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AN ANALYSIS OF FACTORS AFFECTING THE RETENTION PLANS OF JUNIOR US NAVY OFFICERS

by

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March 2002

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The model developed for this thesis is successful in identifying several factors influencing the retention intentions of junior male Navy officers. Nine of the seventeen variables included in the model have a significant impact upon retention. Officers' decision to remain on active duty were significantly influenced by the demographic characteristics of family status; the tenure characteristics of military rank (02), (O3) and military life expectation; the economic characteristics of the transferability of skills gained in the navy over to a good civilian job, and the satisfaction with military work values, and military allocation of time.

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AN ANALYSIS OF FACTORS AFFECTING THE RETENTION PLANS OF JUNIOR US NAVY OFFICERS

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Submitted in partial fulfillment of the
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I. INTRODUCTION

A. BACKGROUND

"Manpower is, and will remain, our Navy's biggest challenge. We are at war for people and we are fighting this war on three fronts." (Chief of Naval Operations (CNO), 2002) The CNO has stated, in his Top Five Priorities, relating to Manpower, that recruiting the right people, raising retention, and attacking attrition are the three fronts that the Navy has to focus on. The U.S. Navy is currently experiencing a retention crisis. Senator Trent Lott of Mississippi (Navy Times, 1997, January 13) stated, "Today, this country is not attracting and retaining enough people of the kinds needed to staff an increasingly higher-skilled force…" The Department of the Navy (1996) recognizes that the retention of eligible, qualified personnel at all levels of the organization is essential to a formidable defense structure. The military, as a whole, needs to ensure force readiness by retaining quality people on board, and managing officer accessions and retention to maintain the correct mix of grade and quality to ensure long term readiness.

The issues of retaining and recruiting sailors have been under focus because each of these two issues has monetary and non-monetary implications. From a monetary perspective, turnover is expensive. Recruiting, classifying, and training replacements cost money. From a non-monetary perspective, excessive turnover also results in lost experience, lower productivity and, in the military, reduced readiness.

Keeping the Navy at current levels of operational capability depends on the Navy's ability to both recruit and retain qualified personnel. Past research has shown that turnover rates are affected by many factors including demographic characteristics, job satisfaction, family situation, and job alternatives.

The services have experimented with many different policies to improve overall retention. Some of these policies involve monetary incentives, quality of life improvements, and expanded promotion opportunities. The non-monetary factors, which may induce people to stay in the military, include training opportunities, health benefits, adventure, and pride. The importance of these non-monetary factors often goes unnoticed.

Insufficient manpower affects ship and squadron manning and reduces military readiness. Improvements in military technology due to advancements in computers and their components, is increasing the complexity of jobs in the fleet. To maintain this technology, technologically skilled people are needed in the military in the higher grades and in the skilled occupations. However, if people continue to exit the military it will become more difficult to ensure fleet readiness.

Low retention results in higher costs of recruiting, educating and, training replacements. A study conducted by Bowman in 1995 stated that the marginal commissioning cost of the average Surface Warfare Officer (SWO) accession was about $48,000 (1995 dollars), and the average marginal training (Post-Commissioning) cost per SWO was about $51,093. (Bowman, 1995) Thus, the total replacement cost

of one SWO is roughly $100,000. The real cost of a SWO officer is probably even higher than this figure because these calculations omit the lost productivity (opportunity cost) of the officer when he or she is achieving SWO qualifications. Clearly, higher retention can bring significant cost savings for the Navy.

However, the Navy's problems with retention are not limited to SWOs. The Naval Special Warfare Officer community also has been identified recently as an area with retention challenges. (Richards, 1997) Fiscal year 1997 had the highest level of Sea Air and Land (SEAL) Officer resignations on record, and in Fiscal Year 1998 the SEAL community received 38 resignation letters. (USSOCOM, 1997) Current low retention rates in this occupational group are of great concern to the Navy because of an increased emphasis on low intensity conflicts and the recognition of the requirement for a crisis response capability that has resulted in an increased demand for special-operations-capable forces.

B. STATEMENT OF PROBLEM

The purpose of this thesis is to identify some of the monetary and non-monetary factors that affect the retention intentions of Junior Navy Officers, and therefore could be used to influence retention policies. The goal of this thesis is to identify and quantitatively evaluate the factors that predict the stated retention intention of Junior Navy Officers. The study uses data on stated retention intentions information of Navy officers from the 1999 "Survey of Active Duty Personnel." This survey consists of all active-duty Army, Navy, Marine Corps, Air Force, and Coast Guard members (including Reservists on

active duty) below the rank of admiral or general, with at least six months of active-duty service at the time of the survey mailings. Data from the 1999 survey are used to construct both a linear regression (probability) model and a binary logit regression model to identify the factors that predict the retention intentions of U.S. Navy officers who are within their initial obligated service.

Officers, depending on their commissioning source, have a contractual obligation to remain in the Navy for a period of 4 to 5 years. Some officers, depending on their occupations (aviators, nuclear), will have additional years of obligation. It is the officers who are nearing the end of their initial obligation who are the focus of this study, because they are now in a position to make a voluntary stay-leave decision. Prior to this time, these officers had neither the motivation nor the experience to truly and logically consider their options and make a stay-leave decision.

II. REVIEW OF LITERATURE

A. TURNOVER RESEARCH

Turnover is the number of people entering and leaving an organization. Price (1979) defines turnover as the degree of individual movement across the membership boundary of a social system. Turnover is “the leaving behavior of employees when they sever their association with the organization.” (Pearson, 1995) The reason why we should be concerned with turnover is that high turnover (low retention) can be very disruptive and expensive. Since the 1900’s there have been many qualitative and quantitative investigations of turnover (Cotton & Tuttle, 1986). In the last 60 years, researchers have conducted over 3,000 studies of job satisfaction and turnover.

Turnover can be voluntary or it can be involuntary. Previous retention studies have been inconsistent on the operational definition for voluntary and involuntary turnover, which has led to a variety of findings for the causal factors of employee turnover (Mobley, Griffeth, Hand and Meglino, 1979). These factors include individual background and demographic factors, personal characteristics, job/career characteristics, social environmental factors at work, social environmental factors that are not work-related (family), organizational characteristics and practices, job performance and evaluations, internal and external economic factors, and behavioral intentions (Wilcove, Burch, Conroy and Bruce, 1991). For the purposes of this paper, voluntary turnover is defined as turnover initiated by the individual, which

is different from involuntary turnover which is initiated by the organization. An aspect that is unique to the military is that of obligation, or contracts. Officers, as well as Enlisted, are obligated to serve on active duty for a period ranging from two to five years. Turnover during this obligated period, is usually due to medical disqualifications or behavioral problems.

The effects of turnover on cost, the effects of turnover on officer quality, the effects of turnover on recruiting, and the effects of turnover on productivity, are how an organization stands to gain or lose because of turnover.

Low officer retention means that the quality of the officer corps may be reduced. The Navy has very little control over which officers decide to leave. This means that there is no guarantee that the officers who remain are of the best quality.

With low retention, poor recruiting may result. Because of the lack of people to fill the ranks, recruiters are forced to lower standards in order to fill these gaps. Also, people who decide to leave the Navy may pass along negative information about the Navy to those most likely to consider entering the Navy, therefore influencing them to leave the recruitment pool.

Productivity is reduced as a result of turnover. When people perceive that their job is secure and meaningful, they tend to be more productive. As more people chose to leave the organization and turnover increases, people’s perception of job security and meaningfulness dissipates, ultimately leading to lower productivity. Brown and Leigh

demonstrate a link between psychological climate (perceived job security and meaningfulness) in the workplace and performance by employees.

> An environment that is perceived as psychologically safe and meaningful is related to greater job involvement and commitment of time and energy in the work of the organization. In turn, greater involvement and effort are positively related to superior performance. (Brown and Leigh, 1996)

B. CIVILIAN TURNOVER RESEARCH

Many organizations invest huge resources in their employees in the form of training salaries and benefits. When an employee quits, not only are the costs for training, salaries, and benefits of the leavers a concern, but the costs for hiring, training new replacement employees are a concern as well.

One of the theories explaining the process of employee turnover is suggested by Lee and Mitchell (1994). This theory focuses on the links between job satisfaction and employee turnover, and states that there are four different possible decision paths to turnover.

The first decision path is realized when a shock to the system occurs. “A shock to the system is theorized to elicit a memory probe for the recollection of a highly similar shock, situation, or response.” An example of this is when an employee has entertained the thought of quitting his job if he should come in contact with a large amount of money. For example, if he should inherit one million dollars (the shock), this shock would then bring to mind the previous thought of quitting his job. The shock may or may not be positive.

The second decision path is when a shock prompts an employee to reevaluate his or her attachment to an organization. An example of this is when a person is not given her expected yearly bonus (shock). As a consequence, she might decide that the commitment in the organization is only one-sided, and therefore she decides to quit.

The third decision path is when a shock to the system might motivate an employee to assess whether a basic attachment could be formed with another organization. An example of this path is when a man is transferred to a location, which he is unhappy with (shock), perhaps being sent to Bahrain instead of San Diego. As a result, he now considers advertisements for other positions at other organizations. When he finds that there are other alternatives available at other organizations, and if these alternatives are better, then he might decide to leave his present organization for the new one.

The forth decision path does not involve a shock. What happens is that when employees realize that, over time, they no longer fit in the organization because their values have changed or their goals were not reached, then these people might decide that it is time to leave the organization.

Those employees who leave an organization are not all alike, however. Jones and Sasser (1995), by creating a customer loyalty model, have identified four types of personalities that might decide to leave an organization, based on their loyalty to that organization. The four types are “the loyalist or the apostle”, “the defector or the terrorist”, “the mercenary”, and “the hostage”. The

original identification was that of customers' relationship to an organization, but can be applied to the employee's relationship to an organization.

The loyalist is one who is completely satisfied with a product or service and can be counted on for repeat purchases. The apostles are the loyalists who are so satisfied that they share their views with others. These, then prove to be excellent salesmen, even champions of ideas. However, because even a highly satisfied loyalist can change his views on service or products, he should always be treated well when things are going well. He should also be treated just as well, if not better, when things are not so well. As long as a person is satisfied with a product or service, he should not become a defector.

The defector is the person who leaves the company for another one. These defectors leave because of their dissatisfaction with a product or service. A defector then becomes a terrorist when they not only leave the organization, but they share their frustrations with fellow workers, thus making them potential defectors.

The mercenary is one who does not have any loyalty to an organization. They only remain with the organization for the money. As long as the price is right, they will stay. The instant that they are not satisfied with their price, they move on to an organization that is willing to give them their price.

The hostage, and the final type of personality, is that employee who feels that he has no other choice but to remain with an organization. No matter how badly they are treated by the organization, they feel they can't leave the

organization. Very little effort is made by the organization to relive this situation since it is apparent that the employee will not leave. This might be dangerous for the organization. If the organization is facing competition, the hostages will be the first to go, and might even become terrorist when doing so. However, if the organization is able to retain these hostages, they might try and make it difficult and expensive for that organization. They will seek to destroy the morale of the employees who remain by choice.

According to Jones and Sasser's customer loyalty model, the Navy should keep in mind the personalities of its Officers. Those officers who are serving only to meet their minimum service requirement are "hostages." Those who would stay on active duty without an obligation to serve are the loyalists. So when the service obligation is done, we can determine which group an officer belongs to, by his or her actions. If they remain after the obligation is complete, they are "loyalists", "apostles" and possibly "mercenaries". If they chose to leave, they were the "hostages" and have now become "defectors", and at times, "terrorists."

Research has indicated that the employee's level of job satisfaction affects commitment to the organization. However, there is evidence to support that commitment to the organization my affect the employee's level of job satisfaction. An example of this is the fact that graduates of the Naval Academy have higher retention rates than those from Officer Candidate School (OCS) or naval Reserve Officer Training Corps (NROTC). (Bowman, 1995)

This fact might be in part due to their higher commitment to the Navy.

Job satisfaction is determined by the individual's perceived "fit" within the organization, the predictability of job relationships, and the compatibility of the job and other roles. The perception of alternatives is a function of the number of organizations visible to the individual and the personal characteristics of the individual (March & Simon, 1958).

In a literature review conducted by Mobley, Griffeth, Hand and Meglino (1979), it was found that age, tenure, overall satisfaction, job content, intentions to remain on the job, and organizational commitment are consistently and negatively related to turnover.

In a multivariate model developed by Arnold and Feldman (1982), which was designed to analyze the turnover process of 654 accountants, many variables were examined. This model measured demographic variables, tenure, multiple measures of job satisfaction and organizational commitment, perceived job security, intention to search for an alternative position, perceived existence of alternative positions, and intention to change positions. The results show that turnover was significantly influenced by age, tenure, overall job satisfaction, organizational commitment, perceived job security, and intention to search for an alternative.

C. MILITARY TURNOVER RESEARCH

Civilian turnover research is helpful in understanding some of the retention issues that face the Navy. However,

we must to look at military turnover research to fully understand the military-specific aspects of these issues.

Cook and Morrison (1983) conducted studies, which determined that there is a relationship between career intentions and the professional development of SWOs. They found that career intentions of junior SWOs were positively related to SWO Personal Qualification System (PQS) progress. They also found that the faster that SWOs completed their PQS, the more likely it was for their junior SWO performance evaluations to be positive. This meant that as SWOs received positive performance evaluations, they were more likely to remain in the Navy. What Cook and Morrison also found was that there is a relationship between a person's billet, PQS progress, and career intentions. Specifically, they found that an officer's perception of his first tour significantly affected the retention decision.

A 1996 study, conducted by Nakada, Mackin and Mackie, on nuclear officer retention, found that pay had a positive effect on retention. Also, they found that unemployment effects were not strong, nor significant, indicating that economic conditions were not as important a factor in predicting retention as pay.

In a Naval Postgraduate Master's thesis, Zinner (1997) analyzed the factors that influenced the retention of male, junior Marine Corps officers within their initial period of obligated service. Using a multivariate logit model, Zinner identified characteristics that significantly influenced the decision of Marine officers to remain on active duty. These characteristics were commissioning

source, satisfaction with various intrinsic aspects of life in the Marine Corps, occupational specialty, whether or not the officer deployed to Operation Desert Shield/Storm, whether or not the officer searched for civilian employment in the last twelve months, the effect of retention on the career decision of the officer's spouse, and whether or not the officer believed that the skills he had acquired in the Marine Corps would be transferable to the civilian market.

An Annualized Cost of Leaving (ACOL) econometric model was developed by Warner and Goldberg (1984) and was used to predict whether or not an enlisted person will stay or leave the service after he has completed his obligated service in the Navy. It measures net benefits accrued by staying in the military for at least one more enlistment term rather than leaving immediately. This model is saying that people will try to maximize their utility by comparing the cost and benefits afforded to them for each career decision made. Individual utility includes both monetary and non-monetary returns.

As the person is deciding whether to stay in the military or to go to the civilian world, the ACOL model assumes that he looks at the anticipated cost and benefits of his going into the civilian world compared to each possible future year that he remains in the military service. Based on this model, an individual prefers to stay in the military for n more years (n = 1,2,3…s and s represents the maximum allowable future periods of service), to leaving immediately only if the ACOL (cost of leaving) exceeds the net preference for civilian life. If the net preference for civilian life is greater than the

ACOL, then that same person will chose to leave the military. Although Warner and Goldberg's study was done on enlisted personnel, the ACOL model can still be applied to officer retention models as long as it is modified to reflect the differences in the decision horizon applicable to officer and enlisted communities. (Warner and Goldberg, 1984)

Warner and Goldberg estimated retention models for 16 Navy enlisted occupation codes. They found that "variation in ACOL explains much of the variation in the probability of reenlisting." Their study found that, for most first term enlistees, the maximum ACOL value is observed over a horizon of a four-year reenlistment. The study also found that married people had higher retention rates than single people. They explained the higher retention of married personnel as being due to the perceived value of non-monetary benefits such as medical and dental benefits available to married people over single people. (Warner and Goldberg, 1984)

Mackin, Darlin and Hasan (2002) analyzed the impact of recent changes in officer compensation and the impact of quality of life factors on retention. Their assumptions were that the probability that an officer chooses to stay in the Navy depended on three factors, relative pay, "taste" for the Navy or military service, and working conditions. Another assumption was that each officer chooses a career path that will maximize his or her lifetime utility.

Two things were done to measure relative pay. First, the measure had to reflect expected current and future

income streams from both military and civilian careers. Second, the model used the ACOL framework, which measures net benefits, accrued by staying in the military for at least one more year rather than leaving immediately. Just as in Warner and Golberg's ACOL model, the decision rule is to stay if the ACOL value exceeds net distaste for military, and that the likelihood of remaining in the military equals to the probability that the net distaste is below the ACOL value.

A weakness with the standard ACOL model is the self-selection of officers over time. The taste distribution of a cohort changes as it passes sequentially through decision points. Mackin, Darlin and Hasan's (2000) model of Navy Officer Retention used the ACOL-2 (Panel Probit) Model. The ACOL-2 model controls for sample truncation that occurs over time as personnel separate by imposing a specific structure on the "taste" term in the retention equation.

The results of the Mackin et al. study were that the explanatory variables, which were unemployment rate (UNEMP), ACOL, Sex (FEMALE), Race (NON-WHITE), Dependent status (DEP), source of Commission (ACAD & NROTC) and prior enlisted service (ENLIND), were all significant at the .01 level of significance. The study finds that the Surface Warfare Officer Career Incentive Program (SWOCP) increased retention, at Minimum Service Requirement (MSR), by about 15%. It also showed that a 10% increase in the unemployment rate would increase the probability of staying by about 2% at MSR. Finally, the study showed that white female officers who were commissioned through the OCS

program were prior enlisted and had dependents were more likely to stay in the Navy. (Makin, Darlin and Hasan, 2002)

III. METHODOLOGY

A. OVERVIEW

This chapter describes three things. First, it describes the data used in this study. Second, it describes the dependent variable and the independent variables. Third, it describes the methodology used in the study.

B. DATA

The data for this study came from the 1999 DoD Survey of Active Duty Personnel. The population consisted of all active-duty Army, Navy, Marine Corps, Air Force, and Coast Guard members (including Reservists on active duty) below the rank of admiral or general, with at least six months of active-duty service at the time of the survey mailings.

The collection of the data was done by mail, which commenced in August 1999 and ended in January 2000. The data is a non-proportional stratified, single stage random sample of 66,040 service members. Only 33,189 eligible military members (50.25 percent) returned usable surveys.

For the purpose of this study, further reductions of the data were made. Since the goal of this study is to explain the retention intention of junior Navy officers who are within their initial obligation, the first reduction in data was made by including only officers who were active duty Navy, and in ranks 01-03. In addition, all female officers and all officers who did not have obligation time remaining were deleted from the data set. This was done because females only make up 17.88 percent of the data set, and they experience different decision-making issues than

men, such as pregnancy. Officers who do not have obligated service time were omitted because they also don't have the same concerns as those officers who have a remaining service time. They have already made a decision to stay in the Navy. The deletions left a sample size of 373 observations.

C. VARIABLE DESCRIPTION AND EXPLANATION

There are 22 variables used in this model, including the dependent variable. The dependent variable is called (INTENT) and is a binary variable, which is used to determine if an officer intends to stay (INTENT=1) or intends to leave (INTENT= 0) the Navy.

The independent variables consist of several groups including rank (O2 and O3), race (BLACK, HISP and OTHER), dependent status (MWD, and MND), maturity and experience (RTIME), community groupings (RLSTAFF and RESL), employment prospects outside Navy life (CIVTRANS and PROBJOB), expectations of military life (LIFEXP and CHOICEOCC) and satisfaction with military environment (FACTOR1, FACTOR2, FACTOR3 and FACTOR4).

This study will predict the retention intentions of junior Navy officers who are within their initial service obligation. Specifically, the model is focused on officers who are either 02 (LTJG) or 03 (LT) because these are the officers who are about to complete their initial service obligations.

A factor that potentially will influence an officer's retention intentions is family status. The two binary variables used in the model, Married w/ Dependents (MWD), and Married w/out Dependents (MND) were constructed by

combining two variables from the 1999 survey. The first variable was (XMIPM), a variable determining whether one was married or not, and the second was (m9958), a variable determining whether one had dependents or not. The base case is Single w/out Dependents (SND).

Another potential factor influencing an officer's retention intentions is race, specifically the perceptions that minorities might have better opportunities in the military community, than in the civilian environment. The binary variables that were created for race were a combination of officers who are Black and officers who are Hispanic called (HISPBLACK), and (OTHR), for officers who are other races such as Asian or Pacific Islander. The base case is white.

Another factor that could influence the retention intention of first term junior Navy officers is the age of the respondent. The presumption here is that an older more mature officer would have the wisdom and expertise needed to make a sound decision on whether to stay in the Navy, or leave. Also, the ages that would most likely represent the target group of O2 and O3 officers are between 23 and 34. The two variables that represent age and maturity are (RAGE_M) for age, and (RTIME), which measures the remaining time of obligated service. Here the interest was solely those officers who had obligation time remaining. These are the officers who are most likely to have a greater vested interest in staying in the Navy, the closer they get to the end of their obligated time in the service.

Another factor influencing retention intention is that of deployments or lack of deployments. Deployment

requirements differ depending on what community an officer is in. Three binary variables were created to represent these communities. The first binary variable was (URL) for unrestricted line officers; the second was (RLSTAFF) for those officers who were in restricted line staff or supporting positions such as Engineering Duty officers or Intelligence officers; and the third was (RESL) for restricted line officer positions such as medical and administration jobs. More deployment requirements exist for officers in the URL community as compared to officers who are in the RLSTAFF and RESL communities. The base case is URL.

Whether or not an officer believes that his skills obtained while in the Navy are applicable or transferable to the civilian community, and whether there are any opportunities for obtaining jobs in the civilian community will also influence an officer's intentions to stay in the Navy. The two variables created to represent these factors were (CIVTRANS), which measures the perception of how much military experience can be directly transferred to a civilian job, and (PROBJOB), which measures the perception of how easy it would be to obtain a good job in the civilian world if one left the Navy.

Obtainment of life goals, or the lack of obtainment, can also influence an officer's intentions to remain in the Navy. Two variables were created to depict this perception. The first variable is (LIFEXP), which is the perception of whether or not your life has become better or worse than expected since joining the Navy, and the second

variable is (CHOICEOCC), which reflects whether or nor one received the occupation of one's choice.

Finally, four variables were created to capture the elements of satisfaction with military life. A large group of variables that deal with job satisfaction are revealed in the survey questionnaire. Factor analysis was used to reduce the number of these variables, by identifying underlying dimensions among the variables and creating new, uncorrelated variables.

A group of 20 variables were combined, using factor analysis, to yield the final four composite variables depicting satisfaction with military life. The first factor (FACTOR1) measures the satisfaction with military work values. FACTOR1 is formed from the variables ENJOYMENT, LEADER, TRAINING, ASSIGN, MILVALUE and MORALE. The second factor (FACTOR2) is based on the satisfaction with military time allocation. FACTOR2 is formed from the variables PERSONALTIME, WORKLOAD, OTHERDUTY, DEPLOY, MANNING, EDUCATION and PCS. The third factor (FACTOR3) is based on the satisfaction with military pay and promotion; is formed from the variables PROMOTE, ADVANCE, PAY, RETIREMENT and SECURITY. Finally, the fourth factor (FACTOR4) is based on the satisfaction with military health care. It is formed from the variables DENTAL and MEDCARE. Tables 1 and 2 display each of the satisfaction variables and the variables used to construct the 4 factors along with their factor loadings.

Table 1. Satisfaction Variables.

Satisfaction with Military Work Values	
Variable	**Explanation**
ENJOYMENT	Amount of Enjoyment From Work
LEADER	Quality of Leadership
TRANINING	Training and Prof. Development
ASSIGN	Type of assignment received
MILVALUE	Military Values, Lifestyle, Tradition
MORALE	Satisfaction With Unit Morale
Satisfaction with Military Time Allocation	
Variable	**Explanation**
PERSONALTIME	Amount of Personal/Family Time Afforded
WORKLOAD	Satisfaction With Personal Workload
OTHERDUTY	Duties Other Than Regular Duties
DEPLOY	Satisfaction With Deployments
MANNING	Level of Manning at Unit
EDUCATION	Education Opportunities Off-Duty
PCS	Frequency of PCS Moves
Satisfaction with Military Pay and Promotion	
Variable	**Explanation**
PROMOTE	Promotion Pace
ADVANCE	Future Advancement Possibilities
PAY	Basic Pay
RETIREMENT	Retirement Pay for Member
SECURITY	Job Security
Satisfaction with Military Health Care	
Variable	**Explanation**
DENTAL	Dental care for Member
MEDCARE	Medical Care for Member

Table 2. Factor Analysis of Job Satisfaction Variables.

Component Factors and Related Satisfaction Variables	FACTOR LOADINGS			
Satisfaction with Military Work Values				
ENJOYMENT	**.70658**	.26348	.03436	-.03426
LEADER	**.62876**	.18648	.11593	.12440
TRANING	**.57240**	.14046	.25460	.13403
ASSIGN	**.56655**	.22465	.18817	-.02200
MILVALUE	**.50931**	.09581	.12103	.11608
MORALE	**.49171**	.34513	.10741	.12914
Satisfaction with Military Time Allocation				
PERSONALTIME	.08488	**.75635**	.00115	.03011
WORKLOAD	.22107	**.61939**	.12497	.14160
OHTERDUTY	.26044	**.46694**	.06641	.04862
DEPLOY	.29267	**.44884**	.09744	.00143
MANNING	.10239	**.36970**	.07218	.19451
EDUCATION	.15271	**.32039**	.05340	.09914
PCS	.15409	**.31862**	.23951	-.02292
Satisfaction with Military Pay and Promotion				
PROMOTE	.21219	-.04440	**.78573**	.03298
ADVANCE	.34668	-.02635	**.61205**	.06232
PAY	-.04204	.29729	**.40528**	.07110
RETIREMENT	.02660	.24016	**.37846**	.17273
SECURITY	.21751	.12349	**.32176**	.10219
Satisfaction with Military Health Care				
DENTAL	.08223	.13207	.07879	**.87344**
MEDCARE	.15160	.15061	.18149	**.72363**

Table 3 is provided to present the variable means and standard deviations.

Table 3. Descriptive Statistics.

Variable	Mean	Standard Deviation
02	.27394	.44648
03	.61693	.48668
HISPBLACK	.10022	.30063
OTHR	.08241	.27529
MWD	.23163	.42234
MND	.23608	.42515
RTIME	.203341	.83519
RLSTAFF	.36748	.48266
RESL	.17149	.37736
CIVTRANS	2.00445	1.15147
PROBJOB	4.46325	.82598
LIFEXP	2.97327	1.02173
CHOICEOCC	.73719	.44065
FACTOR1	6.44127E-17	.86547
FACTOR2	-9.2526E-17	.86131
FACTOR3	-2.3119E-17	.85699
FACTOR4	6.57727E-17	.90844

D. METHODOLOGY

One possible method for estimating multivariate models for this study is ordinary least squares. The linear regression model can be used to explain a dummy dependent variable. This is called a linear probability model. The model is specified as follows:

$$D_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \epsilon_i$$

Where $D_{i\ is}$ a dummy variable (code 1 and 0), Xs are independent variables, βs are regression coefficients, and ∈ is an error term.

However, there are flaws with a linear probability model when the dependent variable is binary. In particular, the error term is not normally distributed. Because the dependent variable takes on only two values, the error term is binomial. This makes hypothesis testing unreliable and the adjusted R^2 is not an accurate measure of overall fit. For models with a dummy dependent variable, adjusted R^2 tells us very little about how well the model explains the choices of the decision makers.

The issue of overall fit is extremely important. Take for example a variable such as pay. If a linear probability model were used to determine the outcome of a binary dependent variable, such as intent to remain in a hazardous occupation, one would expect that as pay increases so do the likelihood that one intends to stay in that hazardous occupation. However, it is quite possible that as pay increases, the likelihood to remain in that hazardous job will not increase much, if at all. However, there comes a point when the likelihood of intent to remain in that hazardous occupation will increase (as pay increases) and ultimately reaches a plateau. There is also a point where the likelihood of the intent to remain at that hazardous occupation will flatten out as pay increases. With a linear model, one would expect to see a straight line depicting the relationship of an independent variable to the dependent variable. However, in the scenario of the hazardous occupation, it appears that the

relationship of the same two variables is better depicted with an “S”-shape relationship rather than a straight line. An S-type relationship is better modeled with a logit model. (Studenmund, 2001)

A logit model can be used to calculate the effect of each independent variable on the probability of the outcome. The marginal effects represent the differences in the probability of the outcome when a base case variable changes by one unit. The equation for the logit model is:

$$L_i = in\ (P_i/1\text{-}P_i) = \alpha + \beta X + \varepsilon$$

Where L_i is the Logit of the i^{th} variable, and Pi = E $(Y=1|X_i) = \beta_1 + \beta_2 X_i + \ldots + \beta_n X_i$, and is the probability associated with the i^{th} variable. (Studenmund, 2001)

The model for this thesis is as follows:

(Probability of intent to stay in the Navy) = β_1 + β_2RAGE_M + $\beta_3$02 + $\beta_4$03 + β_5BLACK + β_6HISP + β_7OTHR + β_8SWD + β_9MWD + β_{10}MND + β_{11}RTIME + β_{12}RLSTAFF + β_{13}RELS + β_{14}CIVTRANS + β_{15}PROBJOB + β_{16}LIFEXP + β_{16}CHOICEOCC + β_{16}factor1 + β_{16}factor2 + β_{16}factor3 + β_{16}factor4 + ε (Studenmund, 2001)

IV. MODEL ESTIMATION

A. MODEL SPECIFICATION

In order to analyze the retention intentions of male junior Navy officers correctly we must first be able to define properly the critical factors that affect the career decisions of those same officers. Intent to remain on active duty is defined as a junior officer's decision to stay in the Navy. Then the retention outcome is modeled as a binary dependent variable. This variable, INTENT, takes the value of 1 if the officer intends to stay in the Navy and the value of 0 if he intends to leave. On the 1999 DoD survey, those officers who responded to "How likely are you to stay in the Navy?" as "Very likely or Likely" are identified as stayers. Those who responded to the same question as "unlikely or very unlikely" are identified as leavers. There is one more answer that could have been given and that was "neither likely nor unlikely". These officers were undecided so they were omitted because their intentions are not clearly known and, therefore might cause confusion in the results of the study.

As stated in Chapter III, because of the flaws with using a linear model with a binary dependent variable, the logit model is used for this study. It has been established that, for a binary dependent variable, the best results would be obtained by using a logit model.

B. INDEPENDENT VARIABLE DEFINITIONS

The independent (explanatory) variables are broken down into four categories: Demographic Characteristics; Rank and Experience Characteristics; and Economic

Characteristics; Military Occupation and Satisfaction Characteristics. These variables are defined below:

1. Demographic Characteristics

a. Race/Ethnic Group

The variables under the category Race/Ethnic Group are coded as dummy variables and include: BLACK, representing 5.62 percent of the data; HISP, representing 4.49 percent of the data; and OTHR, representing 7.87 percent of the data. Because of such a small sample representation of BLACK and HISP, and the hypothesized similarities in the retention intentions, a variable (HISPBLACK) was constructed from both BLACK and HISP. It is believed that members of these groups are more likely to intend to stay in the Navy when compared to the WHITE junior officers (the base case). It is assumed that minorities expect to have better chances in the military than in the civilian market due to perceived advantages in the Navy with respect to racial concerns, compared to a white person. Therefore, minorities might perceive that they would have a more difficult time trying to obtain a job in the civilian market compared to whites.

b. Family Status

The variables that are included in family status category all are coded as dummy variables. These values include single with no dependents (SND), single with dependents (SWD), married with no dependents (MND), and married with dependents (MWD). It is expected that MWD and MND are more likely to stay in the Navy, compared to SND, which is the base case. The reason for this is the difficulties that married officers can encounter when leaving the Navy, such as finding new employment in the

civilian market that has the same benefits and pay as in the Navy, and obtaining adequate health care benefits for dependents. Observations categorized as SWD were omitted from the sample since the respondents in this group constituted only represented 1.8 percent of the data.

2. Rank and Experience Characteristics

a. Military Rank

Three variables were constructed for this category. These binary variables represent the ranks of 01, 02 and 03; they make up 10.79 percent, 27.64 percent and 61.57 percent, respectively, of the data in the sample. Officer rank 01 is the base case. It is assumed that as officers reach the rank of 02 and 03, they have gained the experience necessary to make informed decisions, compared to an officer of the rank of 01 who would only base the decision to leave on hearsay from his peers. So the officers in ranks 02 and 03 can make a sound, reliable decision as compared to 01 officers in the base case. Also, officers in the two higher grades have gained the skills needed to be marketable in the civilian market, skills such as timeliness, responsibility, leadership and managerial “know-how.” Officers in the 02 and 03 are hypothesized to be more likely to leave the Navy as compared to the base case, 01.

b. Military Occupation

The category of military occupation, known as a community in the Navy, is made up of 3 variables. Unrestricted Line (URL) is comprised of officers in the four major combatant communities, SWO, Aviators, SEAL, and Submariners. Restricted Line Staff (RLSTAFF) is comprised of officers who are in restricted line staff or supporting

positions such as Engineering Duty officers or Intelligence officers. Restricted Line (RESL) is comprised of line officer positions such as medical and administration jobs. Approximately 46 percent of officers who took the survey were in the URL community, which serves as the base case. Compared the base case, RLSTAFF and RESL are expected to be more likely to leave the Navy because the jobs skills obtained in their communities are more marketable in the civilian workforce. The sample includes 45.17 percent from the URL, 36.63 percent from the RLSTAFF, and 18.20 percent from the RESL communities.

c. Life Expectation

A question in the 1999 DoD survey deals with the expectation of military life, which is the basis for the variable LIFEXP. The question is "Has your life been better or worse than you expected when you first entered the military?" The answers ranged from one, "much worse," to five, "much better." The assumption is that those officers whose life is perceived to be as expected or better than expected, will be more likely to stay in the Navy.

d. Matched Military Occupation

A dummy variable (CHOICEOCC) was created to represent whether or not an officer obtained his or her choice of military occupation. The question on the 1999 DoD survey was "Did you receive the military occupation of your choice?" If the officer did obtain the occupation of his choice, it is assumed that he will be more likely to stay in the Navy, compared to one who did not get his choice.

e. Remaining Time in Obligated Service

All officers are bound by contract to remain on active duty for a period of time varying between four and 8 years, depending on source of commission and occupation. The responses to this category, on the 1999 DoD Survey, range from “3 years or more” for a selection of value one, to “less than 3 months” for a selection of value 6. The assumption is that as an officer is nearing the end of his or her obligation, they will be more concerned with career outcomes and might choose to leave the Navy because of the experience gained in their occupation, and the perceived difficulty associated with sea duty and deployment. Those officers further away from the end of their obligated service are either too far away to be concerned, or too inexperienced to make a sound career decision.

3. Economic Characteristics

a. Probability of Finding a Good Civilian Job

The variable PROBJOB measures the perceived notion that an officer will be able to find a good job in the civilian market if he were to leave the Navy. On the 1999 DoD Survey, responses varied between “strongly disagree,” given a value of 1, and “strongly agree,” given a value of 5. The relationship of PROBJOB with the intention to stay in the Navy is anticipated to be a negative one. As an officer perceives that he can find a better job in the civilian market, the chances that he will stay decrease.

b. Transferability of Military Experience and Training to Civilian Job

Officers answered a question about how they thought their Navy skills would transfer to the civilian

market. Answers ranged between "strongly disagree," given a value of 1, and "strongly agree," given a value of 5. If officers believe that their skill will transfer into the civilian market, they will be more likely to leave the Navy, compared to officers who believe that their skill will not transfer.

4. Military Occupation/Satisfaction Characteristics

Many measures of satisfaction with facets of military life are available in the 1999 DoD survey. In order to reduce the number of variables used, factor analysis was employed. It is used to reduce the set of original variables to a new, smaller set of variables that capture similar attributes among the related groups of original variables.

From the factor analysis process, 20 satisfaction variables were grouped into four dimensions which were identified as four factors: FACTOR1 represents satisfaction with military work values; FACTOR2 represents satisfaction with military time allocation; FACTOR3 represents satisfaction with military pay and promotion; and FACTOR4 represents satisfaction with military health care. The make up and explanation for each of these four variables is displayed in Table 1, chapter 3. It is anticipated that the greater the perceived satisfaction with any of the four categories--work values, time allocation, pay and promotion, and health care--then the more likely an officer will be to stay in the Navy.

Table 4 is provided to give the reader a summary of all the explanatory variables and their expected signs.

Table 4. Variable Names and Expected Signs.

Variable Name	Expected Sign
Demographic Characteristics	
Race (HISPBLACK, OTHR)	+
Family Status (MND, MWD)	+
Rank and Experience Characteristics	
Military Rank (02, 03)	-
Military Occupation (RLSTAFF,RESL)	-
Life Expectation (LIFEXP)	+
Matched Military Occupation (CHOICEOCC)	+
Remaining Time in Obligated Service (RTIME)	-
Economic Characteristics	
Prob. of Finding a Good Civilian Job (PROBJOB)	-
Transfer of Experience to Civilian Job (CIVTRANS)	-
Military Occupation/Satisfaction Characteristics	
Satisfaction w/ Mil. Work Value (FACTOR1)	+
Satisfaction w/ Mil. Time Allocation (FACTOR2)	+
Satisfaction w/ Mil. Pay and Promotion (FACTOR3)	+
Satisfaction w/ Mil. Health Care (FACTOR4)	+

C. MODEL RESULTS

1. Expected Signs

Table 5 below shows the results of estimating a binary logit model. The signs of the coefficients of all the explanatory variables except for OTHR, RTIME, RLSTAFF, RESL, CIVTRANS, and FACTOR4, are as expected. Of the variables with unexpected signs, only RLSTAFF and CIVTRANS are significant at acceptable levels of significance (.1, .05, .01). A possible reason for the unexpected sign for RLSTAFF could be that officers in these occupations have recognized that the Navy offers better opportunities, because of the skills and experience gained over time than it does for URL. Also, these officers might be more likely than URLs to perceive that their specialized skills are not

transferable to the civilian community. Those officers might perceive that a community such as intelligence might not be very competitive in the civilian market. An explanation for the unexpected sign of CIVTRANS might be similar to that of RLSTAFF. Officers might have a perception that their skills are morel likely to be rewarded in the Navy than in the civilian market even though their skills are transferable to the civilian sector.

Table 5. Binary Logit Retention Intention Model.

Variable	Parameter Estimate	Standard Error	Probability Value	Partial Effects
02	-.9531*	.5120	.0626	-.15954
03	-1.4832***	.4832	.0021	-.21332
HISPBLACK	.0685	.4582	.8811	.01467
OTHR	-.00797	.5649	.9887	-.00168
MWD	.6730*	.3482	.0533	.02003
MND	.0949	.3282	.7765	.02003
RTIME	.0949	.1016	.3503	.02041
RLSTAFF	1.1307***	.3169	.0004	.27088
RESL	.6058	.3915	.1218	.14046
CIVTRANS	.2246*	.1300	.0841	.04942
PROBJOB	-.2589	.1765	.1425	-.08898
LIFEXP	.5702***	.1575	.0003	.13168
CHOICEOCC	.5950*	.3323	.0734	.1378
FACTOR1	1.1594***	.2014	<.0001	.27789
FACTOR2	.4614*	.1718	.0073	.10517
FACTOR3	.0794	.1648	.6301	.01702
FACTOR4	-.1068	.1563	.4944	-.02208
Intercept	-2.0151		.1190	
Predicted Probability	.30318			
-2 LOG L	348.975			
R^2_p	76.4			
Chi-Sq.	154.5153			
N	373			
***=Significant at one percent; **=Significant at five percent; *=Significant at ten percent.				

The variables O2, MWD, CIVTRANS, CHOICEOCC, and FACTOR2 are significant at the 10 percent level of significance. The Variables O3, RLSTAFF, LIFEXP, and FACTOR1 are significant at the one percent level of significance.

2. Partial Effects Interpretation

The partial effect of each explanatory variable on the dependent variable is calculated by measuring the impact of a one-unit change in the independent variable on the retention probability of a "typical" junior Navy officer. The reason partial effects must be calculated in this way is because the estimated logit coefficients do not provide a direct interpretation because of the non-linear nature of the model. A change in Y from one unit change in X_1 does not just depend on B_1 but also on the values of X_2, X_3 and all the other variables. In order to determine the partial effects, zeros were used for binary variables and the mean values were used for continuous variables in constructing the base case junior Navy officer.

The base case junior Navy officer is a white, single, without dependents, officer in pay grade 01, in the URL community, who has 7 months to one year left in obligated service. This same officer believes that he cannot transfer his skills gained in the Navy to the civilian market, and that he cannot find a good job outside the Navy. He received the occupation of his choice, and his military life has been as expected. Refer to Table 5 for summary of a summary of partial effects.

The partial effects show that the higher ranks are less likely to stay in the Navy. An 02 Navy officer has a

15.95 percent lower retention intention than an O1 Navy officer, and an 03 has a 21.3 percent lower retention intent, ceteris paribus.

The variable, MWD, is positive and is significant at the 10 percent level of significance. A Married junior Navy officer with dependents has a 2 percent higher retention intention than a single officer with no dependents, ceteris paribus.

The variable, RLSTAFF, is positive and is significant the .01 level. A junior Navy officer in the RLSTAFF community has a 27.09 percent higher retention intention than a junior Navy officer in the URL community, ceteris paribus.

The variable, CIVTRANS, is positive and is significant at the 10 percent level of significance. A one-unit increase in the measure of perception of being able to transfer jobs skill to the civilian market, given the base case characteristics, yields a 4.94 percent increase in the retention for junior Navy officers, ceteris paribus.

The variable, LIFEXP, is positive and is significant at the .01 level. A one-unit increase in the scale measuring the perception that military life has been as expected, given the base case characteristics, yields a 13.17 percent increase in the retention for junior Navy officers, ceteris paribus.

The variable, CHOICEOCC, is positive and is significant at the 10 percent level of significance. A junior Navy officer who has obtained the occupation of his choice has a 13.78 percent higher retention intention than

a junior Navy officer who did not obtain the occupation of his choice, ceteris paribus.

The variable, FACTOR1, is positive and is significant at the .01 level. A one standard deviation increase from the average component score of this factor, which measures satisfaction with military work values, results in a 27.29 percent increase in retention intentions of junior Navy officers, ceteris paribus.

The variable, FACTOR2, is positive and is significant at the 10 percent level of significance. A one standard deviation increase from the average component score of this factor, which measures satisfaction with military allocation of time, results in a 10.51 percent increase in retention intentions of junior Navy officers, ceteris paribus.

D. MODEL GOODNESS-OF-FIT

When employing a multivariate model, one worries about the statistical significance of each explanatory variable as well as the overall goodness-of-fit of the model. Out of the 17 variables that make up the model, nine of them were found to be significant.

Goodness-of-fit is important in determining whether a model is sound. For a logit model, one must look at the Global Null Hypothesis tested when running the model. The test of this Hypothesis has a Chi-Square distribution for the null hypothesis that all of the estimated coefficients in the model are zero. The model analyzed in this thesis produced a –2 Log L Chi-Square score of 154.5153 with 17 degrees of freedom and an associated probability value of <.0001. Therefore, the null hypothesis that the

coefficients of all the explanatory variables are zero is rejected and it can be concluded that the explanatory variables jointly are statistically significant in explaining the dependent variable.

A second measure of goodness-of-fit when looking at logit models, is the percentage of correctly predicted observations in the sample, or R^2_p. This model's R^2_p is 76.4 percent with the probability cut-point of .56. This means that 76.4 percent of the observations in the data set are correctly classified as stayer or leavers in this model.

Another factor when looking at goodness-of-fit, is degree of multicollinearity. Whenever explanatory variables are linearly related to one another, the problem of multicollinearity exists, which can make coefficient estimates unstable. For this model, simple correlation coefficients between the explanatory variables were examined. The VIF is looked at in the linear regression model, and can be used to ensure better goodness-of-fit in the Logit model. It was found that the Years of Service (YOS) variable, the Age (RAGE_M) variable, and the pay grade (O2, O3) variables were highly correlated. YOS had a correlation coefficient of 0.75 with RAGE_M.

Variance inflation factor (VIF) is another tool used to measure the severity of multicollinearity. The VIF measures the extent to which a given explanatory variable can be explained by all other explanatory variables in the equation. RAGE_M had a VIF value of 2.73 while the model VIF was only 1.52. Clearly the RAGE_M VIF was much higher than the model VIF. Based on these two tests, years of

service (YOS) variable and the age (RAGE_M) variable were omitted.

Factor analysis was the last measure taken to limit multicollinearity among the satisfaction variables measuring similar attributes. From the factor analysis, 20 satisfaction variables were combined and used to produce the four factor variables (FACTOR1-FACTOR4) representing satisfaction with military life.

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V. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

This thesis analyzes factors that influence the retention intention of junior Navy officers who are within their initial service obligation. In order to determine the significance of these factors for the retention intentions of junior Navy officers, a multivariate logit model is estimated. The study use data on stated retention intentions information of Navy officers from the 1999 "Survey of Active Duty Personnel." This survey consists of all active-duty Army, Navy, Marine Corps, Air Force, and Coast Guard members (including Reservists on active duty) below the rank of admiral or general, with at least six months of active-duty service at the time of the survey mailings. The data were restricted to: Navy officers of the rank 01-03, who are male, and have obligation time remaining (N=373).

The factors that were found to be significant in explaining the retention intentions of junior Navy officers with an obligation, were: Military Rank (O2, O3), Military Occupation (RLSTAFF), Family Status (MWD), Life expectations (CIVTRANS, LIFEXP, and CHOICEOCC), and FACTOR1, satisfaction with military work values, and FACTOR2, satisfaction with military allocation of time.

The Navy cannot influence some of the factors that have been shown to be significant such as the expectation that skills gained in the Navy are transferable to the civilian market. What are important to the Navy are the

significant explanatory variables that may be influenced by Navy policy makers.

Officers in the rank of 02 and 03 were less likely to intend to stay in the Navy, 15.95 and 21.33 percent less likely, respectively, than a navy ensign (rank of 01). The reason for this might be because of a negative experience gained during the four year experience between entry and 03. Some of the issues that might lead to this negative effect might be lack of personnel and equipment available in accomplishing a constant or growing workload, sea duty and ship or squadron. If an officer has a demanding workload but is not given the tools to accomplish the work, this may discourage him from remaining in the Navy.

Family status is a positive factor. An officer who is married and has dependents is 2 percent more likely to intend to remain in the Navy compared to a single officer with no dependents. The Navy is making strides to ensure that its personnel have better options for their dependents such as better privileges with the commissary and exchange, better service at medical facilities, and ensuring the both the service member and the spouse have continued medical benefits after retirement, and this policy seems to be working. Continuing to ensure that the needs of the service member's families are met will ensure that retention intentions of these members will sway towards staying in the Navy.

Life expectation is a difficult issue to deal with. Officers who perceived their life in the military has been as expected intend to remain in the Navy at a 13.17 percent higher rate. It is, however, difficult to influence

everyone's perceived expectations of Navy life. Although influencing actual life and expectation once in service, the Navy's only method of influence prior to joining the service, is through positive recruitment and advertisement. However, even with the best advertising, a person makes up his own mind based on what he perceives. So if the perception is not realistic, there will be a danger that an officer will believe that he was cheated out of an expected way of life.

When it comes to meeting an officer's choice of occupation, the Navy can ensure better matches. An officer who obtains the occupation of his choice, has a 13.78 percent higher probability of intending to remain in the Navy than an officer who does not. Although the needs of the Navy and availability tend to dictate the occupation that is given to officers, perhaps more effort can be made by policy makers in finding a better fit, or match between the officers and the jobs assigned.

Satisfaction with military life is a factor that can be influenced by Navy polices. FACTOR1, satisfaction with military work values, and FACTOR2, satisfaction with military time allocation were found to be significant in determining the retention intentions of Navy officers. (Refer to table 1 and 2 for an explanation of the factors making up variables FACTOR1 and FACTOR2). If officers perceive a positive satisfaction with FACTOR1 and FACTOR2, then they have, respectively, a 27.29 and 10.51 percent higher likelihood of intending to stay in the Navy after their initial obligation. This means that as officers perceives issues dealing with FACTOR1, enjoyment of

military life, leadership, training, assignments, military values and morale, and FACTOR2, personal time, workloads, deployments, and manning, as being positive, then positive retention intentions followed. These are all issues that Navy policy makers have a potential to influence.

B. RECOMMENDATIONS AND FUTURE RESEARCH

Because of the small numbers of female and minority officers sampled, it was difficult to look at the factors that may have affected the retention behavior of these two important groups. Studies conducted in the future should ensure that these groups have sufficient sample sizes, perhaps by over-sampling these groups. From the original sample size of 66,040 service members only 50.25 percent of eligible military members, 33,189, returned usable surveys. Ensuring high response rates will ensure the largest possible sample size and improve retention analysis.

Family status is a recurring factor in influencing retention intentions in the military. Follow-on research on the significance of family on the retention intentions of service members should be continued. Programs such as “Homesteading” where the Navy attempts to ensure the sailors obtain billets at locations of their choice, should be made permanent. This program has the potential to show promising and positive results on the retention intentions of service members. Currently, officers are not specifically included in this program, but it would be interesting to see the results on retention intentions of officers if this program were implemented for them.

Surveys such as the 1999 DoD Survey of Officers and Enlisted Personnel should be continued. These surveys

provide valuable information on the intentions and expectations of service members. They provide explanations to problems with retention, recruitment, and attrition at a reasonable cost.

A look at retention over time would also be helpful in determining if attitudes have changed and if so, to what extent. Once Policy changes have been implemented, often they do not show improvements, or problems, until several years after implementation. In order to determine if the implementations have addressed the problems they were designed to help, a continuous look at the effects is needed. An active feedback and evaluation would make this possible.

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