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Nuclear Officer Bonus & Incentive Pay (NOBIP) and Retention

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Monterey, California: Naval Postgraduate School

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NPS NRP Executive Summary

Nuclear Officer Continuation Bonus (COBO) and Retention

Period of Performance: 10/26/2020 – 10/23/2021

Report Date: 10/20/2021 | Project Number: NPS-21-N330-B

Naval Postgraduate School, Graduate School of Defense Management (GSDM)



NAVAL RESEARCH PROGRAM
NAVAL POSTGRADUATE SCHOOL
MONTEREY, CALIFORNIA

NUCLEAR OFFICER CONTINUATION BONUS (COBO) AND RETENTION EXECUTIVE SUMMARY

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Project Summary

Retaining top-quality nuclear officers is critical to mission readiness. To facilitate officer retention, the Navy offers a bonus, the Nuclear Officer Continuation Bonus (COBO), to officers who have fulfilled the minimum service requirement (MSR). The Navy recently raised the amount of the bonus in the hope of increasing retention. It is mission-critical to understand how responsive retention rates have been to COBO, particularly in light of the recent changes. This study examines the efficacy of the most recent bonus policy for nuclear officers, NAVPOL 20241 and its immediate predecessor. Specifically, we used sponsor-provided data on 2,058 nuclear officers across seven year groups to assess the impact of the latest NAVPOL on nuclear officer retention relative to the immediately prior policy. Statistical analyses using survivorship modeling revealed that individual characteristics, such as the overall unemployment rate, marital status, presence of dependents, length of military tenure, and membership in certain racial/ethnic groups are all positively and statistically significantly associated with nuclear officer retention. We recommend the Navy commission additional studies to obtain a deeper understanding of the non-monetary factors influencing nuclear officer retention, rather than a simple increase in the dollar amount of the COBO.

Keywords: *Retention, bonuses, officer pay, compensation, turnover*

Background

Retention of high-quality nuclear officers is critical to Fleet readiness. The Navy recently adopted a new bonus pay scheme for nuclear officers, NAVPOL 20241, because anecdotal evidence suggests that the predecessor policy, which was also adopted to increase retention, did not fully achieve the desired effect. It is important to the Navy to understand changes in nuclear officers' decision making and turnover decisions in response to changes in COBO. The Navy has faced a historically competitive job market with regard to retention of the best nuclear officers. It is mission-critical for leadership to understand how historical trends and new pressures due to the COVID-19 pandemic mitigate or enhance the effects of the COBO compensation plan.

Prior literature has explored the impact of monetary and qualitative factors on the recruitment, retention, and job satisfaction of military personnel (e.g., Lewin Group 2007; RAND 2012; RAND 1996; RAND 1993). Additionally, an extensive body of literature in accounting, corporate finance, and economics addresses the role of compensation in incentivizing certain behaviors among economic agents (Coughlan and Schmidt 1985; Hadlock and Lumer 1997; Murphy 1999; Desai et al. 2006). Extant research in managerial and defense compensation provides a natural foundation on which to build a study about current COBO practices.

To address the above concerns regarding retention, we first performed an in-depth literature review of economic, finance, accounting, and management literatures on compensation. We then used sponsor-provided data, combined with the latest research findings, to design an empirical study of the impact of NAVPOL 20241 on nuclear officer behavior. We created a model of professional survivorship based on employment policy theory, prior research, and input from the sponsor. For example, our model included



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controls for personal officer characteristics such as age, military tenure, race, and marital status, as well as characteristics of officers' prior experiences with the Navy before signing the Department Head (DH) contract (including the location of the Department Officer Tour, the type of vessel on which the Department Officer Tour (DOT) was performed, and whether the vessel was in the shipyard during the officers' DOT. While the data contain information on the entire length of the officers' careers, this analysis focused particularly on the time immediately following the point that the officers passed their assessment, as this was a likely period where the officers' views on whether to remain in the Navy and continue as a department head are established. Additionally, the model includes the unemployment rate and the locality of the officers' homeport to control for effects of the regional economy.

The analysis employed data from 2,058 individual nuclear officers spanning year groups 07 through 13, with relatively even distribution of officers across the year groups. The sample of Nuclear Officer personnel data was obtained directly from the sponsor. The model describes the likelihood that an individual officer would sign a DH contract given their personnel characteristics. The model was estimated using logistic regression.

Findings and Conclusions

The estimates obtained from the logistic regressions identified several individual characteristics that have a statistically significant relationship with the likelihood of signing a DH contract. Age, prior enlisted service, marital status, and having dependent children at the time of passing were all positively associated with signing a DH contract. A higher unemployment rate in the macroeconomy was also positively linked with the likelihood of signing. Officers who served their DOT on certain types of ships were less likely to sign than those who served on other vessels.

We also thoroughly examined the hypothesis that serving a DOT aboard a ship that was in the shipyard impacted retention rates. Ultimately, we found no evidence within our sample to support the argument that time in the yard affects retention.

The analysis was replicated with a smaller data set of Surface Warfare Officers (SWOs); empirical results revealed that observed associations between the above-described characteristics for nuclear officers were subsumed by year-group membership for SWOs. The SWO analysis did not reveal any findings that were not consistent with the larger study of submarine nuclear officers. Variations in retention for SWOs appeared to be largely driven by year groups for this subset of naval officers.

Taken together, these results suggest that the dollar value of the COBO bonus may not be sufficient to fully explain nuclear officers' retention decisions. Extensive prior research finds a weak association between compensation amounts and retention decisions in the public sector, while a stronger association can be found between soft factors (such as sense of efficacy and job satisfaction) and retention decisions. Given the budget reductions currently facing the Navy, we recommend the Navy further explore the non-monetary factors associated with nuclear retention as an additional mechanism to meet their staffing goals.



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Recommendations for Further Research

Further research can explore and identify the non-monetary factors associated with nuclear officers and Surface Warfare Officers retention. Survey research would be useful to understand these factors. We recommend the Navy enhance non-monetary factors associated with officer retention rather than increasing the size of the Nuclear Officer Continuation Bonus, as cash compensation alone is unlikely to fully meet the Navy's retention goals. We also recommend the Navy separately examine the impact of compensation models on the retention of enlisted personnel, as their background and career trajectory significantly differ from those of officers.

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Acronyms

COBO	Nuclear Officer Continuation Bonus
DH	Department Head
DOT	Department Officer Tour
SWO	Surface Warfare Officer

