006 / HQ US STRATCOM (JT-BIL) OFFUTT AFB NE
JOINT / NGG / 7588 / STRATCOM, JOIC (JT-BIL) SAN ANTONIO TX
JOINT / NSJ / 7505 / STRIKFORNATO (JT BIL) LISBON, PORTUGAL
JOINT / N28 / 8006 / COMBINED FORCES (KOREA / CAMP HUMPHREYS)

Thank you for your input.

We'll do our best to put you in the right assignment with due consideration to your desires, needs of the Marine Corps, and equity among the population. Building the slate over the next two months is a time and a half job. Please be patient. Anxious emails and phone calls don't make your assignment better or result in orders being issued faster. As things firm up, expect an email or phone call to further discuss your next assignment. To help manage expectations, you can expect orders NLT late February; earlier if you're an OCONUS mover.

Submit your survey.

Thank you for completing this survey.

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APPENDIX C. FY20 GROUND OFFICERS MOVERS QUESTIONNAIRE. SOURCE MMOA (2020).

2/18/2020

MAX Survey - FY20 Ground Officers Movers Questionnaire [SCN USMC-MRA-17070]

FY20 Ground Officers Movers Questionnaire [SCN USMC-MRA-17070]

There are 19 questions in this survey.

Contact Information

*

Please enter the best contact information for you: *

Are you a: *

Please choose **only one** of the following:

- ☐ LtCol
- ☐ Maj
- ☐ Maj, Selected for LtCol
- ☐ Capt in zone for Maj CY 19 (Maj Sel)
- ☐ Captain
- ☐ 1stLt
- ☐ 2ndLt

Who is your monitor: *

Please choose **only one** of the following:

- ☐ Combat Service Support LtCol Monitor
- ☐ Combat Arms LtCol Monitor
- ☐ Ground Maj CSS Monitor
- ☐ Ground Maj Combat Arms Monitor
- ☐ Ground Maj Information Monitor
- ☐ Company Grade Infantry Monitor
- ☐ Company Grade Combat Arms Monitor
- ☐ Company Grade Intel / Financial Mgr Monitor
- ☐ Company Grade Logistics / Supply Monitor
- ☐ Company Grade Comm / ComStrat / Cyber Monitor
- ☐ Company Grade Adj / Lawyer / Military Police Monitor

Family Considerations**Do you have an Active Duty or Reserve Spouse? ***

Please choose **only one** of the following:

- ☐ Active Duty Spouse
- ☐ Reserve Spouse
- ☐ No

What branch of service is your spouse? *

Please choose **only one** of the following:

- ☐ USMC
- ☐ Navy
- ☐ Army
- ☐ USAF
- ☐ Coast Guard

Please provide your service spouse's
monitor/detailer/branch manager information: *

*

*

EFMP FAMILY MEMBERS

If you have an exceptional family member, ensure your
medical and educational EFMP documentation is current.

Career Considerations

Which of the following best describes your career objective? *

Please choose **only one** of the following:

☐ LtCol Command and Beyond

☐ Exit service at present grade (resign/retire)

☐ Other

Which is more important to you? *

Please choose **only one** of the following:

☐ Billet Type

☐ GeoLocation

Please rank your GeoLocation preference: *

Please number each box in order of preference from 1 to 6

East Coast

West Coast

Hawaii

Overseas

National Capital Region

OTHER (I&I, MCRC, MARCENT, NORTHCOM, SOUTHCOM, etc.)

Rank your OCONUS preferences: *

Please number each box in order of preference from 1 to 5

Africa

Europe

Pacific

Middle East

South America

Please rank you MSC preference: *

Please number each box in order of preference from 1 to 6

HHQ (MEF/MARFOR/Deputy Commandant)

Div

MLG

Wing

MARSOC

MCRC

What are your top 15 MCCs?

*You must list at least three different GeoLocations

*You must include 2 OCONUS MCCs, 1 of which must be within III MEF to support the Commandant's Planning Guidance.

*You must include 1 OPFOR MCC

*You must include 1 Supporting Establishment MCC

*

Are you interested in a Joint tour? *

Please choose **only one** of the following:

☐ Yes

☐ No

Within the CPG, CMC highlighted instructor duty as a priority. How interested are you in instructor duty? 5 points being very interested. 1 point being not interested at all. *

Please choose the appropriate response for each item:

	1	2	3	4	5
	☐	☐	☐	☐	☐

Additional Comments

Please provide additional information that would be pertinent for your monitor to know (spousal employment considerations; high school child considerations)

Please write your answer here:

12-21-2019 – 08:25

Submit your survey.

Thank you for completing this survey.

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APPENDIX D. FY20 ROTARY WING MOVERS SURVEY. SOURCE: MMOA (2020).

2/18/2020

MAX Survey - FY20 USMC Rotary Wing Movers Survey

FY20 USMC Rotary Wing Movers Survey

Thank you for accessing the FY20 USMC Rotary Wing Movers Survey. Please fill out the fields honestly and completely. Clear and honest responses improve the slating process and will ultimately result in you receiving orders most in line with your priorities. Our intent is to produce an equitable slate, considering the needs of the Marine Corps, career progression, and personal desires.

There are 40 questions in this survey.

Contact Information

*

Current unit: *

Please write your answer here:

Please enter the best contact information for you: *

Who is your monitor: *

Please choose **only one** of the following:

- ☐ Maj Chris "Twister" Denver (RW Majors and Majors-Select)
- ☐ Capt Norm "Face" Holcombe (RW Company Grade)

What is your MOS? *

Please choose **only one** of the following:

- ☐ 7532
- ☐ 7562
- ☐ 7563
- ☐ 7564
- ☐ 7565
- ☐ 7566

Career Considerations

What is your date of rank? *

Please enter a date:

Which of the following best describes your career objective? *

Please choose **only one** of the following:

- ☐ O5 Command and Beyond
- ☐ Promotion to Lieutenant Colonel
- ☐ Promotion to Major
- ☐ Retirement/Resignation as a Captain
- ☐ Other

Which of the following best describes your career objective? *

Please choose **only one** of the following:

- ☐ O5 Command and Beyond
- ☐ Promotion to Lieutenant Colonel
- ☐ Retirement/Resignation as a Major

Do you have any other career-timing considerations (promotion board status, continuation, intent to retire, etc.) that MMOA-2 should consider? Please explain.

Please write your answer here:

Please select the qualifications and designations that you have earned: *

Please choose all that apply:

- ☐ WTI
- ☐ NSI
- ☐ WTO
- ☐ LAT-I
- ☐ TERF-I
- ☐ Division Leader
- ☐ Section Leader
- ☐ Aircraft Commander
- ☐ FCP
- ☐ ASO
- ☐ FAC (7502)

Please list any additional qualifications and designations that you hold:

Please write your answer here:

Is your current unit planning on training you to earn additional qualifications/designations prior to moving next year? *

Please choose **only one** of the following:

- ☐ Yes
☐ No
☐ Not sure

Specify additional qualifications/designations that your unit is planning on training you for prior to departure. *

Please choose **all** that apply:

- ☐ WTI
☐ NSI
☐ WTO
☐ LAT-I
☐ TERF-I
☐ Division Leader
☐ Section Leader
☐ Aircraft Commander
☐ FCP
☐ ASO

When are you projected to earn the new qualifications/designations? *

Please write your answer here:

Have you completed your PME? *

Please choose **only one** of the following:

- ☐ Yes
☐ No

When did you complete your PME? *

Please enter a date:

Are you planning to complete PME? *

Please choose **only one** of the following:

- ☐ Yes
☐ No
☐ Not sure

When are you projected to complete your PME? *

Please enter a date:

Which is more important to you? *

Please choose **only one** of the following:

- ☐ Billet
- ☐ Location

Please rank the following locations:

*

Please number each box in order of preference from 1 to 12

Please choose at least 12 items.

Please choose no more than 12 items.

North Carolina

California

National Capital Region (DC, VA, MD)

Japan

Florida

Texas

Arizona

Middle East

Europe

Korea

Other CONUS (specify in next question)

Other OCONUS (specify in next question)

Optional: Specify actual location(s) for "Other OCONUS" and "Other CONUS" rankings from the previous question.

Please write your answer here:

Please rank the following: *

Please number each box in order of preference from 1 to 5

Please choose at least 5 items.

Please choose no more than 5 items.

PMOS Fleet Flying Tour (primary platform)

PMOS Supporting Establishment Flying Tour (primary platform)

FAC Tour

Staff Billet

Non-PMOS Supporting Establishment Flying Tour (Station, MATSG, etc.)

Are you interested in a Joint tour? *

Please choose **only one** of the following:

- ☐ Yes
☐ No

Are you scheduled to deploy before your next assignment? *

Please choose **only one** of the following:

- ☐ Yes
☐ No

When are you slated to deploy? (Please round to the 1st for OPSEC purposes) *

Please enter a date:

When are you slated to return? (Please round to the 1st for OPSEC purposes) *

Please enter a date:

Have you submitted an official extension request (via AA form through your command) to MMOA-2 asking to extend beyond 30 September 2020? *

Please choose **only one** of the following:

- ☐ Yes
☐ No
☐ Not sure

If your command has submitted an extension request to MMOA-2, please specify the requested SEDD. *

Please enter a date:

If your command has submitted an extension request to MMOA-2, please specify the justification cited on the request (PWTI, deployment, etc.). *

Please write your answer here:

Please fill out your preference list honestly and completely. Units on your preference list must be either an MCC listed on your monitor's vacancy list, an active duty MAG that flies your platform, or a MATSG. If you have submitted an extension request via your current command, you may rank that against possible destinations on your preference list (abbreviation: EXT).

NOTE: For non-MAG/MATSG units, do not write the full unit name. Enter the MCC only.

Example preference list:

1. MAG-29

2. 1TC

3. 1ET

4. EXT

.....

9. MATSG-21

10. 1RT

*

Requested earliest PCS/PCA Date (FY20 On-Cycle begins 1 April 2020 and ends 30 September 2020): *

Please enter a date:

Requested latest PCS/PCA Date (FY20 On-Cycle begins 1 April 2020 and ends 30 September 2020): *

Please enter a date:

Reason for PCS/PCA window (example: deployment timeline, etc.): *

Please write your answer here:

Family Considerations

Do you have an Active Duty or Reserve Spouse? *

Please choose **only one** of the following:

- ☐ Active Duty Spouse
☐ Reserve Spouse
☐ N/A

What branch of service is your spouse? *

Please choose **only one** of the following:

- ☐ USMC
- ☐ Navy
- ☐ Army
- ☐ USAF
- ☐ Coast Guard

Please provide your service spouse's
monitor/detailer/branch manager information: *

*

*

Do you have an exceptional family member? If so, ensure
your medical and educational EFMP documentation is
current. Enrollment is mandatory and is NOT derogatory.
*

Please choose **only one** of the following:

- ☐ Yes
- ☐ No

Additional Comments

Please provide any additional information that would be useful for your monitor to know:

Please write your answer here:

Thank you for submitting your preferences.

02-29-2020 – 12:38

Submit your survey.

Thank you for completing this survey.

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