



## ACQUISITION RESEARCH PROGRAM SPONSORED REPORT SERIES

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### **Identify Cost Savings to the U.S. Naval Officer Dress Uniforms**

December 2019

**LT Amanda Rose, USN**

**LCDR Aerrick L Steinwand, USN**

**LCDR Cindy Suarezvillafane, USN**

Thesis Advisors: Dr. Ryan S. Sullivan, Assistant Professor  
Don E. Summers, Senior Lecturer

Graduate School of Defense Management

**Naval Postgraduate School**

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Prepared for the Naval Postgraduate School, Monterey, CA 93943.



The research presented in this report was supported by the Acquisition Research Program of the Graduate School of Defense Management at the Naval Postgraduate School.

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## ABSTRACT

Due to excessive purchase and maintenance costs of naval dress uniforms, our team utilized a cost-benefit analysis approach to analyze each component of the four dress uniforms to identify cost savings. We examined the dress uniform history, implementation, and the prescribed manner of wear to identify components that could be eliminated, changed, modified or cross utilized. We created a survey and received 185 complete responses from Naval Postgraduate School naval officers. More than 45% of respondents spent over \$2,000 on dress uniforms in their career, with the average years of service equating to 7.58 years. Officers receive an inadequate initial clothing allowance, that only covers an average of 73% of the mandated uniform costs. Our team identified two courses of action that result in cost savings. Replacing embroidered rank and service designator with hard shoulder boards, results in an average cost savings of \$112.00 per uniform and provides a single rank and service designator device that can be cross utilized with multiple uniforms. At retirement we estimate total cost savings of \$873.00 for males and \$1,160.67 for females. Eliminating the dinner dress white jacket results in an immediate cost savings of \$211.58 for males and \$331.40 for females. We recommend these cost savings be considered for adoption by the Navy's Uniforms Matters Office and special initial clothing monetary allowance be increased to cover mandated uniform purchases at commissioning.



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## ACKNOWLEDGMENTS

Our research team would like to acknowledge our advisors, faculty, classmates, and families for their unwavering support with this project. To our advisors, Dr. Ryan Sullivan and Professor Don Summers, thank you for helping us complete a well-rounded project we are proud of. This would not be possible without your expert guidance and advice. Additionally, we would like to thank the Navy Exchange Services Command (NEXCOM), specifically Navy Clothing Textile and Research Facility, for providing our team with valuable data necessary for our research. Finally, we would like to thank Men's Wearhouse, specifically Ms. Carrie Ask, for allowing our team to explore their pristine rental business practices.

Cindy would like to thank her amazing thesis partners, Aerrick and Amanda, for pursuing this endeavor that we share a common passion for. She would also like to thank her family for their love and support through the long hours away from home while completing this MBA project. She would like to dedicate her work to her sons, Logan, Xavier, and Kai—never stop pursuing your dreams!

Aerrick would like to first and foremost thank God for giving him the ability and opportunity to complete this project. He would also like to thank his partners, Cindy and Amanda, for their friendship, professionalism, and commitment toward completion of this project. Additionally, he would like to express the utmost gratitude to his family—Jennifer, Marlee, and Brycen—for their steadfast support, love, and perseverance through this strenuous process.

Amanda would like to thank God for giving her this opportunity to complete her second master's degree. She would like to thank her incredible thesis partners who have become great friends and mentors for the rest of her career. Furthermore, she would like to thank her amazing fiancé, Vincent Benites, for his love, support, and encouragement through this time with her thesis. Lastly, she would like to thank her father for inspiring her to pursue a career in the Navy, and her mother and sister for their love and encouragement during her time working on her MBA.



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## LIST OF ACRONYMS AND ABBREVIATIONS

AUD	Australian Dollars
COA	course of action
CPO	chief petty officer
CRA	clothing replacement allowance
DC	Distribution Centers
DFAS	Defense Financial Accounting Services
DoD FMR	Department of Defense Financial Management Regulation
LDO	Limited Duty Officer
MW	Men's Wearhouse
MWR	Morale, Welfare, and Recreation
N13X	Uniform Matters Office
NAPS	Naval Academy Preparatory School
NAVPERS	Navy Personnel Command
NAVSUP	Navy Supply Systems Command
NCTRF	Navy Clothing and Textile Research Facility
NEX	Navy Exchange
NEXCOM	Navy Exchange Service Command
NPS	Naval Postgraduate School
NS	Naval Station
OCS	Officer Candidate School
ODS	Officer Development School
OPNAV	Chief of Naval Operations
PCS	permanent change of station
ROTC	Reserve Officer Training Corps
ROI	return on investment
UPMO	Uniform Program Management Office
USA	United States Army
USAF	United States Air Force
USD	United States dollar
USD(C)	Office of the Under Secretary of Defense, Comptroller



USMC

United States Marine Corps

USN

United States Navy

USNA

United States Naval Academy



## I. INTRODUCTION

The United States Navy (USN) is plagued with an abundance of mandated uniforms. Currently, naval officers have a total of four dress uniforms: service dress blue, service dress white, dinner dress blue, and dinner dress white. Service dress uniforms are mandated for all officers, while the dinner dress uniforms are prescribed for lieutenant commanders and above, but optional for lieutenants and below. For the majority of naval officers, these uniforms are seldom worn, but the costs to purchase and maintain these uniforms can be substantial over time. The Department of Defense has made significant recent strides in alleviating the financial burden imposed on naval officers by increasing the special initial clothing monetary allowance in May 2018 from \$1,017.40 to \$1,862.21 for males, a 45% increase, and from \$1,330.10 to \$2,030.48 for females, a 34% increase (Navy Exchange, 2019e). The combined purchase cost for both blue and white service dress uniforms for a male is currently \$1,054.51, and for females is \$1,006.17 (Navy Exchange, 2019e). Of the two dress uniforms, one is required to purchase at initial training, the percentage utilized from the special initial clothing monetary allowance equates to 57% for males and 50% for females; however, the cost of these two uniforms compared to the total costs of required uniforms equates to only 40% for males and 38% for females. We identified that officers receive an inadequate special initial clothing monetary allowance, that only covers 71% for males and 76% for females of the mandated uniform costs.

In comparison to our sister services, the Navy leads the way in the number of uniforms mandated for wear. Army, Air Force, and Marine Corps uniform guidance authorizes a single year-round service dress uniform, with variations, to accommodate both working environments and more formal occasions. Additionally, all other services prescribe a single dinner/mess jacket, while the Navy has two separate dinner dress jackets with different components, creating unnecessary costs. Furthermore, shipboard operational units have limited storage space for uniforms and personal items. Exploring the potential reduction of the number of required uniforms to give sailors more space has the potential to increase morale during arduous deployment cycles.



Although there have been previous working uniform studies (Dungey, Mohan, & Flores, 2018; Hicks, House, & Styer, 2018; Wharton, 2017), this is the first study that focuses solely on service and dinner dress uniforms. In this study, we use a cost–benefit analysis approach to analyze each component of the four dress uniforms to identify cost savings for naval officers’ uniforms. Additionally, we explore potential uniform changes and evaluate the benefits of modifying or deleting uniforms and components. This leads to our two primary research questions: What are the potential cost savings opportunities for the four prescribed U.S. naval officers’ dress uniforms? Can uniforms be modified or eliminated to provide additional cost savings to naval officers?

Our course of action is to identify potential variations of dress uniforms that could be modified for cross-utilization among multiple uniforms. Specifically, we intend to provide net benefits of eliminating all line designator and rank insignia striping, as well as other uniform items, effectively reducing costs to naval officers. We explore the opportunity, probability, and availability to implement the following courses of action (COAs):

- COA 1: Provide an annual uniform allowance for naval officers.
- COA 2: Eliminate the white dinner dress jacket.
- COA 3: Eliminate line designator and rank striping on service and dinner dress jackets and replace with shoulder boards.
- COA 4: Explore a dress uniform rental option.

Our team created a survey and distributed it to naval officers of all ranks, assigned as students to Naval Postgraduate School (NPS). We received 193 responses of which only 185 fully completed the survey. Preliminary results of the survey indicate that more than 45% of respondents spent over \$2,000 on dress uniforms and components in their careers, with respondents averaging 7.58 years in service. More than 60% of respondents have not purchased the dinner dress white uniform, and more than 20% of the respondents that have purchased the uniform have not worn it in the past year or more. Moreover, almost 45% of respondents would be interested in the possibility of a rental service option for dress uniforms. These preliminary results indicate that naval officers are encountering expenses for uniform items they have no need for or which they rarely utilize.



We break down our study into five chapters. Chapter I of our thesis provides an introduction, presents our primary research question, and identifies the courses of action we analyzed. Chapter II provides a detailed history of naval dress uniforms, shows current uniform monetary allowances for service members, and contains a literature review of the following major U.S. Navy uniform stakeholders: Navy Exchange Service Command (NEXCOM), Navy Personnel Command (NAVPERS), Office of the Under Secretary of Defense, Comptroller (USD[C]), and naval officers. Chapter III provides a cost-benefit analysis, survey results, methodology, and in-depth analysis of our survey and research. Chapter IV explores the viability of a potential organic or contracted rental option for dress uniforms. Finally, Chapter V presents a summary of our findings, provides a conclusion, answers the research questions, and provides sound recommendations for future Navy uniform policies.



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## II. LITERATURE REVIEW

### A. BACKGROUND AND HISTORY

In 1776, the Continental Congress implemented the first standard uniform for naval officers. This uniform was quickly criticized and rejected by naval officers (Naval History and Heritage Command, 2017a). Several hundred years later, we find that uniform changes still plague the U.S. Navy. Sailors demand that uniforms be functional in a continuously dynamic environment, but military bureaucracy is slow to accept and implement changes.

The Naval Committee issued the initial uniform instruction on September 5, 1776. This instruction gave officers the provision to wear uniforms based on rank, which included captain, lieutenant, masters, and midshipman. The naval officer uniforms have changed multiple times since then. In the initial uniform instruction, naval officers were mandated to wear only one specified uniform for all occasions. Figure 1 shows the specified uniform, which consisted of a blue cloth jacket with a round or slash cuff based on rank, red lapels, stand up collar, yellow buttons, and blue trousers with a red waistcoat (Naval History and Heritage Command, 2018).



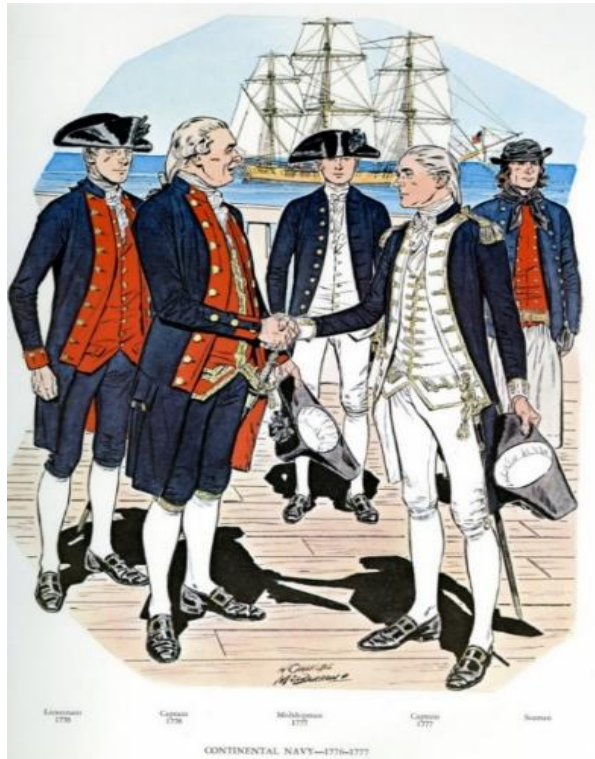


Figure 1. Captain John Paul Jones with Other Officers and Midshipmen, 1777. Source: Naval History and Heritage Command (2018).

Before 1852, the Navy allowed white vests and pants to be worn in warm weather months; however, the white service dress jacket was not officially adopted until 1852. The addition of the white service dress jacket commenced the differentiation of summer and winter service dress uniforms. Along with the adoption of the service dress white jacket, the Navy also implemented shoulder straps for commissioned officers, which displayed their rank, similar to the shoulder boards worn on today's uniforms (Naval History and Heritage Command, 2017b). Figure 2 shows the white service dress jacket with shoulder straps that was authorized in 1852.





Figure 2. First U.S. Navy Service Dress White Jacket and Rank Shoulder Strap, 1852. Source: Naval History and Heritage Command (2017b).

The original naval officers' evening dress uniforms were established in 1866 to be worn at formal social events. The uniform consisted of a blue jacket to be worn with either white or blue pants. The differentiation of summer and winter evening dress uniforms began in 1901 when the uniform was expanded to include a white jacket. No significant changes were made to the service or evening dress uniforms until after World War II. In 1947, a uniform instruction was released omitting the use of evening dress uniforms and provided guidance to Navy personnel stating that "the blue and white service uniforms were to be used for the formal occasions" (Naval History and Heritage Command, 2017c). The evening dress uniforms were restored under the uniform regulations released in 1951 and are now referred to as dinner dress uniforms (Naval History and Heritage Command, 2017d).

In 1948, Congress authorized women to serve in full capacity in the Navy (Naval History and Heritage Command, 2017c). Simultaneously, evening dress blue uniforms for female officers were authorized, followed by the white evening dress uniform in 1963 (Naval History and Heritage Command, 2017d). Except for small modifications in components, the female dinner dress uniforms have largely remained unchanged. These uniform changes are displayed in Figure 3. In 2015, the Navy Personnel Command released a directive changing the female service dress white uniform to more closely resemble the prescribed male white service uniform.



Figure 3. U.S. Navy Dinner Dress Blues in 1967. Source: Naval History and Heritage Command (2017d).

Today, naval officers have four dress uniforms mandated to be worn at multiple occasions throughout their careers. The mandated uniforms are the service dress white and blue, and dinner dress white and blue. When prescribed by the Navy region commander,

the service and dinner dress white uniforms are worn during the summer months, and the service and dinner dress blue uniforms are worn during winter months. However, the service dress blue uniform is authorized to be worn year-round to official functions as prescribed. Service dress uniforms are equivalent to a civilian coat and tie dress code. The dinner dress uniforms are worn for official functions and are comparable to civilian black tie or white tie dress code. The dinner dress uniforms are mandated for lieutenant commanders and above, while optional for lieutenants and below (United States Navy, 2018). Figures 4 through 7 show the current naval officer service dress uniforms and formal and dinner dress uniforms for males and females.



Figure 4. Male Service Dress Blue and White Uniforms. Source: United States Navy (2018).



Figure 5. Female Service Dress Blue and White Uniforms. Source: United States Navy (2018).



Figure 6. Male Formal and Dinner Dress Blue and White Uniforms. Source: United States Navy (2018).



Figure 7. Female Formal and Dinner Dress Blue and White Uniforms. Source: United States Navy (2018).

## B. CHANGE IN MILITARY SOCIAL NORMS

Throughout naval history, dating back to the Revolutionary War, naval officer uniforms represented society's expectations of a higher standard of conduct, education, and tradition. At that time, male officers generally came from wealthy socioeconomic backgrounds, and their "uniforms identified the wearer as a gentleman of the maritime profession" (Naval History and Heritage Command, 2017a). Today, we no longer see a significant division in social status backgrounds among naval officers, as the Navy strives to increase the diversity in accessions to more accurately reflect the demographics of society at large. Countless naval officers are entering the military services via multiple channels, many of which commission with established families, large amounts of college debt, and other financial obligations.

Other changes to social norms have increased the push for gender-neutral, unisex uniforms. Recently the female Navy uniforms have undergone updates to the service dress white jacket, pants, and the combination cover to closely resemble or match the male uniforms (Bureau of Personnel Command, 2015). Continuous uniform changes create an undue financial burden, most recently for female naval officers, without the availability of reimbursement in the form of an annual or special allowance to mitigate the cost to the service member.

### **C. UNIFORM ALLOWANCES**

Naval officers rarely wear their dress uniforms, and the costs associated with them may be viewed as excessive with the purchase price of one service dress uniform ranging from \$620.00 for females to \$675.00 for males. Unlike enlisted service members, officers do not receive an annual clothing replacement allowance (CRA).<sup>1</sup> Naval officers commissioning from either Officer Candidate School (OCS) or Limited Duty Officer (LDO) School are entitled only to a special initial clothing monetary allowance. Per the Department of Defense Financial Management Regulation (DoD FMR), the current entitlement rate for females in the U.S. Navy is \$2,030.48 and \$1,862.21 for males (Office of the Under Secretary of Defense [Comptroller], 2019b). This initial monetary clothing allowance is similar to other services in the DoD. Table 1 shows the initial clothing allowances authorized for members of the U.S. Navy according to the DoD FMR.

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<sup>1</sup> U.S. Navy senior enlisted members (E-7 to E-9) receive a CRA yet are mandated to wear the same dress uniforms as U.S. naval officers.



Table 1. Special Initial Clothing Monetary Allowance. Source: Office of the Under Secretary of Defense (Comptroller; 2019b).

R U L E	A	B	C	D	E
	When an entitled enlisted member is	and is	then the total value of the Special Initial Clothing Allowance is	and the prescribed cash payment portion to be paid is	and the Partial Initial Clothing Allowance for a member of the Reserves or Guard called to active duty is
1	in pay grade E-6 or below and assigned to the U.S. Navy Band, Washington, DC, or the U.S. Naval Academy Band, or selected for appointment as a Limited Duty Officer in the Navy	male	\$1,044.13	\$1,044.13	\$0
2		female	\$1,095.12	\$1,095.12	\$0
3	eligible to wear the uniform of a chief petty officer (E7-E9) (See Note)	male	\$1,044.13	\$1,044.13	\$522.07
4		female	\$1,095.12	\$1,095.12	\$547.56
5	selected for officer training in the Navy and enters Officer Candidate School, the Enlisted Commissioning Program, or the Seaman to Admiral Program	male	\$1,862.21	\$1,862.21	\$0
6		female	\$2,030.48	\$2,030.48	\$0
7	a direct civilian accession student to the Air Force Officer Training School (OTS)	male	\$928.00	\$928.00	\$0
8		female	\$1,201.41	\$1,201.41	\$0
9	an enlisted accession student to the OTS	male	\$388.92	\$388.92	\$0
10		female	\$388.92	\$388.92	\$0
11	assigned to the U.S. Air Force Academy Preparatory School	male	\$1,020.43	\$1,020.43	\$0
12		female	\$1,020.43	\$1,020.43	\$0

While the initial entitlement helps defray purchase the costs, it does not cover the remaining expenses for all mandated uniforms and components upon commissioning. When accounting for the cost of all required uniforms and components including service dress blue and white, summer whites, two sets of service khakis, two sets of the Navy working uniform type III, and two sets of the Navy physical training uniform, the service member is left with a debt of \$760.28 for males and \$648.60 for females. Table 2 shows the breakdown of costs after mandated uniforms have been purchased with the initially authorized clothing allowance. Based on the high cost and life expectancy of the dress



uniforms, we analyze and recommend whether the Navy should pursue providing an annual clothing allowance to naval officers.

Table 2. Initial Uniform Entitlement Minus Mandated Uniform Costs. Adapted from Office of the Under Secretary of Defense (Comptroller; 2019b); Navy Exchange (2019e).

Uniform	Female	Male
Special Initial Clothing Monetary Allowance	\$2,030.48	\$1,862.41
Service Dress Blues	(\$619.94)	(\$675.61)
Service Dress Whites	(\$386.23)	(\$378.90)
Summer Whites (2)	(\$181.06)	(\$63.90)
Service Khaki (2)	(\$323.44)	(\$317.64)
Navy Working Uniform (3)	(\$536.41)	(\$536.41)
Navy Physical Training Uniform (2)	(\$228.58)	(\$228.58)
Accessories	(\$72.16)	(\$72.16)
Outerwear	(\$331.26)	(\$349.49)
Total Delta	(\$648.60)	(\$760.28)

Note 1: The combination cover, black shoes, black dress socks, and white undershirts are accounted for under the service dress blue uniform cost. The combination cover is interchangeable with the service dress white uniform; other uniform components are interchangeable with the service khaki uniform. For males, the black belt and belt buckle cost is accounted for under the service dress blue uniform. Female service dress blue uniform trousers are unbelted.

Note 2: The white dress shoes, white dress socks, and hard shoulder boards are accounted for under the service dress white uniform cost, and components are interchangeable with the service white uniform. Female service dress white uniform trousers are unbelted.

Note 3: Insignia and shoulder board costs accounted for at the O-1/Ensign rank. Collar rank insignias prices range from \$5.49–\$21.03. Cover rank insignia prices range from \$21.11–\$36.65. Hard shoulder board prices range from \$40.31–\$76.42. Soft shoulder boards prices range from \$14.05–\$65.51. Rank ranges from O-1/Ensign to O-10/Admiral.

Note 4: Not accounting for any ribbons, medals, or metal breast insignias.

Note 5: Calculations were made per the number of uniforms issued at Officer Candidate School.

#### D. OTHER SERVICES' UNIFORMS

By comparison, the dress uniforms of the Navy's sister service, the United States Marine Corps (USMC), consist of one dinner dress uniform, which includes one blue jacket with interchangeable components depending on formality of the event, white or black tie. Their service dress equivalent to the Navy's consists of one blue jacket with interchangeable trousers dependent upon the season (U.S. Marine Corps, 2018). Overall,



USMC officers have fewer uniforms and components than are currently mandated for naval officers.

Unlike the USN and USMC, United States Air Force (USAF) officers are prescribed one year-round service dress uniform with different variations that are interchangeable with working uniforms, equivalent to the U.S. Navy service khaki uniform. Their mess dress uniform is mandatory for all officers and comparable to the U.S. Navy dinner dress uniforms (Department of the Air Force, 2019). Likewise, as of August 2019, United States Army (USA) officers are also prescribed a single year-round service dress uniform with different variations ranging from modified service dress to a dinner dress alternative when a bowtie is added. The Army uniform instruction, AR 670-1, does not mandate the wear of the dinner dress uniform, but it is highly encouraged upon promotion to the rank of major (O-4; Department of the Army, 2015). Like USN officers, USA, USMC, and USAF officers receive a minimal initial uniform allowance and do not receive an annual uniform allowance (Office of the Under Secretary of Defense [Comptroller], 2019b). Table 3 shows the formal and dinner dress uniform service equivalent uniforms.<sup>2</sup>

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<sup>2</sup> To compare with an ally foreign service, according to the Australian Government Department of Defence, their officers are not given an initial clothing allowance but are issued a complete set of uniforms upon their commission. Officers in permanent forces (active and reserve) receive an annual uniform allowance of AUD\$682 (~USD\$1,011; Australian Government Department of Defence, 2019).





Table 3. U.S. Services Formal and Dinner Dress Uniforms. Source: Navy Personnel Command (NAVPERS, 2019b).

<b>FORMAL AND DINNER DRESS UNIFORM</b>					
<b>NAVY</b>	<b>MARINE CORPS</b>	<b>ARMY</b>	<b>AIR FORCE</b>	<b>COAST GUARD</b>	<b>WHEN WORN</b>
Formal Dress	Evening Dress	Blue Mess/ Evening Dress Green Dress (Enl. Only)	Formal Dress	Formal Dress	Official formal evening functions, state occasions
Dinner Dress Blue Jacket	Evening Dress Blue	Mess	Mess Dress, Blue	Dinner Dress Blue Jacket	Social functions of general or official nature
Dinner Dress White Jacket	Evening Dress White	Mess	Mess Dress, Blue	Dinner Dress White Jacket	Private formal dinners, dinner dances, club affairs
Dinner Dress Blue	Dress Blue "A"	Army Blue (Bow Tie)	Service Dress	Dinner Dress Blue	Same as Dinner/Mess but less formal
Dinner Dress White	Dress Blue "A"	Army White (Bow Tie)		Dinner Dress White	Occasions requiring more formality than service uniforms but not a bow tie

## **E. STAKEHOLDERS**

Numerous Navy uniform changes throughout the past decade attempted to modernize the fleet appearance and address the warfighter’s needs to align with conflicts in the Middle East. However, other than the recent female uniform changes meant to achieve a gender equality appearance, there have been no significant changes to Navy dress uniforms since 1967. In the next section, we discuss the stakeholders that have standing on the design, testing, distribution, changes, and approval of naval officers’ dress uniforms.

### **1. Navy Exchange Service Command**

The Navy Exchange Service Command (NEXCOM) is an Echelon II command, falling under Naval Supply Systems Command (NAVSUP). NEXCOM oversees the Uniform Program Management Office (UPMO), the Navy Clothing and Textiles Research Facility (NCTRF), and the Navy Exchange (NEX) Retail Stores and Services regarding



uniform matters (Naval Supply Systems Command [NAVSUP], 2019). Each of these offices plays a distinct role in the uniform process.

UPMO is responsible for recommending uniform policy changes to the chief of naval operations (OPNAV). UPMO introduces any new or modified uniforms to the fleet for the initial rollout. Additionally, their mission is to improve uniform fit, availability, and longevity for the service member. UPMO coordinates uniform matters among the multiple stakeholders listed in this section (Navy Exchange, 2019f).

NCTRF, located in Natick, MA, is tasked by UPMO to conduct design development and testing of fabrics for all U.S. Navy uniform recommendations (Navy Exchange, 2019b). Our thesis team visited NCTRF as part of our research. We observed three different teams that include clothing designers, textile technologists, and a physiologist, who work together to create optimal uniforms for the fleet. NCTRF clothing designers print and sew an initial uniform prototype to ensure proper uniform fit and design. The textile technologist tests the fabric for durability and discoloration. Finally, the physiologist uses simulation manikins to perform human-like physiological testing, including water, fire, and sweat testing.

Upon completion of uniform testing, approval, and wear policy promulgation, service members can purchase uniform items from the NEX (Navy Exchange, 2019c). The NEX oversee the fitting and issuing of uniforms at both enlisted and officer accession facilities, the Recruit Training Command located in Great Lakes, IL, and Officer Candidate School in Newport, RI. They also offer additional services such as dry cleaning and tailoring at many fleet concentration locations (Navy Exchange, 2019c).

## **2. Naval Personnel Command**

Navy Personnel Command (NAVPERS) reports to OPNAV, which is composed of the highest-ranking U.S. Navy leadership and policy-makers. NAVPERS is responsible for all areas relating to the U.S. Navy's personnel matters, including the Uniforms Matters Office (N13X). This office generates, maintains, updates, and distributes all instructions and regulations regarding uniform policies (NAVPERS, 2019a). The primary Navy uniform instruction is the U.S. Navy Uniform Regulation (NAVPERS 15665I). This



regulation provides service members with grooming standards, uniform components, and rules regarding the manner of wear for all uniform items (NAVPERS, 2019b).

### **3. The Office of the Under Secretary of Defense (Comptroller)**

The Office of the Department of Defense (Comptroller) office was created after World War II to advise the secretary of defense on all defense financial matters and is responsible for the development and execution of the Department of Defense's budget (The Office of the Under Secretary of Defense [Comptroller], 2019a). The comptroller publishes all financial rules for the Department of Defense via the Department of Defense Financial Management Regulation (DoD FMR), which details military pay and allowance policies. The DoD FMR promulgates guidance to Defense Financial Accounting Services (DFAS) to issue pay entitlements to service members, which includes uniform allowances (The Office of the Under Secretary of Defense [Comptroller], 2019b).

### **4. Naval Officers**

All naval officers have standing on uniforms, as they solely hold the burden of purchasing, maintaining, and updating their uniforms. Although some uniforms are only mandated for occasional wear, naval officers are expected to have all uniforms readily available. Costs among officers can differ significantly and create financial hardships due to multiple external factors such as manner of wear, individual care, weight fluctuation, uniform discoloration, maternity, and uniform policy changes. Furthermore, personal storage onboard naval vessels is limited, and the number of uniforms required to be taken on deployments exceeds space available in living quarters.



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### **III. DATA ANALYSIS**

#### **A. SURVEY RESULTS**

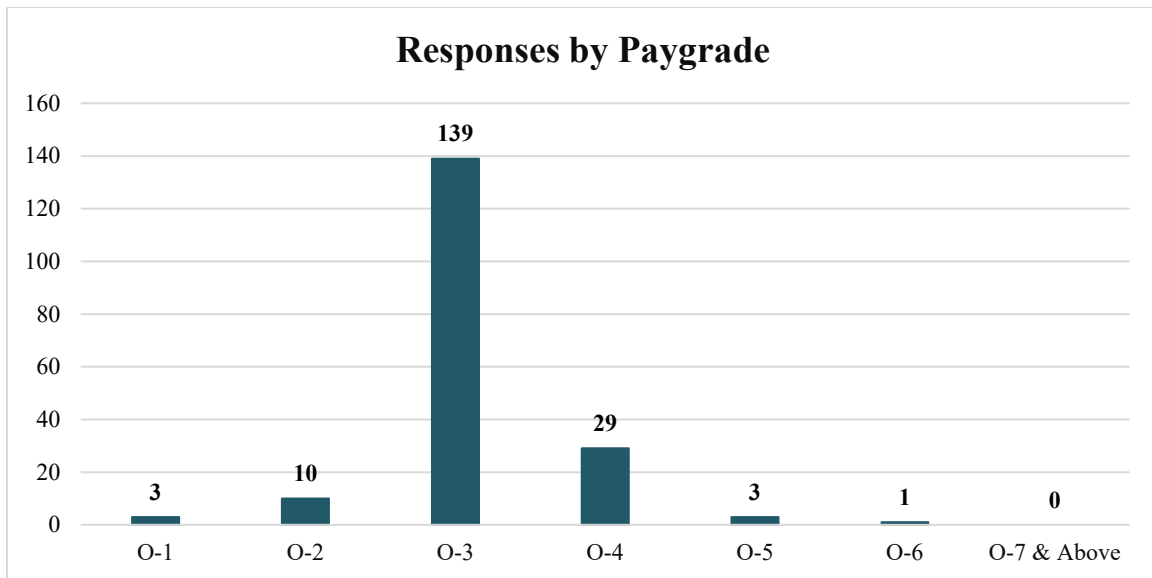
Our team conducted a 12-question online survey regarding the usage and expenses concerning naval officer dress uniforms; the survey can be found in the Appendix. Our survey produced a response rate of 28%. We sent out a total of 696 surveys to Navy officer students at NPS, receiving 193 responses, with eight not fully completed. The goals of our survey were to obtain a sample size of naval officers who have purchased the naval dress uniforms and collect data regarding their utilization rate and costs associated with those specific uniforms.

The first four questions addressed the demographic details of the service member completing the survey: paygrade, officer commissioning source, service community, and years of service. The methodology for obtaining demographic data was selected to ensure that a variation of the population sample captures naval officers across the different lines of service, including staff corps, unrestricted line, and restricted line. Other demographic questions asked for the range in military ranks, years of service, and commissioning source. Questions 5 through 8 pertained to the utilization and frequency of wear of the four dress uniforms. Question 9 asked the number of times dress uniforms required replacement throughout an officer's naval career. The next two questions pertained to uniform expenses. We asked how much was spent in the last three years on dress uniforms and components, as well as how much was spent on dress uniforms throughout their naval career. Finally, our last question surveyed the service member on their likelihood of using a rental option for dress uniforms if it were available.

##### **1. Demographics**

Most NPS students are lieutenants (O-3) and lieutenant commanders (O-4). The next largest group is lieutenant junior grades (O-2), followed by commanders (O-5) and ensigns (O-1). Figure 8 shows the naval officers' response by paygrade.



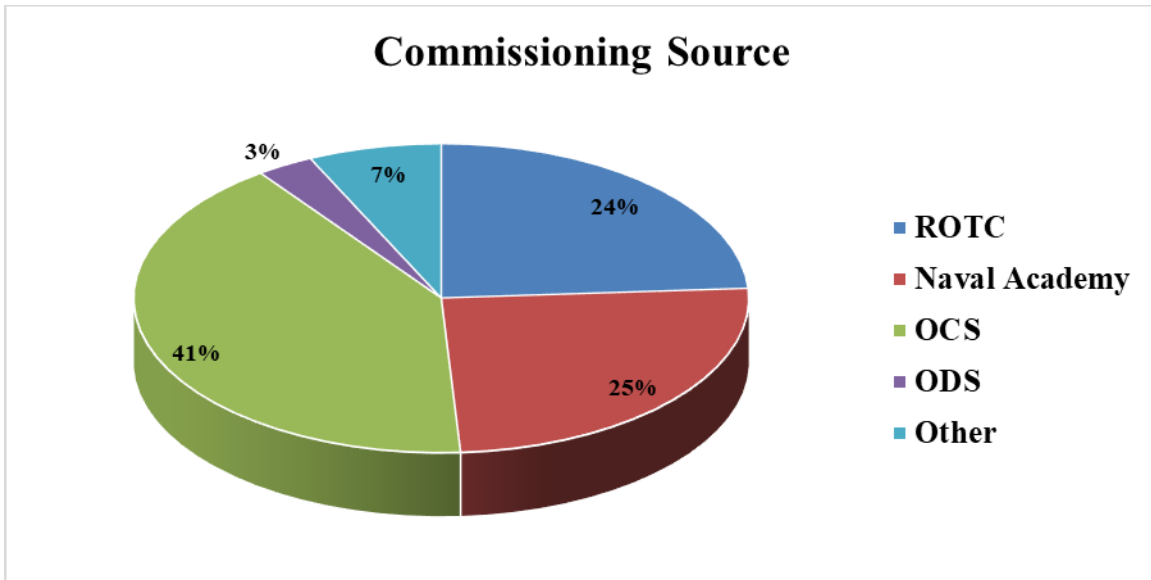


N = 185

Figure 8. Naval Postgraduate School Survey Responders by Paygrade.

Naval officers obtain their commissions through various accession programs. Our survey asked respondents their source for commissioning due to slight differences in uniforms issued at each program. For example, United States Naval Academy (USNA) graduates have dinner dress uniforms issued as part of their initial set of uniforms, while other commissioning programs such as Officer Candidate School (OCS), Reserve Officer Training Corps (ROTC), and Officer Development School (ODS) do not issue them. Currently, this uniform is mandated for wear when promoted to the rank of lieutenant commander and is an optional uniform for lieutenants and below. The commissioning source of those who responded were primarily from OCS, USNA, and ROTC at 41%, 25%, and 24%, respectively. Figure 9 displays the respondents' commissioning sources.



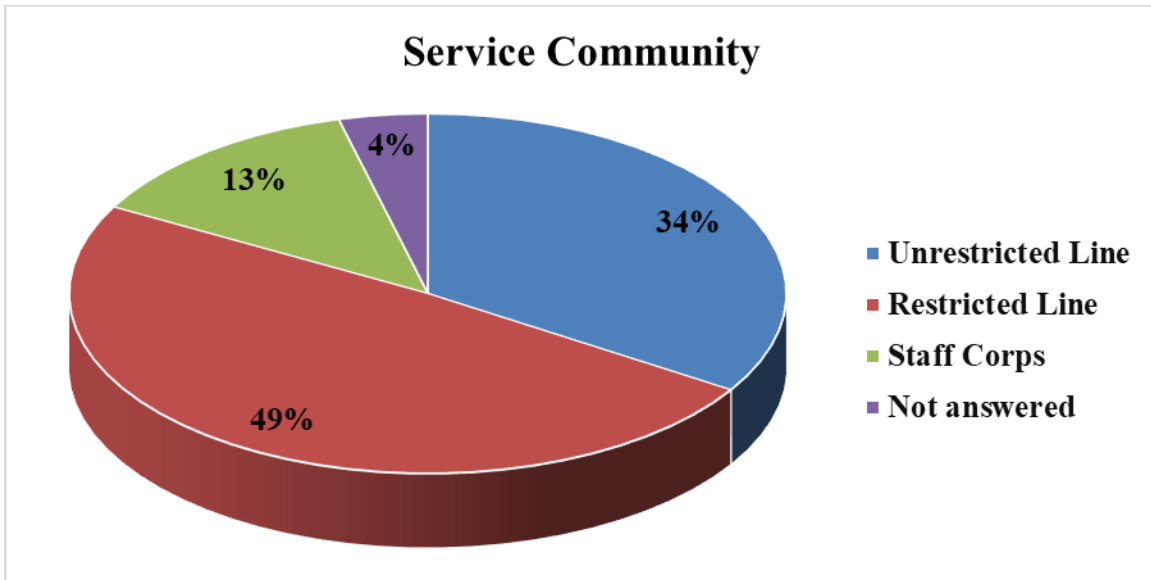


N = 185

Figure 9. Naval Postgraduate School Survey Responders by Commissioning Source.

The U.S. Navy has four officer service communities: line, staff, limited duty, and warrant. For our survey, we excluded limited duty and warrant officers because there are no students at NPS represented from those communities. Service communities are broken down into more specific service designators. For example, the unrestricted line officers designator includes surface warfare, aviation, submarine, and special warfare officers. The restricted line designator includes engineering duty, aerospace engineering duty, aerospace maintenance duty, naval intelligence, foreign area, public affairs, oceanographer, information professional, cryptologic, information operations, and human resource officers. The Staff Corps designator includes supply, medical, judge advocate, chaplain, and civil engineers. Due to differences in usage rates within each community, we designed question 3 to ensure we captured data across service communities. Our survey results consisted primarily of unrestricted and restricted line officers (33% and 49%, respectively). Figure 10 provides a breakdown of respondents by service community.





N = 185

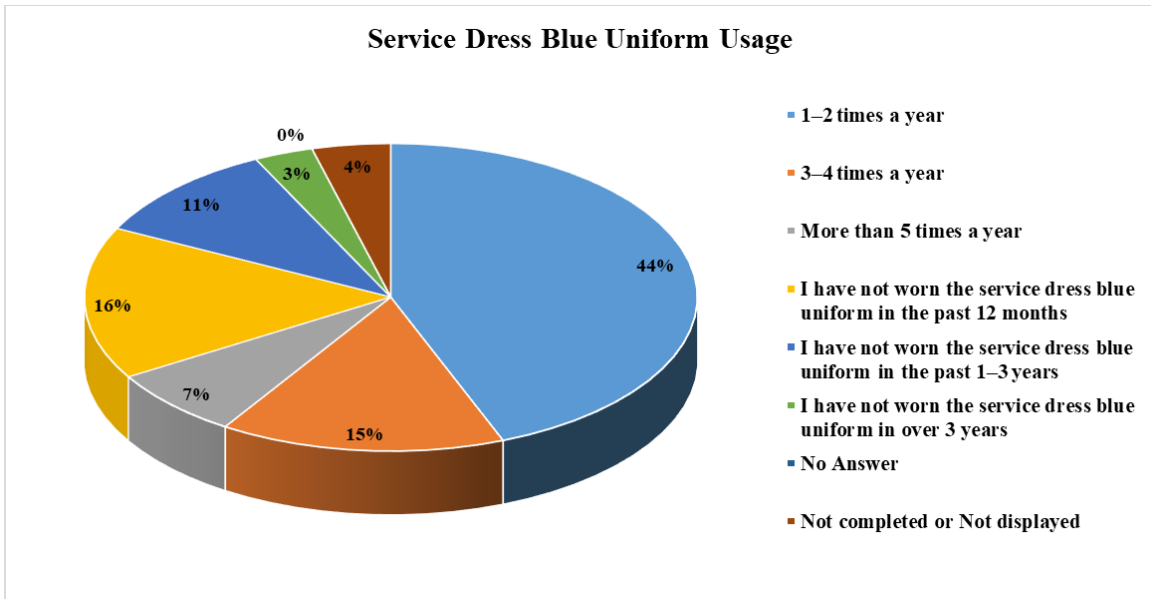
Figure 10. Naval Postgraduate School Survey Responders by Service Community.

## 2. Uniform Usage, Replacement, and Cost

We looked at the number of times a naval officer has worn each dress uniform and how much he or she has spent on those uniforms throughout his or her naval career. For our study, we intended to determine whether there is a correlation between uniform utilization rate, purchase cost, and upkeep. The objective is to calculate a value for the uniform as well as determine whether there is a definite or useful purpose for each uniform based on usage.

First, we looked at uniform usage among our survey population. We found that the service dress blue uniform was the most utilized dress uniform, with 68% of respondents claiming an average usage rate of at least one time per year. Figure 11 shows the breakdown by the usage rate of the service dress blue uniform.

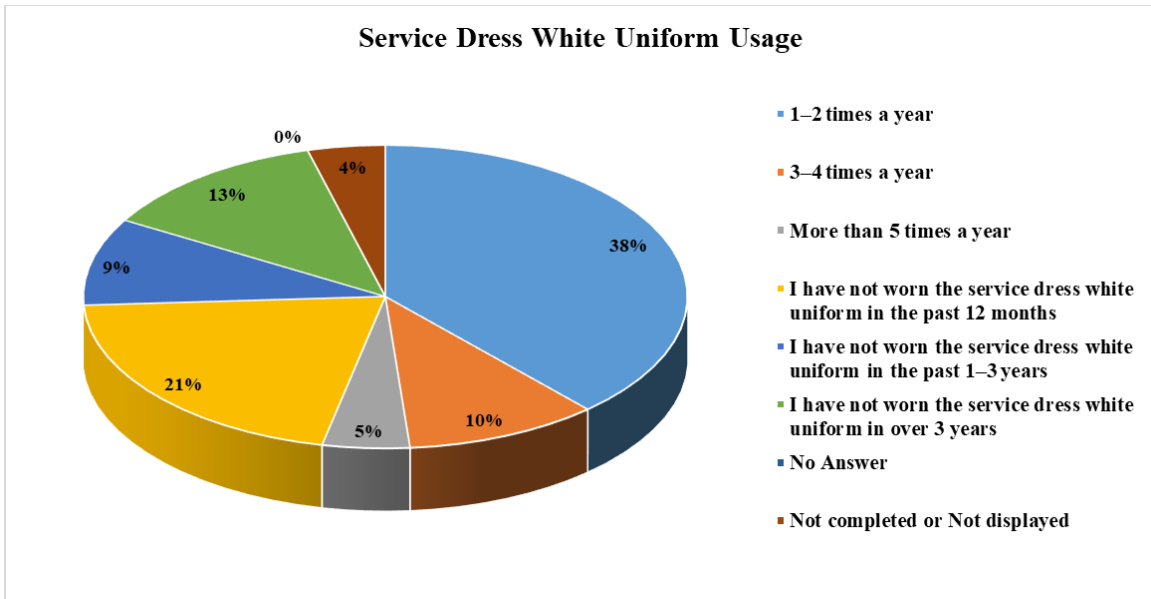




N = 185, 0% is for no answer

Figure 11. Naval Postgraduate School Survey Responses for Service Dress Blue Uniform Usage.

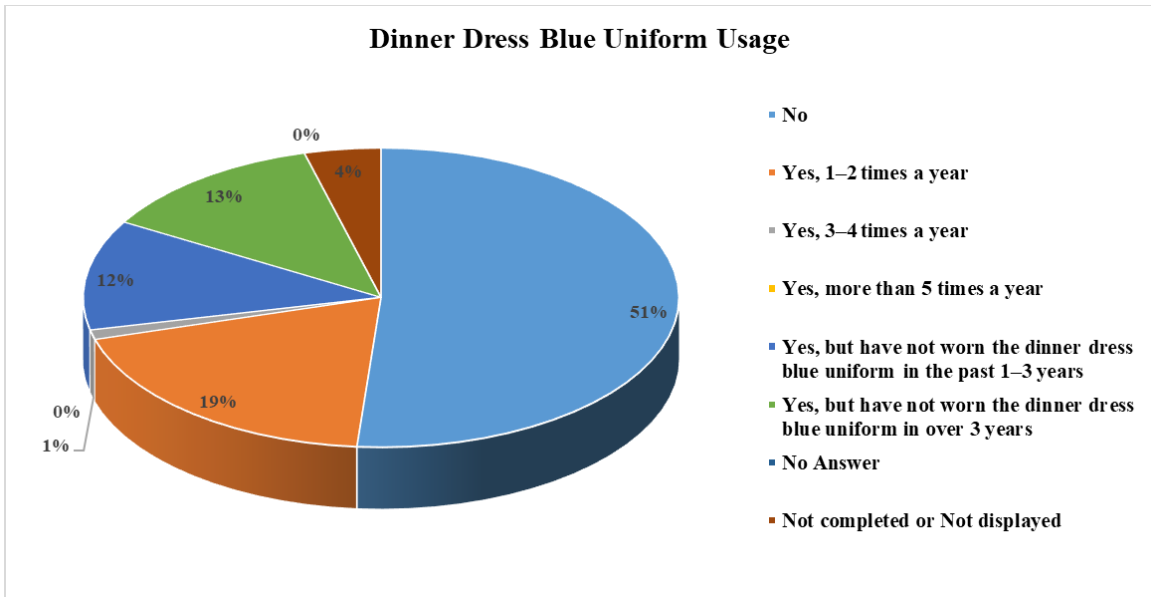
Our survey respondents confirmed our preliminary hypothesis that the service dress white uniform is extremely underutilized compared to the usage rate of the service dress blue uniform. However, the service dress white uniform is worn more often than either of the dinner dress uniforms. Only 53% of respondents used the service dress white uniform at least once a year. Figure 12 shows the breakdown by the usage rate of the service dress white uniform.



N = 185, 0% is for no answer

Figure 12. Naval Postgraduate School Survey Responses for Service Dress White Uniform Usage.

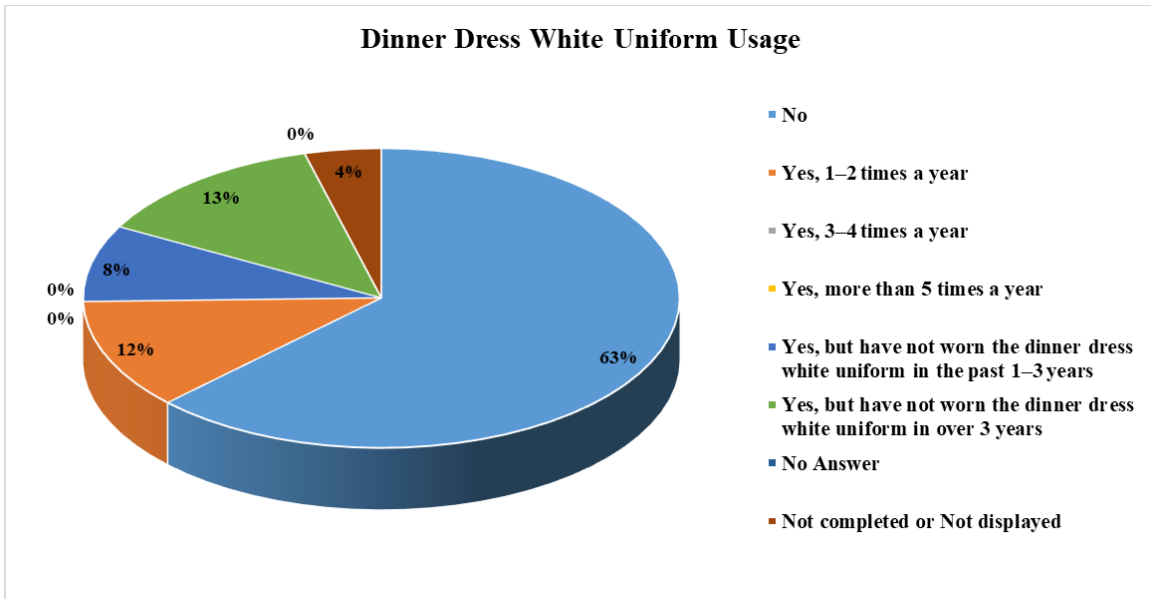
The usage rate of the dinner dress blue uniform is much lower than the service dress uniforms because it is not a required uniform for the ranks of ensign to lieutenant (O-1 to O-3) but is mandatory for lieutenant commanders and above (O-4 and above). Of our respondent population, less than 50% own the dinner dress blues. Of those respondents who own the dinner dress blue uniform, only 21% responded that they had worn it at least once a year. Figure 13 shows the usage breakdown for the dinner dress blue uniform.



N = 185, 0% is for Yes, more than 5 times a year

Figure 13. Naval Postgraduate School Survey Responses for Dinner Dress Blue Uniform Usage.

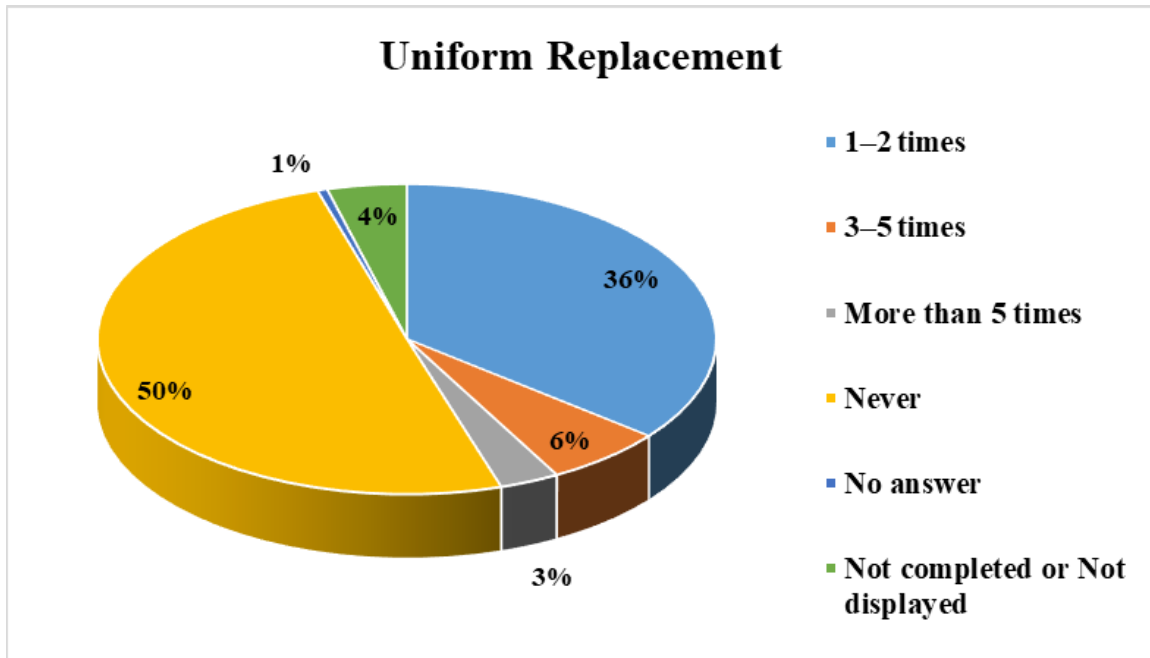
Concerning the dinner dress white uniform, our respondents' usage rate consisted of only 12% who have worn the uniform at least once a year. The population of respondents who do not own this uniform is 63%. Of those who have purchased the uniform, 13% have not worn it in over three years, effectively exceeding the 36-month life expectancy of the uniform. A combined total of 76% of respondents will have to purchase a replacement dress white uniform if they are required to wear it at their next formal event. Figure 14 shows the usage breakdown for the dinner dress white uniform.



N = 185, 0% is for Yes, 3-4 times a year and Yes, more than 5 times a year

Figure 14. Naval Postgraduate School Survey Responses for Dinner Dress White Uniform Usage.

We asked how many times in their naval officer career has a service or dinner dress uniform item (jacket or pants) needed replacement. About 45% of respondents have had to replace an item at least one time. A point of consideration is that the average years of service from the respondents was 7.5 years. If the survey were conducted Navy-wide, we can assume the percentage of replacing a uniform item at least once would be higher because the median years of service would be higher than that of the average NPS student. Figure 15 shows the data breakdown for the number of times respondents have needed to replace a service or dinner dress uniform item in their naval officer career.



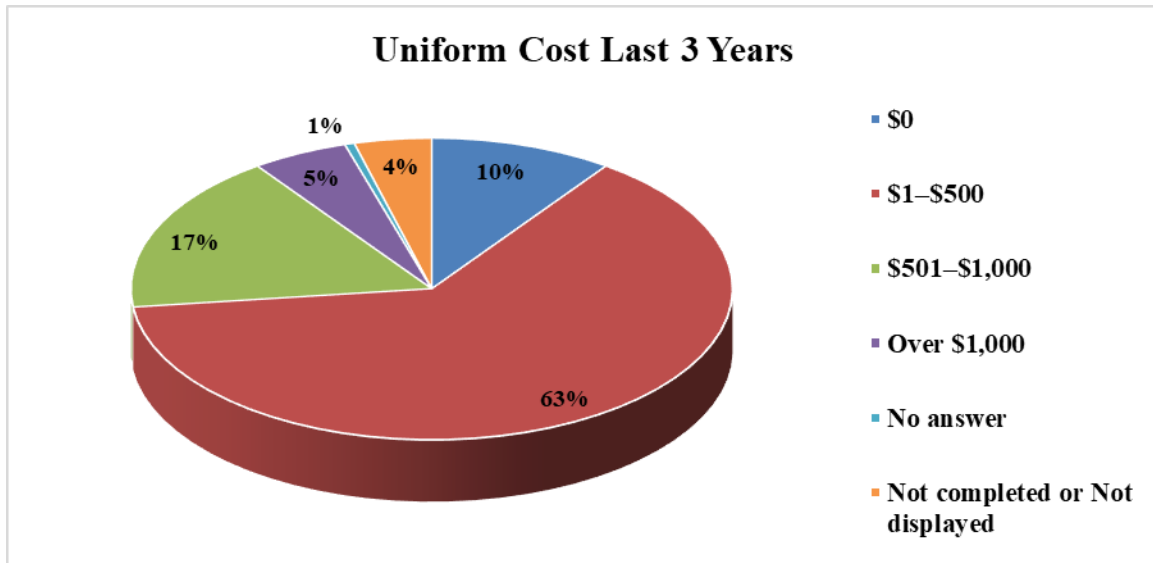
N = 185

Figure 15. Naval Postgraduate School Survey Responses for Uniform Replacement.

We asked our respondents how much they spent on service and dinner dress uniform items and components in the last three years. 63% of respondents spent between \$1 and \$500 on a dress uniform item or component. Only 10% of respondents stated they had not spent any money on dress uniforms. Here we can also assume that due to the average years of service and paygrade of the respondents to our survey, this is a lower cost estimate compared to the data we would receive from a Navy-wide study. For example, a higher population of lieutenant commanders and commanders who are required to maintain all four dress uniforms would have a higher maintenance cost in the last three years than the more junior population at NPS. Due in part to the large portion of respondents (63%) who claimed they spent in the range of \$1 to \$500 on uniforms in the last three years, we took the midpoint of this range (\$250) and divided it by dress uniform life cycle (three years). The calculation produced an average per year of \$85 spent per officer purchasing dress uniforms but did not account for expenses related to replacing or maintaining any other mandated non-dress uniforms, since this study focused on dress uniforms. Figure 16



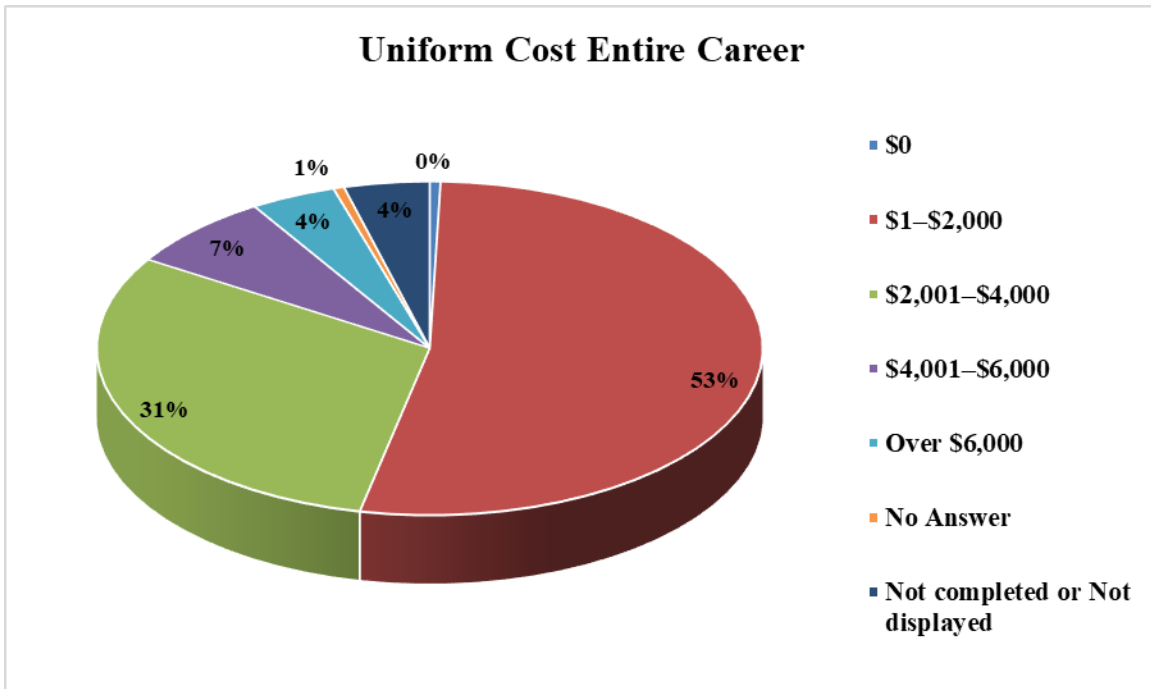
shows a further breakdown of costs that respondents spent on purchasing dress uniforms in the last three years.



N = 185

Figure 16. Naval Postgraduate School Survey Responses: Uniform Costs Last 3 Years.

Finally, when asked about how much they spent on dress uniforms or components in their entire naval officer career, 53% responded that they spent a total of between \$1 and \$2,000. Also, 30% responded that they spent between \$2,001 and \$4,000. Here we can also assume that due to the average years of service and paygrade of the respondents to our survey, this is a lower cost estimate compared to the data we would receive from a Navy-wide study. Similar to the above assumptions, due to the lower average years of service of the respondents on our survey, a Navy-wide survey would indicate an increased average total amount spent throughout an officer’s career. Figure 17 portrays all the price ranges for the uniform cost on dress uniforms or components in the respondent’s entire naval officer career.



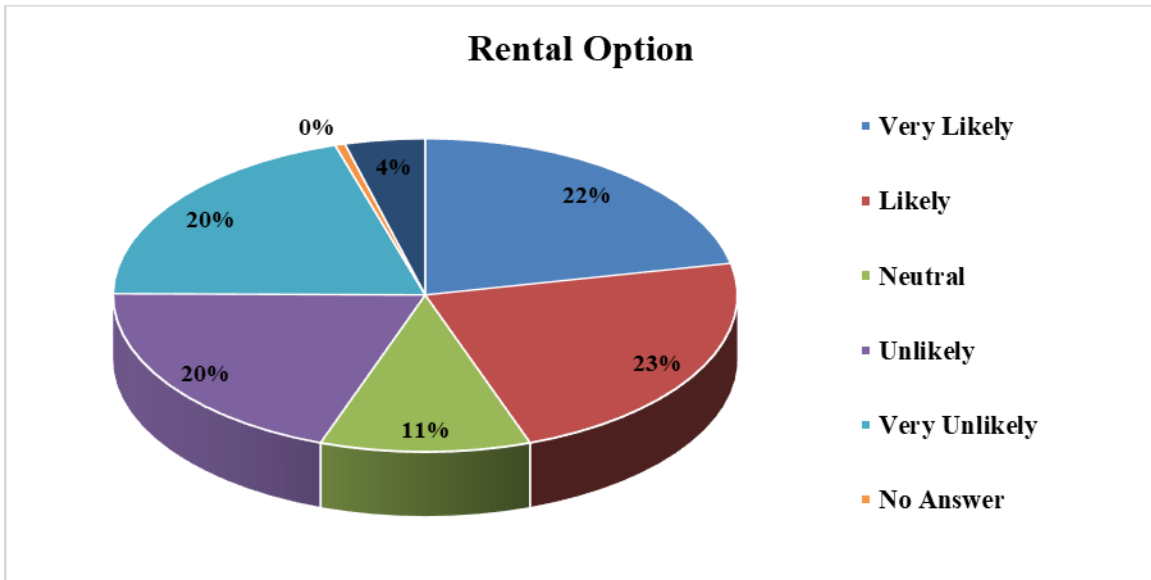
N = 185

Figure 17. Naval Postgraduate School Survey Responses: Uniform Cost Entire Career.

### 3. Rental Option

Our team is exploring an alternative uniform cost-savings option that would include a service and dinner dress uniform rental option for service members. We asked service members to respond how likely they would be to rent any of the dress uniforms if provided an opportunity to utilize the service. From our survey, we deduce that service members are almost equally likely (45%) and unlikely (40%) to rent a dress uniform if given the option. This information facilitates a cost-benefit analysis of a rental option discussed in Chapter IV. Figure 18 displays the breakdown of the likelihood our respondents would utilize a rental option for dress uniforms.





N = 185

Figure 18. Naval Postgraduate School Survey Responses: Rental Option.

## B. UNIFORM DATA ANALYSIS

Our team completed a cost–benefit analysis to consider possible future uniform policy changes to benefit naval officers. Specifically, we determined the net benefits of changing the rank and line designator insignia striping on the male dinner dress blues, female dinner dress blue and white, and both male and female service dress blues, and replacing with the hard shoulder boards. This change would allow naval officer dress uniforms to utilize the same rank designator device for all service and dinner dress uniforms, eliminating unnecessary costs of purchasing striping and subsequent tailoring.

Currently, naval officer service dress uniforms differ in the manner in which the rank and service designator is displayed. On both the male and female service dress blue jacket, the rank and service designator are embroidered at the base of the sleeves, while the service dress white uniform displays the rank with hard shoulder boards. Both service dress uniforms should utilize hard shoulder boards, effectively eliminating striping and tailoring costs associated with these uniforms. Figure 19 show the current service dress blue and white uniforms and the proposed change for the service dress blue uniforms with rank and service designator hard shoulder boards.







Figure 19. Current Male Service Dress Uniforms (left and middle) and Proposed Change (right). Source: NAVPERS (2019b).

Should the Navy choose to implement the proposed change, we estimate cost savings for one male or female service member to range from \$48.45 to \$175.01 depending on the service member's rank. Our estimates included the costs for gold lace, service designator insignia, and tailoring cost for one service dress uniform. The tailoring costs include once at the time of promotion and each time a uniform reaches its 36-month uniform life expectancy for replacement. With the proposed change, the service dress blue uniform would need shoulder loops added to support hard shoulder boards, at the cost of \$6.00 per uniform. We deducted this cost from the total cost estimate for rank, service designator, and tailoring cost to provide an overall cost savings. Table 4 shows the breakdown for the potential cost savings for this proposed change. Figure 20 is the timeline for projected naval officer promotions and uniform replacement.

Table 4. Cost Savings per Dress Uniform with Proposed Change. Adapted from Navy Exchange (2019a).

Rank	Sleeve Gold Lace Cost	Designator Cost	Sewing Cost for Gold Lace and Designator	Tailoring Cost for Uniform Change	Total Cost for Rank and Designator for 1 SDB, DDB or DDW (Female) Uniform	Total Cost for 1 SDW or DDW (Male) to Add Shoulder Loops	Total Cost Savings for 1 Dress Uniform
O-1	\$6.23	\$11.22	\$37.00	\$0.00	\$54.45	\$6.00	\$48.45
O-2	\$11.31	\$11.22	\$40.00	\$40.00	\$102.53	\$6.00	\$96.53
O-3	\$12.46	\$11.22	\$45.00	\$90.00	\$158.68	\$6.00	\$152.68
O-4	\$17.54	\$11.22	\$47.00	\$94.00	\$169.76	\$6.00	\$163.76
O-5	\$18.69	\$11.22	\$50.00	\$50.00	\$129.91	\$6.00	\$123.91
O-6	\$24.92	\$11.22	\$55.00	\$55.00	\$146.14	\$6.00	\$140.14
O-7	\$32.41	\$11.22	\$65.00	\$65.00	\$173.63	\$6.00	\$167.63
O-8	\$33.56	\$11.22	\$65.00	\$65.00	\$174.78	\$6.00	\$168.78
O-9	\$39.79	\$11.22	\$65.00	\$65.00	\$181.01	\$6.00	\$175.01
O-10	\$46.02	\$11.22	\$65.00	-	\$122.24	\$6.00	\$116.24

### Career & Uniform Replacement Timeline

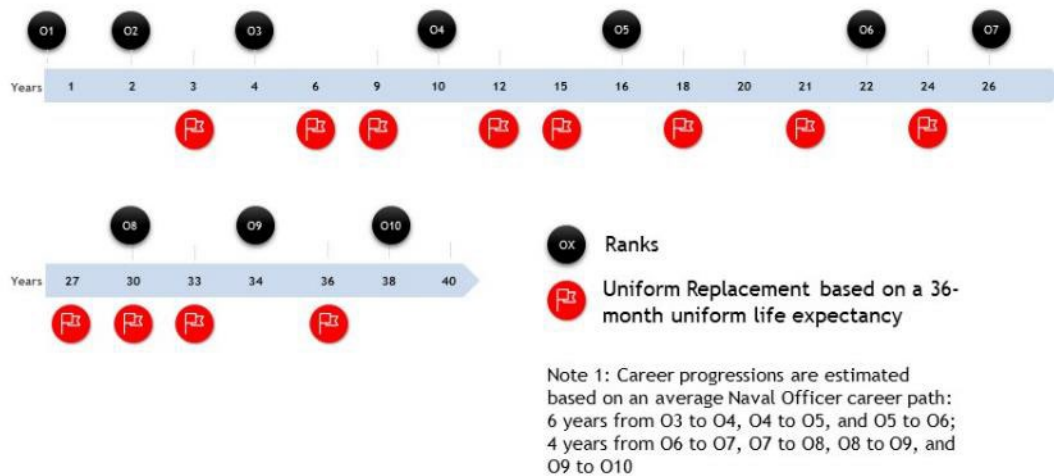


Figure 20. Career and Uniform Replacement Timeline. Adapted from NAVPERS (2019b).

Extending this change to the male dinner dress blue jacket and the female dinner dress blue and white jacket, we can estimate the same cost savings for each uniform to naval officers. The male dinner dress blue and female dinner dress blue and white uniforms display the officer's rank and service designator at the base of the sleeves, similar to the service dress blue uniform. The male dinner dress white uniform is the only dinner dress uniform that uses hard shoulder boards to display rank and service designator. Changing these three uniform rank and service designators to hard shoulder boards would generate an estimated additional savings to naval officers between \$48.45 to \$175.01, rank dependent. Figures 21 and 22 show the current male and female dinner dress blue and white uniforms. Figure 23 displays the proposed changes to the rank and service designator to hard shoulder board for the dinner dress uniforms.



Figure 21. Current Male Dinner Dress Blue and White Uniforms.  
Source: NAVPERS (2019b).



Figure 22. Current Female Dinner Dress Blue and White Uniforms.  
Source: NAVPERS (2019b).



Note: male dinner dress blue and female dinner dress white have the same proposed changes.

Figure 23. Male and Female Dinner Dress Blue Proposed Change.  
Adapted from NAVPERS (2019b).

Table 5 presents the calculated cost savings for a 20-year career per person and the annual cost savings for the average retirement population if hard shoulder boards were to be implemented across all dress uniforms.

Table 5. Estimated Total Cost Savings at 20 Years. Adapted from Navy Exchange (2019a); Navy Recruiting Command (2017); Guina (2019).

<b>Rank</b>	<b>Individual Cost Savings (Male)</b>	<b>Individual Cost Savings (Female)</b>	<b>Retirement Population Cost Savings (Male)<sup>1</sup></b>	<b>Retirement Population Cost Savings (Female)<sup>2</sup></b>	<b>Total<sup>4</sup></b>
O-1	\$48.45	\$48.45	\$13,604.67	\$2,986.39	\$16,591.06
O-2	\$96.53	\$96.53	\$27,105.44	\$5,949.97	\$33,055.41
O-3	\$152.68	\$152.68	\$42,872.25	\$9,410.98	\$52,283.23
O-4 <sup>3</sup>	\$327.52	\$491.28	\$91,966.98	\$30,281.81	\$122,248.79
O-5 <sup>3</sup>	\$247.82	\$371.73	\$69,587.38	\$22,912.92	\$92,500.29
<b>Total Cost Savings at 20 Years</b>	<b>\$873.00</b>	<b>\$1,160.67</b>	<b>\$245,136.71</b>	<b>\$71,542.07</b>	<b>\$316,678.79</b>

Note 1: Total cost savings estimates for male and female officers retiring at 20 years at the rank of Commander for one dress uniform and the overall average cost savings for the annual retirement population.

Note 2: Calculated using the average male retirement average from Table 6 multiplied by cost savings per rank.

Note 3: Calculated using the average female retirement average from Table 6 multiplied by cost savings per rank.

Note 4: Calculated using individual cost savings identified in Table 4 multiplied by two uniforms for males and three uniforms for females.

Note 5: Figures not discounted.

In our calculations for males, we multiplied the cost savings by two covering both the service and dinner dress blue uniforms, while for females we multiplied the cost savings by three covering the service dress blue, dinner dress blue, and dinner dress white uniforms, for the ranks of lieutenant commander and above. For lieutenants and below, we only accounted for the savings of one service dress blue uniform. Assuming an officer retires at the rank of commander (O-5) at 20 years of service, we calculate a total individual cost savings of \$873.00 for males and \$1,160.67 for females.

To identify overall cost savings across the naval officer population, completing a 20-year career at the rank of commander, we used officer accession and retirement data to calculate our estimates. To calculate total cost savings in Table 5, we averaged the



accession data from Navy Recruiting Command (2007–2018) as shown in Table 6. Furthermore, we used the statistics acquired from The Military Wallet that only 17% of accessions reach a 20-year retirement to calculate the number of retirees (Guina, 2019). Finally, to account for differences in uniforms, we separated the retirement population into male and female. Open-source data estimates that female officers account for 18% of the total officer population (Reynolds & Shendruk, 2018). Using calculations from Tables 5 and 6, as well as the statistics above, we estimate savings for the combined officer retirement population at 20 years of service to be \$316,678.79. Table 6 displays accessions and retirement data.

Table 6. Officer Total Accessions, and Total Retirements from 2007–2018. Adapted from Reynolds & Shendruk (2018); Navy Recruiting Command (2017); Guina (2019).

<b>Year</b>	<b>Accessions</b>	<b>Retirement</b>	<b>Female</b>	<b>Male</b>
2018	2,132	362	65	297
2017	2,174	370	67	303
2016	2,124	361	65	296
2015	2,072	352	63	289
2014	1,449	246	44	202
2013	2,049	348	63	286
2012	1,854	315	57	258
2011	2,180	371	67	304
2010	2,403	409	74	335
2009	2,202	374	67	307
2008	1,962	334	60	274
2007	1,571	267	48	219
<b>Average</b>	<b>2,014</b>	<b>342</b>	<b>62</b>	<b>281</b>

Our study also explored the net benefit of eliminating the seldom-used dinner dress white jacket for both male and female. As mentioned in Chapter II, the U.S. Air Force and the U.S. Army’s dinner dress uniforms consist of one jacket for formal occasions. Figure 24 displays the male and female dinner dress white jackets.





Figure 24. Male and Female Dinner Dress White Jackets. Source: Marlow White (2019).

Eliminating this mandated jacket for lieutenant commanders and above could result in an additional cost savings of \$211.58 for males and \$331.40 for females. Table 7 displays the cost savings as a result of eliminating of the dinner dress white jacket, including the rank and service designator insignia costs and the associated tailoring costs for these items.

Table 7. Cost Savings for Eliminating the Dinner Dress White Jacket. Adapted from Navy Exchange (2019a).

<b>Dinner Dress White Jacket Expenses</b>	<b>Male<sup>1</sup></b>	<b>Female<sup>1</sup></b>
Dinner Dress White Jacket	\$211.58	\$255.64
Gold Lace	N/A <sup>2</sup>	\$17.54
Service Designator	N/A <sup>2</sup>	\$11.22
Sewing Cost for Gold Lace & Designator	N/A <sup>2</sup>	\$47.00
<b>Total Savings</b>	<b>\$211.58</b>	<b>\$331.40</b>

Note 1: Figures not discounted

Note 2: Male dinner dress jackets do not require sewing of rank and service designator insignia as they utilize hard shoulder boards.



### C. UNIFORM ALLOWANCES

Per the United States Navy Uniform Regulation, the average dress uniform life expectancy is 36 months (NAVPERS, 2019b). Life expectancy can vary greatly depending on factors such as individual care, maintenance, storage, permanent change of station (PCS) moves, weather, and frequency of wear. These factors contribute significantly to fading and discoloration, requiring service members to purchase the uniform in its entirety instead of replacing only a single uniform item. With typical required obligated service times lasting only four years for naval officers, initially issued uniforms are not designed to last throughout the entire first term of service. To offset this disparity in uniform longevity, a uniform allowance would reduce the financial burden to naval officers. Per regulation, naval officers only receive an initial clothing allowance and are not allotted an annual uniform clothing allowance to offset maintenance and replacement costs (Under Secretary of Defense [Comptroller], 2018). As mentioned in Chapter II, this initial allowance does not cover all the mandated uniforms that an officer must purchase upon commission.

Navy senior enlisted members, when promoted to chief petty officer (CPO; E-7), are mandated to wear the same dress uniforms as naval officers. Contrary to officers, enlisted members receive a standard initial clothing allowance of \$2,023.31 for males and \$2,153.92 for females upon entering the service; when eligible to wear the uniform of a CPO, a special initial clothing allowance of \$1,044.13 for males and \$1,095.12 for females is provided (Under Secretary of Defense [Comptroller], 2018). In addition to this special initial clothing allowance, they receive an annual cash clothing replacement allowance of \$504.00 for males and \$493.20 for females (Defense Finance and Accounting Service [DFAS], 2019a). Based on the Defense Finance and Accounting Services (DFAS) 2019 Pay and Allowance Tables, senior enlisted members make equivalent to or more than junior officers, yet continue to receive an annual clothing allowance.

We conducted a comparison analysis between CPOs' base pay and clothing allowance with junior naval officer's base pay. Our analysis determined that up to lieutenant (O-3), CPOs receive a higher compensation, which also includes their annual clothing allowance (DFAS, 2019b). As of March 2017, the average enlisted member



reaches the rank of CPO at the 13-year mark (Navy Live, 2017). When comparing a CPO at greater than 13 years of service to an ensign (O-1) at less than two years of service, we found that a CPO makes 36% more. Our calculations included the CPO base pay of \$4,295.70 plus their annual clothing allowance at a monthly rate of \$42.00 (using the annual male clothing replacement allowance) that totals \$4,337.70. An ensign's base pay equates to \$3,188.40 for a difference of \$1,149.30. Next, we looked at CPOs with time in service at greater than 15 years compared to a lieutenant junior grade (O-2) with time in service greater than two years. Using the same computations, we found that a CPO makes 8% more than a lieutenant junior grade with a difference of \$340.80. Based on our analysis, the data indicates an annual cash clothing replacement allowance should be allocated for the ranks of ensign and lieutenant junior grade (O-1 to O-2).

#### **D. EFFECTS TO STAKEHOLDERS**

If the above-proposed changes are adopted, several stakeholders have standing in this cost-benefit analysis with regards to naval officer dress uniforms. These stakeholders include Navy Exchange Service Command (NEXCOM), naval officers, the Office of the Chief of Naval Personnel, Uniform Matters Office (OPNAV N13X), and the Naval Personnel Command (NAVPERS). Any change to uniforms will have an impact on all these stakeholders.

NEXCOM will need to modify existing dress uniform contracts to cancel the dinner dress white jacket that we seek to eliminate. Additionally, they will lose tailoring service revenue if hard shoulder boards are adopted instead of the current uniform's rank and service designator on dress uniform sleeves. Naval officers will benefit from fewer uniform expenses, less uniform maintenance, and easier interchangeable rank insignia. OPNAV N13X and NAVPERS will be responsible for creating and promulgating new uniform policies and guidance regarding the dress uniform changes. We believe that our study will guide future uniform changes and provide Navy leadership with sound recommendations to improve uniform policies.



## IV. ANALYSIS OF ALTERNATIVES

### A. UNIFORM RENTAL SERVICE VIABILITY

As an alternative option to deliver cost savings to officers, our team explored the viability of providing a rental option for U.S. Navy dress uniforms. In this chapter, we substitute the terms *organic* and *internal* when referring to Navy Exchange Service Command's (NEXCOM) ability to provide this service. The terms *non-organic* and *external* are substituted when referring to contracted or outsourced vendor rental service. To gather data and explore this research alternative, our team visited three locations: NCTRF, Natick, MA; Navy Exchange (NEX), Newport, RI; and Men's Wearhouse (MW) Distribution Center, Norcross, GA.

First, at NCTRF, we explored Navy uniform testing procedures, fabric utilization, fabric durability, alteration alternatives, and design. The Navy presently conducts extensive testing of fabric durability and discoloration in a controlled laboratory environment. However, we found the current authorized fabric is not able to withstand multiple sleeve alterations to the extent necessary for rental operations. The Navy Uniform Board approves design schematics that provides detailed uniform specifications from NCTRF before any contract award by NEXCOM. As part of the uniform design, NCTRF specifies that each officer dress uniform shall provide extra fabric at each inseam not to exceed  $\frac{1}{4}$  inch, which only allows for minimal alterations (Navy Clothing and Textile Research Facility, 2015).<sup>3</sup> Our research suggests that in providing a viable rental option for uniforms,  $\frac{1}{4}$  inch is not properly suitable to support necessary alterations for fit, form, and function to maximize adequate return on investment (ROI).

Next, we visited the Navy Exchange (NEX) at Naval Station (NS) Newport, RI, which is the largest seller of officer uniforms by volume. NS Newport NEX issues uniforms to all naval officers commissioning via Officer Candidate School (OCS), Officer Development School (ODS), Limited Duty Officer (LDO) School, Warrant Officer School,

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<sup>3</sup> NCTRF provides a purchase description for each individual uniform component. For this reference we utilized the woman's dress blue coat purchase description. All dress uniforms inseam specifications are set up to  $\frac{1}{4}$  inch.



and Naval Academy Preparatory School (NAPS). Additionally, this NEX supports the largest concentration of initial officer training schools as well as many advanced schools, including the Naval War College. Due to the large concentration of officers and the limiting factor of a ¼ inch inseam, the NEX must carry a large variety of sizes to accommodate for the different body types. Male uniforms are available in sizes 32–56, extra short to extra-extra-long, and two body fits: classic and athletic. Female uniforms are available in sizes 2–22, petite, regular, and tall in length, and three body fits: misses, juniors, and women’s (Navy Exchange, 2019a).

Finally, we visited one of the Men’s Wearhouse Distribution Centers (DC). The company has competed in the formal wear rental industry for more than 45 years, having six distribution centers strategically located nationwide that service more than 700 storefront locations (The Men’s Wearhouse, Inc., n.d.). Men’s Wearhouse, which now falls under Tailored Brands, is a reputable, known commodity and worldwide competitor in the formal wear rental industry and provided our team valuable insight into entering and operating in the rental market. Our goal was to gain an overarching understanding of their business model, best practices, and cradle-to-grave operations within the formal wear rental market. We found they have an intricate inventory and ordering software system, aligned with the regional DC’s, that tracks the demand and rental transactions to ensure each customer receives their order on time. We witnessed a heavy-duty bar code tag that was sewn into each laundered component to track their location, number of wash times, number of rentals, and garment life expectancy to ensure profit-maximizing.

Our visits to these sites provided us limited data but sufficient information to draw the following conclusions for the viability of an internal or external uniform rental option:

1. Currently, with 10 different sleeve designators and 14 officer ranks, a rental option would not be cost-effective or viable. Rank designator and service striping must be eliminated on dress uniforms and replaced with hard shoulder boards since the current fabric will not support multiple sleeve alterations.
2. A substantial inventory of uniforms would be required to accommodate the wide variety of customer sizes and body types as well as the currently limited in-seam of ¼ inch available for alterations.



3. Brick and mortar stores as well as regional DC's are necessary and must have open space to support remote locations as well as the larger fleet concentration areas.
4. A robust inventory and tracking system is required at the storefront and DC to support rental operations.
5. Sufficient capital must be available to support start-up costs.
6. Significant experience in the formal wear industry is required to ensure long-run success.

As discussed in Chapter III, the results of our survey indicated that just over 50% of respondents were interested and would likely utilize a rental service if the option were available. We studied and analyzed the feasibility of establishing an internal or external rental option.

#### **B. EXTERNAL RENTAL FEASIBILITY**

When exploring external rental feasibility options, we visited the Men's Warehouse. As part of their rental strategy, they have strategically positioned six DCs across the United States. These DCs support regionalized operations, maximize logistics footprint, and extend their transportation network to support storefront services. As part of their current rental operations, Men's Warehouse has a robust inventory and tracking software system in place, which helps maximize profits for each rental component. Within their 45 years of experience in the formal wear rental industry, they have systematically established more than 700 stores for easy customer accessibility. Sufficient capital is a necessary and essential element when strategizing for new business opportunities. Men's Warehouse's Fiscal Year 2018 financial statements reported net earnings of \$90,623,000, indicating they are in a favorable financial position to invest in new business ventures (Tailored Brands, Inc., 2019).

When asked, Men's Warehouse would not provide specific cost data, citing company proprietary information, but indicated they utilize vendors that offer the lowest cost for raw materials that meet or exceed their garment life expectancy requirements. The reduced material cost ensures the lowest possible rental prices are extended to their customers. Assuming Men's Warehouse launches this new rental venture under the current uniform policies, they would be subject to the terms and provisions of the Barry



Amendment, which states that all material used for DoD personnel uniforms must be manufactured and procured exclusively from certified U.S. companies and material producers (Office of the Secretary of Defense, 2014). Following the requirements of the Barry Amendment, we assume the uniform cost to an external company such as Men's Warehouse would increase in comparison to the formal wear costs of their current primary rental lines, which are not subject to the stipulations of the amendment.

With current uniform procurement stipulations, we conclude that Men's Warehouse has two options for uniform inventory: 1) purchase and rent the currently produced uniforms or 2) develop new more alterable uniforms that comply with the Barry Amendment and other uniform design requirements. Without actual data, it is nearly impossible to ascertain the bottom-line cost of uniforms to an external organization. However, with the specifications of the Barry Amendment, we can reasonably assume that Option 1 would increase the cost to Men's Warehouse and the rental price to the customer, whereas Option 2 would reduce costs as well as the rental price. Should the uniform requirements of the Barry Amendment be lifted, more freedom would be afforded to companies to reduce raw material costs that best suits their organizational strategy, while still conforming to the uniform design requirements.

### **C. INTERNAL RENTAL FEASIBILITY**

When exploring internal rental feasibility options, we visited the NEX, Newport, RI. NEXCOM has more than 300 storefront locations worldwide, with 73 stores located in the continental United States, all of which sell uniforms and components (Naval Supply Systems Command, 2018). Additionally, during our visit, we discovered there is only one uniform distribution center located in Pensacola, FL. A singular distribution point that services worldwide operations cannot provide a sustained, on-time service for rental customers, which would result in increased transportation costs that would ultimately be transferred to the customer, thereby increasing the overall uniform rental cost.

The NEX utilizes a sufficient system for inventory tracking; however, they do not possess the additional software necessary to maintain a rental distribution similar to the one Men's Warehouse employs. We assume that if NEXCOM established a rental option, current revenue from uniform sales would decrease. Although the NEX has been in service



since 1909 and has significant experience in the retail industry, they lack experience in the formal wear rental market (Navy Exchange, 2019d).

Currently, their business model uses 30% of their total profits towards capital expenditures and improvements, while the remaining 70% is donated to Morale, Welfare, and Recreation (MWR; Navy Exchange, 2019d). MWR provides subsidized activities and services to service members and their families. Redistribution of profits to fund a rental option venture would alter the current contribution level to MWR. We requested uniform sales data from NEXCOM but did not receive a reply with the information at the time we wrote this chapter. If this information were provided to us, we would have deconstructed and organized the data in such a way to determine how many uniforms would be required to provide a rental option organically.



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## V. RECOMMENDATIONS AND CONCLUSION

### A. RECOMMENDATIONS

To identify potential cost savings for the four mandated naval officers dress uniforms, our team completed an in-depth data analysis of multiple uniform components and conducted an online survey to collect data regarding utilization and expenses associated with these uniforms. Our research led us to four viable options that provided significant cost savings to naval officers. The four options we evaluated included: the replacement of the embroidered rank and service designator for the dress uniform jacket with hard shoulder boards; the elimination of the dinner dress white jacket; the authorization of an annual cash clothing replacement allowance; and the establishment of a uniform rental service. Our analysis concluded that three of the four options if implemented, would result in reduced uniform costs for naval officers. Cost savings for the rental service option would vary based on the frequency of uniform rentals per officer.

#### 1. **Replace Embroidered Rank and Service Designator with Hard Shoulder Boards**

Our uniform analysis concluded that replacing the rank and service designator, currently embroidered on the base of the sleeves of the dress uniforms, with hard shoulder boards is necessary and would result in cost savings across all ranks. We calculated savings for one dress uniform to be between \$48.45 and \$175.01 (O-1 to O-10) based on rank. Extending these savings to the two male dress uniforms requiring striping, the service and dinner dress blue jackets, the total cost savings per officer would be between \$96.90 and \$350.02 (O-1 to O-10). Female naval officers would benefit from additional cost savings as the savings would be extended to cover three dress uniforms requiring striping, the service and dinner dress blue, and dinner dress white jackets. Female officers total cost savings would be between \$145.35 and \$525.03 (O-1 to O-10). Our calculations included the minimal \$6 shoulder loop alteration cost needed to allow for the wear of the hard shoulder boards to the current uniforms. We assumed the cost of the hard shoulder boards as a sunk cost because this is a mandatory component for other uniforms.



The U.S. Navy has deep-rooted naval heritage, and its dress uniforms have included the embroidered gold piping on our jacket sleeves dating back to the 1770s. Although some officers will welcome the change, we anticipate that this policy recommendation could encounter significant resistance due to our strong naval traditions. A sensitivity analysis should be conducted before making this uniform policy change to assure fleet acceptance.

## **2. Eliminate the Dinner Dress White Jacket**

Our team conducted a survey to gather data on the usage of the four naval officer dress uniforms. The survey provided results that the utilization of the dinner dress white uniform had a meager number of respondents (12%) who have used the dinner dress white uniform at least once a year. Of our respondents, 63% have not been required to purchase the dinner dress white uniform in their career. Due to the lack of usage and high cost associated with this uniform, we recommend the elimination of the dinner dress white jacket. We recommend only eliminating the dinner dress white jacket because the other uniform components—the shirt, trousers, cummerbund, and tie—are also used with the dinner dress blue uniform. Additionally, this would reduce the number of formal uniforms for naval officers to a single uniform, mirroring the U.S. Army and Air Force dress uniform policies.

Our study analyzed the potential cost savings of eliminating the dinner dress white jacket. We determined that removing this uniform component would result in a cost savings of \$211.58 for males, and \$331.40 for females. The additional cost savings to the female uniform is due to the embroidery cost for the rank and service designator insignia that the male uniform does not require (males utilize hard shoulder boards on their dinner dress white jacket). Although we do not anticipate a significant resistance to this uniform change as the previous recommendation, we still suggest completion of a sensitivity analysis before a change in policy.

## **3. Authorize an Annual Cash Clothing Replacement Allowance**

Part of our research consisted of studying the various uniform allowances and entitlements for U.S. service members authorized by the under secretary of defense (Comptroller) via the Department of Defense Financial Management Regulation (DoD FMR). The DoD FMR authorizes both enlisted and officers an initial uniform allowance



but authorizes an annual uniform clothing replacement allowance only for enlisted service members. We compared the base pay and uniform replacement allowances of chief petty officers (CPO; E-7 and above) to that of junior naval officers. Our research concluded that CPOs make more than ensigns and lieutenant junior grades officer (O-1 to O-2).

When comparing the U.S. DoD services to Australia, another ally country, we found a significant difference in the uniform allowance authorized for their officers. Per the Australian Government Department of Defence, their officers are not given an initial clothing allowance but rather are issued a complete set of uniforms upon their commission. Additionally, Australian officers in permanent forces (active and reserve) receive an annual uniform allowance of AUD \$682 (~U.S. \$1,011; Australian Government Department of Defence, 2019).

Based on our study and comparisons, and due to the life expectancy of 36 months for the dress uniform discussed in Chapter III, we recommend that the under secretary of defense (Comptroller) authorize an annual cash clothing replacement allowance for the ranks of O-1 and O-2. The amount allowed should be comparable to the uniform replacement allowance authorized for CPOs as naval officers have the same working and dress uniforms prescribed. Authorization of an annual uniform replacement allowance would result in reduced financial hardship of junior naval officers during their initial years of service.

#### **4. Provide a Rental Option for Dress Uniforms**

Our team analyzed an alternatives endeavor, a uniform rental option, as we explored additional cost savings for naval officer's dress uniforms. We visited NCTRF, the Navy Exchange, Newport, RI, and a Men's Wearhouse distribution center in Norcross, GA. Afterward, we determined that a rental option is within the realm of possibility. However, this option is only viable should the Navy adopt the recommended change of replacing the rank and designator insignia with hard shoulder boards. Our limited data suggests that the NEXCOM lacks the capital required for startup costs, available distribution centers, experience, desire, and space at current stores. Based on the existing infrastructure, financial statement, and experience, we determined that an external well-established rental entity, such as Men's Warehouse, would be better suited to offer a dress uniform rental



option to the U.S. Navy rather than providing the service organically. We recommend further in-depth research with concrete sales, cost, and infrastructure data be conducted as our team was unable to obtain this information as part of our study.

## **B. CONCLUSION**

In conclusion, we believe that if each of the recommended changes is adopted, naval officers will benefit from reduced uniform costs, fewer uniforms to carry on deployment, and a single rank and designator insignia interchangeable across all dress uniforms. We assumed that our recommendations would require minimal stakeholder actions. Naval Personnel Command (NAVPERS) would need to develop and promulgate new uniform instructions to the fleet, and Defense Finance, and Accounting Service (DFAS) would need to perform the accounting modification to include clothing allowance for authorized naval officers. Finally, we can assume that the Navy Exchange Service Command (NEXCOM) would be required to make some uniform contract modifications and lose some revenue from striping alterations.

The Navy has performed a significant number of uniform changes in recent years, which may lead to some officers resisting another shift in uniforms. Our final assumption is that naval officers will accept our recommended uniform changes due to all the benefits previously mentioned. We believe Navy leadership could utilize this study and recommendations to improve future uniform policies.



## APPENDIX

- 1) What is your current paygrade?
  - O-1
  - O-2
  - O-3
  - O-4
  - O-5
  - O-6
  - O-7 & Above
  
- 2) What was your commissioning source?
  - ROTC
  - Naval Academy
  - OCS
  - ODS
  - Other
  
- 3) What community do you belong to?
  - Unrestricted Line
  - Restricted Line
  - Staff
  
- 4) How many years have you served as an officer in the United States Navy?
  - \_\_\_\_\_ Year(s)
  
- 5) How often do you wear your SERVICE DRESS BLUE uniform?
  - 1–2 times a year
  - 3–4 times a year
  - More than 5 times a year
  - I have not worn the service dress blue uniform in the past 12 months
  - I have not worn the service dress blue uniform in the past 1–3 years
  - I have not worn the service dress blue uniform in over 3 years
  
- 6) How often do you wear your SERVICE DRESS WHITE uniform?
  - 1–2 times a year
  - 3–4 times a year
  - More than 5 times a year
  - I have not worn the service dress white uniform in the past 12 months
  - I have not worn the service dress white uniform in the past 1–3 years
  - I have not worn the service dress white uniform in over 3 years
  
- 7) Have you purchased the MESS DRESS BLUE uniform? If so, how often have you worn the mess dress blue uniform?
  - No, go to question 6



- Yes, 1–2 times a year
  - Yes, 3–4 times a year
  - Yes, more than 5 times a year
  - Yes, but have not worn the mess dress blue uniform in the past 1–3 years
  - Yes, but have not worn the mess dress blue uniform in over 3 years
- 8) Have you purchased the MESS DRESS WHITE uniform? If so, how often have you worn the mess dress white uniform?
- No, go to question 7
  - Yes, 1–2 times a year
  - Yes, 3–4 times a year
  - Yes, more than 5 times a year
  - Yes, but have not worn the mess dress white uniform in the past 1–3 years
  - Yes, but have not worn the mess dress white uniform in over 3 years
- 9) How often have you replaced a service or mess dress uniform item in your naval officer Career (jacket, pants)?
- 1–2 times
  - 3–5 times
  - More than 5 times
  - Never
- 10) How much have you spent in the last 3 years on dress uniforms and/or components (excluding ribbons and medals)?
- \$0
  - \$1–\$500
  - \$501–\$1,000
  - Over \$1,000
- 11) How much have you spent in your naval officer career on dress uniforms and/or components (excluding ribbons and medals)?
- \$0
  - \$1–\$2,000
  - \$2,001–\$4,000
  - \$4,001–\$6,000
  - Over \$6,000
- 12) If a rental option for dress uniforms was available, how likely would you be to utilize this service?
- Very likely
  - Likely
  - Neutral
  - Unlikely
  - Very unlikely



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