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REBALANCING MILITARY COMPENSATION

AN EVIDENCE-BASED APPROACH

TODD HARRISON

REBALANCING MILITARY COMPENSATION: AN EVIDENCE-BASED APPROACH

By Todd Harrison

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About the Author

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Since joining CSBA, Mr. Harrison has authored a number of publications on trends in the overall defense budget, modernization initiatives, the defense industrial base, military personnel costs, and the cost of the wars in Iraq, Afghanistan, and Libya. He frequently contributes to print and broadcast media and has appeared on CNBC, CNN, NPR, Al Jazeera English, and Fox News. He has been a guest lecturer for a number of organizations, including Harvard's Kennedy School of Government, the U.S. Army's School of Advanced Military Studies (SAMS), and the National Defense University. Mr. Harrison is a member of the Council on Foreign Relations.

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EXECUTIVE SUMMARY

The all-volunteer force, in its current form, is unsustainable. Over the past decade, the cost per person in the active-duty force increased by 46 percent, excluding war funding and adjusting for inflation. If personnel costs continue growing at that rate and the overall defense budget remains flat with inflation, military personnel costs will consume the entire defense budget by 2039. But cost growth is not the only factor affecting the long term sustainability of the all-volunteer force. The fundamental structure of military compensation remains largely unchanged despite the transition to an all-volunteer force four decades ago. The challenge of an all-volunteer force is that the military must be able to attract a sufficient number of short-term volunteers to alleviate the need for conscription. In its final report issued in 1970, the Gates Commission recommended a set of comprehensive reforms to military pay and benefits deemed necessary for a successful end to conscripted service. The draft officially ended in 1973, but the Gates Commission's recommendations were largely unheeded in the years that followed.

The objective of this study is not to solve the problem of rising military personnel costs. Solutions are abundant. Dozens of studies have recommended major reforms to the military compensation system using economic theory, focus groups, leading experts, and best practices from other organizations. But these studies have largely focused on inputs—the costs of different forms of military compensation. Few studies have attempted to understand the output of the military compensation system—how service members value their total compensation package. Even fewer have used empirical evidence to support their conclusions. As a result, many studies recommend changes to the compensation system that reflect the value judgments of the authors rather than the 1.5 million who serve on active duty. What is lacking is hard data on how service member value different types of compensation. The purpose of this study is to contribute something new to the debate—an evidence-based approach to rebalancing the military compensation system.

Methodology

This report presents a methodology for reforming the military compensation system based on a quantitative understanding of service members' preferences. The central idea behind this approach is to measure what types of compensation are most important to individual service members and how they make tradeoffs between different forms of compensation. Do members of the military prefer cash compensation up front rather than a larger amount of deferred compensation in the future, and by how much? Do they prefer some types of benefits, such as free dependent healthcare, to other types of benefits, such as commissary privileges? Do service members value benefits commensurate with what it costs the government to provide them? Understanding these preferences makes it possible to identify opportunities to both reduce costs and maintain or improve the attractiveness of the compensation system. Moreover, by understanding how decision-making varies by rank, age, and years of service, the compensation system can be rebalanced to improve the attractiveness for key groups of personnel at critical points in their careers.

As a proof of concept, CSBA partnered with TrueChoice Solutions Inc., a firm that specializes in developing on-demand preference analytics solutions for Fortune 500 companies and government agencies, to conduct a trial study. The study asked service members to rate their preferences for different levels of ten types of compensation. For example, one type of compensation measured in the study was the use of a performance-based bonus. Respondents were asked to rate their preferences on a scale of 0 to 10 for no performance-based bonus, a bonus of up to 5 percent, up to 10 percent, up to 15 percent, and up to 20 percent. After indicating their preferences for different levels of pay and benefits, service members were asked to rate the importance of each type of compensation relative to one another. Respondents were then asked to make pairwise comparisons among different types of compensation to verify their responses. For example, the study would ask a user if they preferred a performance-based bonus of up to 20 percent with no increase in basic pay or a 15 percent performance-based bonus with a 5 percent increase in basic pay.

The study ran for 12 weeks and generated 2,655 responses. Just over half of the responses came from active-duty service members, the focus of this analysis. The sample of active-duty personnel includes responses from all four Services and from men and women in roughly the same proportions as the actual active-duty population. But the study sample differs from the actual active-duty population in the proportion of responses from junior enlisted personnel (pay grades E-1 to E-4). Junior enlisted make up 45 percent of the active-duty force but only 5 percent of the study sample. Other ranks are relatively overrepresented in the study, particularly senior officers, which comprise only 6 percent of the active-duty force but are 32 percent of the study sample. The study results are not analyzed

in aggregate because of the clear differences in demographics between the study sample and the actual active-duty population.

One obvious limitation of the study is that it is not based on a random sample. Because this study was not sponsored or endorsed by the Department of Defense (DoD), it relied primarily on free publicity in the defense media. The use of free publicity introduces the potential for a self-selection bias in the results because those who read these publications and take the time to click on a link for a survey may have different preferences than those who do not. Another key limitation of this analysis is that it measures the preferences of service members, not their actual behavior. Making the compensation system more or less attractive does not guarantee that recruiting and retention will improve or falter. If DoD were to implement the approach used in this study, it could link study responses to actual behavior and, over time, establish a correlation between expressed preferences and actions.

Findings

The study analyzes the data by rank, age, years of service, and other factors that emerge as being important in determining how service members value different forms of compensation. The results presented are *findings* based on the data collected in the study, not *recommendations* for changes in compensation policy. Many other factors must be taken into account before a change can be recommended, such as fairness, equity, feasibility, and potential operational impacts on the military. The following is a summary of the major findings:

- BASIC PAY: Service members of all ranks place a high value on basic pay, especially those at the lower end of the pay scale. A dollar spent increasing basic pay for junior enlisted has more than six times the impact than a dollar spent increasing basic pay for senior officers.
- PERFORMANCE-BASED BONUS: Service members do not appear to value a performance-based bonus commensurate with its costs. Even the 18 to 29 age group, which values a performance-based bonus the most, values it at only a fraction of what it would cost to implement.
- TRICARE PRIME FEE PAID BY RETIREES UNDER 65: Personnel tend to undervalue retirement healthcare benefits, particularly early in their career. Even among mid-career personnel, those with 6 to 15 years of service, 89 percent would prefer an immediate $350 increase in annual pay in exchange for a $1,400 per year increase in the TRICARE Prime fee they would pay once they retire.
- TRICARE FOR LIFE FEE PAID BY RETIREES 65 AND OLDER: Service members at all stages of their career do not value the free TRICARE for Life benefit

commensurate with what it costs DoD to provide. More than 90 percent of service members in all groups prefer an increase in basic pay of a lesser amount than the savings achieved from raising the TRICARE for Life fee as proposed in the FY 2013 budget request.

- ACTIVE DUTY DEPENDENT HEALTHCARE FEE: Service members with dependents value free dependent healthcare 52 percent more than those without dependents. But even 75 percent of those with dependents do not value free dependent healthcare commensurate with what it saves them in annual premiums.
- YEARS OF SERVICE REQUIRED FOR RETIREMENT: Service members of all ranks, ages, and years of service prefer maintaining the 20 years of service requirement to earn a retirement rather than lowering it to 15 years.
- RETIREMENT COLLECTION AGE: More than 80 percent of service members in each age group would prefer a 1 percent increase in basic pay in exchange for raising the retirement collection age to 50.
- DEFINED-CONTRIBUTION PLAN: Service members in all groups greatly undervalue the contribution rate (the percentage of basic pay the military would contribute each year) for a defined-contribution retirement plan.
- FAMILY AND CAREER SERVICES: More than 75 percent of junior officers and 99 percent of all other rank groups do not value child, youth, and school services as much as it costs to provide.
- MILITARY EXCHANGES: The study reveals that military exchanges are valued as much or more than they cost by a majority of service members in each rank group.
- COMMISSARIES: One-third of officers value the commissaries as much or more than they cost, compared to less than 6 percent of enlisted.
- CHOICE OF DUTY STATION AND LENGTH OF TOUR: Of all the additional services and in-kind benefits examined, service members of all ranks place the highest value on being able to choose their duty station and length of tour. Moreover, officers and senior enlisted with dependents tend to value this benefit more than their peers without dependents.
- ADDITIONAL VACATION DAYS: On average junior enlisted and junior officers value additional vacation days as much or more than they do commissaries and military exchanges.

These findings suggest that opportunities exist to make the compensation system more efficient at delivering value to service members. DoD could rebalance the allocation of resources to move funding from undervalued forms of compensation, such as free TRICARE for Life, to more highly valued forms of compensation,

such as basic pay. Rebalancing the compensation system would reduce costs while maintaining or improving the perceived value for service members.

Recommendations

The chief recommendation of this study is that DoD conduct a full study of its own using the methodology presented. It should draw from its own personnel databases to create a larger, randomized sample. Particular attention should be paid to junior enlisted personnel, given the significantly lower participation rate of junior enlisted personnel observed in this trial study.

A future study should expand both the types of compensation examined and the levels within each type of compensation, particularly in the areas of retirement benefits, in-kind benefits, and bonuses. The tradeoff in expanding the number of compensation attributes and levels measured in the study is that as the number of questions increases, the amount of time required to take the survey increases. The ten types of compensation examined in this study required an average of 10.4 minutes to finish and resulted in a completion rate of 90 percent. To maintain a similar time requirement and completion rate, the survey could be designed in two or three versions. Each version could ask a different set of questions about different types of compensation, and respondents could be randomly assigned a version of the survey. This approach would require a larger pool of respondents to achieve the same quality of results.

In order to get the most value from implementing this methodology, it should not be a single study. Once the survey instrument is in place, it should be used on a periodic basis to monitor shifts in the preferences of service members. Moreover, the study responses should be linked with personnel data to track how the stated preferences of service members in the study correlate with their actions. Over time, this would allow DoD to establish a relationship between how users value certain types of compensation and how they behave in terms of retention, performance, and other metrics.

A final recommendation is to design separate surveys for family members of active-duty personnel and for guard and reserve personnel. For simplicity this survey asked the same set of questions to all respondents, but in reality the concerns of these groups and the benefits offered are substantially different and warrant a tailored set of questions.

Final Thoughts

The military compensation system has languished since the transition to an all-volunteer force some four decades ago. As this study demonstrates, the preferences of junior personnel—the short-term, non-career volunteers that make an all-volunteer force possible—are significantly different than the career personnel

the compensation system was designed for before the transition to an all-volunteer force. Keeping an all-volunteer force viable without fundamentally reforming the compensation system has proven costly and it is, ultimately, unsustainable.

The fiscal crisis DoD and the nation now face provides a unique opportunity to address the long-term structural problems in the military compensation system. Military personnel costs are on an unsustainable trajectory. If DoD does not find ways to reduce personnel costs during this anticipated period of flat or declining defense budgets, it will be faced with a precarious dilemma—either downsize the force substantially or hollow out the budgets for other priorities, such as research and development, procurement, and readiness.

While the impending fiscal crisis may provide an impetus for reform, getting better value out of the compensation system is a sound idea regardless of the budget environment. The preference-based benefits optimization approach presented in this study has been used by private-sector organizations for years. The question is not can it be done, but rather how much longer must the military wait?

The high cost of the military compensation system would be a price worth paying if there were no alternative. It is intolerable when an alternative exists that is consistent with our national security needs and the preferences of those who serve.

INTRODUCTION

The all-volunteer force, in its current form, is unsustainable. From 2001 to 2011, the cost of military pay and benefits on a per person basis increased by 46 percent, excluding war funding and adjusting for inflation, making it one of the fastest growing areas of the defense budget. If personnel costs continue growing faster than the overall defense budget, they will gradually crowd out funding for training, readiness, modernization, and other priorities. Norm Augustine famously projected that the exponential growth in the unit cost of fighter aircraft meant that by the year 2054 the entire defense budget would be needed to procure just one aircraft.[1] In a similar manner, military personnel costs will consume the entire defense budget by 2039 if the overall defense budget remains flat with inflation and personnel costs continue growing at the rate experienced over the past decade.[2]

But cost growth is not the only factor affecting the long-term sustainability of the all-volunteer force. Since the end of the draft nearly four decades ago, the military compensation system has failed to adapt to the unique needs of an all-volunteer military. The Gates Commission was appointed in 1969 to study the feasibility of transitioning to an all-volunteer force. In its final report issued in 1970, the Commission recommended a set of comprehensive reforms to military pay and benefits deemed necessary for a successful end to conscripted service. Although the draft officially ended in 1973, the Gates Commission's recommendations were largely unheeded in the years that followed. As a result, the fundamental structure of military compensation remains largely unchanged despite the transition to an all-volunteer force.

Since the end of the draft nearly four decades ago, the military compensation system has failed to adapt to the unique needs of an all-volunteer military.

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[1] Norman R. Augustine, *Augustine's Laws* (Reston, VA: American Institute of Aeronautics and Astronautics, 1997), p. 107.

[2] These costs include the Defense Health Program as part of total military personnel costs even though it is funded under the Operation and Maintenance title of the budget. The compound annual growth rate for military personnel costs from Fiscal Year (FY) 2001 to FY 2011 is 4.2 percent, adjusting for inflation and excluding war-related funding.

As the Gates Commission and many other studies since have noted, a key difference in an all-volunteer force is that compensation plays a vital role in filling the ranks. While a military career has no direct parallel in the private sector, an all-volunteer force must nevertheless compete directly with private sector employers to attract and retain quality personnel. Military compensation must therefore be competitive with what private sector employers are offering—not just in total compensation but in the mix of cash, deferred, and in-kind benefits. As Colonel Karl Gingrich noted in a recent Brookings study, "A compensation system based on the characteristics and values of the Baby Boomer generation may not meet the intrinsic needs of Millennials and thus will have to be reformed to be relevant."[3] But how do the preferences of today's service members differ from those of previous generations? In what specific ways should the military compensation system be reformed to meet the needs of today's all-volunteer force?

Reforming the military compensation system is no simple task. It is a politically sensitive issue that successive Congresses and administrations have been reluctant to tackle, particularly during the past decade of war. A key impediment to reforming the military compensation system is a lack of data on how service members value various forms of compensation. Over the past decade, new benefits were added and existing benefits were expanded with little regard for how service members valued these benefits or their preferences among different types of benefits. One of the risks in a declining budget environment is that pay and benefits could be cut in a similarly haphazard manner. Rather than focusing exclusively on how to reduce costs, this report argues that the Department of Defense (DoD) and Congress should instead use an evidence-based approach that focuses on getting better value from pay and benefits programs.

A number of recent studies have recommended changes to the compensation system, but little if any quantitative data are available on the relative value service members place on different types of compensation. For example, the Army increased its total funding for recruiting and reenlistment bonuses from $1.2 billion in Fiscal Year (FY) 2005 to $2.1 billion in FY 2008 without using quantifiable data to set the amount of the bonuses it used to achieve the desired effect. Recruiting and retention improved significantly, but according to the Government Accountability Office (GAO) analysis the Army did not know "whether it was paying more than it needed to in order to get the same results."[4] The Army had awarded billions of dollars in bonuses without evidence to justify the amount of

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[3] Karl Gingrich, *Making it Personnel: The Need for Military Compensation Reform* (Washington, DC: Brookings, February 2012), p. 6.

[4] Government Accountability Office, *Army Needs to Focus on Cost-Effective Use of Financial Incentives and Quality Standards in Managing Force Growth* (Washington, DC: Government Accountability Office, May 2009), p. 4.

the bonuses being granted. Could the same result have been achieved at a lower cost? Or could the Army have done even better with the resources it had?

This report presents a methodology for reforming the military compensation system based on practices used successfully in the private sector to optimize employee benefits and rewards based on a quantitative understanding of employee preferences. The central idea behind preference-based benefits optimization is to understand what types of compensation are most important to service members, and how they make tradeoffs between different forms of compensation. For example, do members of the military prefer cash compensation up front rather than a larger amount of deferred compensation in the future? Do they prefer some types of benefits, such as free dependent healthcare, to other types of benefits, such as commissary privileges? Do service members value benefits commensurate with what it costs the government to provide these benefits? And, importantly, how do preferences vary across age groups, years of service, rank, gender, and other factors? The goal of measuring the preferences of service members is to identify opportunities where DoD can maintain or improve the attractiveness of its compensation system at a lower overall cost to the government. Moreover, by understanding how decision-making changes over the course of a service member's career, DoD can reshape its compensation system to improve the attractiveness for personnel at critical points in their careers.

The goal of measuring the preferences of service members is to identify opportunities where DoD can maintain or improve the attractiveness of its compensation system at a lower overall cost to the government.

As a proof of concept, CSBA partnered with TrueChoice Solutions Inc., a firm that specializes in developing on-demand preference measurement solutions and real-time econometric technology for Fortune 500 companies, to conduct a trial study. Unlike a simple survey system that asks a set of predefined questions, the unique, patented methodology employed by TrueChoice Solutions uses an interactive, personalized dialogue to quantify the preferences of personnel both across types of compensation and within each type of compensation. It then validates these preferences by asking users to make pairwise comparisons between hypothetical compensation packages. Using the preference data obtained from the tool, proposed changes are analyzed for how they would likely benefit or adversely affect different groups of personnel, based on age, years of service, rank, gender, and other demographic data.

The study conducted by CSBA and TrueChoice Solutions was limited to the main components of compensation: basic pay, bonuses, healthcare, retirement benefits, and some in-kind benefits. It primarily focused on active-duty personnel, but the study also collected data from family members, retirees, guard and reserve members, and civilians. Because the study was conducted without support or endorsement from DoD, the results collected were not a random sample. Instead, the study was publicized in the defense media, which yielded 2,655 completed surveys. This also created the potential for a self-selection bias in the

results.[5] The study results presented in this report are therefore not the final answer but rather an indication of what DoD might find if it were to conduct a more comprehensive study of its own using this methodology.

This report is organized into five main chapters. The first chapter provides an overview of how the military compensation system and the all-volunteer force have evolved over the past four decades. The second chapter reviews the study methodology used for this study, the specific questions posed, and the data sample obtained. The third and fourth chapters analyze the findings of the study, including how service members value various forms of compensation, their preferences among different types of pay and benefits, and the differences among key demographic groups. The final chapter concludes by reviewing the obstacles to reform and offers specific recommendations for implementing a preference-based benefits optimization system as part of a comprehensive effort to reform military compensation in a sustainable manner.

[5] A self-selection bias arises when individuals select themselves into the sample group. In this instance, those who saw the survey mentioned in a news story or heard about it from a friend or colleague and elected to take the survey could have different preferences or stronger preferences than the general population. Even if a random sample were used to pick individuals to take the survey, however, a self-selection bias would still arise because not all people would agree to take the survey.

CHAPTER 1 > THE ALL-VOLUNTEER FORCE AFTER NEARLY FOUR DECADES

The Gates Commission and the End of the Draft

In March 1969, just two months after taking office, President Nixon created an advisory commission to "develop a comprehensive plan for eliminating conscription and moving toward an all-volunteer force."[6] What became known as the Gates Commission, led by former Secretary of Defense Thomas S. Gates, conducted a thorough assessment over the months that followed. Gates himself was initially opposed to the idea, but by the time the commission published its final report on February 20, 1970, the commissioners were unanimous in supporting the transition to an all-volunteer military.[7]

The commission noted in its report that the true cost of conscription could not be measured in the defense budget alone. They argued that because entry pay for the first two years of military service was roughly 60 percent of what men could earn in civilian work, the draft represented a de facto tax on those who served. They also argued that the draft had a broader economic effect due to the loss of productivity these men would have generated had they not been compelled into military service. Moreover, the Commission found that the draft created a stress on society that "weakened the political fabric of our society and impaired the delicate web of shared values that alone enables a free society to exist." The report went on to conclude:

> The costs of conscription would have to be borne if they were a necessary price for defending our peace and security. They are intolerable when there is an alternative consistent with our basic national values. The alternative is an all-volunteer force.[8]

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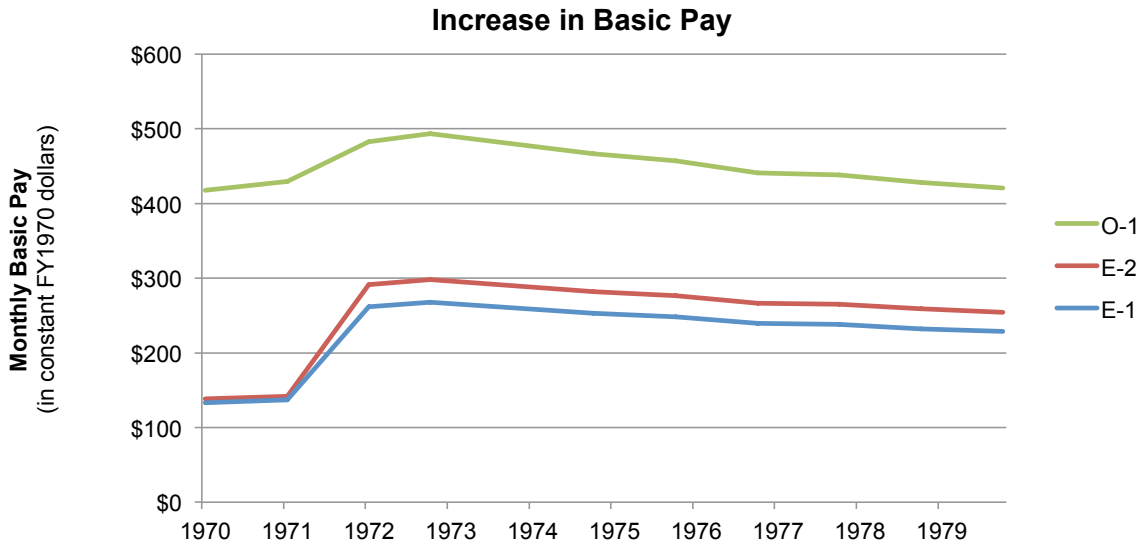
[6] "Statement by the President Announcing the Creation of the Commission," White House Press Release, March 27, 1969.

[7] Thomas Gates et al., *The Report of the President's Commission on an All-Volunteer Armed Force* (Washington, DC: Government Printing Office, February 1970), p. iii.

[8] Ibid., pp. 5-10.

FIGURE 1: BASIC MILITARY PAY FOR E-1s, E-2s, AND O-1s



The military had a career model for volunteers who intended to make a career of the military, but it did not have a career model designed for short-term volunteers.

Despite the heavy use of conscripts during Vietnam, the majority of men serving in the military were volunteers, not draftees or draft-induced volunteers. According to the Commission's estimates, 62 percent of the 3.4 million service members in active duty in 1967 were volunteers.[9] The question was not how to create a volunteer force because one already existed. Rather the challenge was how to attract a sufficient number of people who otherwise would not have volunteered to alleviate the need for conscription. The military had a career model for volunteers who intended to make a career of the military, but it did not have a career model designed for short-term volunteers. Instead, it relied on the draft to fill this role. For an all-volunteer force to work, the commission concluded that the military must adapt its career model and its compensation system to attract both career and non-career volunteers.[10]

The chief solution offered by the Gates Commission was to increase pay for the first two years of service. While the Nixon administration did not initially follow through on the commission's recommendation to end the draft, in a compromise Congress increased the pay for junior personnel to attract more volunteers and lessen the military's reliance on conscripts. As shown in Figure 1, basic pay for E-1s and E-2s, the most junior enlisted ranks, roughly doubled effective January

[9] Ibid., p. 51.

[10] Ibid., p. 50.

1, 1972. Pay for O-1 junior officers increased by a more modest 16 percent.[11] The combination of winding down ground operations in Vietnam and the larger number of volunteers attracted by the increase in basic pay meant that the number of draftees inducted into service fell from 94,000 in 1971 to 50,000 in in 1972, and a mere 646 in 1973 before the draft officially ended.[12]

But the commission's recommendations did not stop with increasing basic pay. It also recommended more fundamental changes to the military compensation system, such as "the development of a military salary system comparable to that of the civilian sector, including the substitution of cash for some benefits that are now provided in-kind, and the modification of the present retirement system, including the introduction of vesting."[13] More specifically, it recommended:

- Combining allowances for housing and subsistence with basic pay to give new recruits better "visibility" to understand the true value of cash compensation;
- Introducing partial vesting of retirement benefits after five years of service, rather than making personnel serve 20 years before becoming entitled to any retirement benefits;
- Using funds from in-kind forms of compensation, such as the construction of family housing, to further increase basic pay;
- Eliminating the requirement that service members periodically re-enlist for a fixed period of time, except in time of war and to fulfill terms of service commensurate with training received;
- Allowing greater choice of occupation as a condition of enlistment; and
- Creating opportunities for lateral hiring of skilled civilian personnel into pay grades commensurate with their training and experience.[14]

With the exception of the increase in basic pay for junior personnel, virtually none of the commission's additional recommendations were enacted.

The Gates Commission addressed a number of anticipated issues with transitioning to an all-volunteer force, including fears that an all-volunteer force would: lack the flexibility to expand rapidly, undermine patriotism and the common responsibility to serve, create a separate military ethos, undermine civilian control

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[11] Data derived from the Defense Finance and Accounting Service military pay tables from 1970 to 1979, available at http://www.dfas.mil/militarymembers/payentitlements/militarypaytables.html, accessed on December 5, 2011.

[12] Selective Service System, "Induction Statistics," available at http://www.sss.gov/induct.htm, accessed on December 5, 2011.

[13] Gates et al., p. 56.

[14] Ibid., pp. 52-67.

of the military, result in an overrepresentation from racial minorities and lower economic classes, stimulate military adventurism, and lessen civilian concern about the use of military force. The commission also addressed concerns that four decades later proved to be quite prescient, namely that an all-volunteer force would be costly and would force cuts in other areas of the budget.[15]

Military personnel costs increased significantly, as the Commission expected. From the peak of the Vietnam War in FY 1968 to the first full year without the draft in FY 1974, military personnel costs grew by 60 percent in real terms on a per person basis. Personnel costs remained relatively stable for the rest of the decade, declining by 4 percent from FY 1974 to FY 1980 on a per person basis, as military pay raises did not keep pace with inflation. Beginning in FY 1980, however, personnel costs began growing again as the overall defense budget increased at an even faster rate. By FY 1985, personnel costs were 73 percent higher in real terms than in FY 1968.[16] This cost growth, along with a record federal deficit, led to a chorus of voices calling for reform.

REDUX

In response to the rising cost of military personnel, Congress enacted the Military Retirement Reform Act of 1986, which created the REDUX retirement system. REDUX—shorthand for reduction—reduced the cost of the military retirement system while maintaining its core components. The new system decreased retirement benefits by reducing the percentage of pay received in retirement from 50 percent to 40 percent for 20 years of service and reducing the annual cost of living adjustment by 1 percent. But REDUX also increased the rate at which retirement pay escalated for each additional year of service, so those retiring at 30 years received the same 75 percent of pay as under the old system. This lessened the incentive for service members to retire as soon as they became eligible at twenty years because each additional year of service would result in a greater increase in retirement pay than under the old system. REDUX only applied to those who entered the military on or after August 1, 1986, which meant that the first cohort of service members under the new system would not be eligible to retire until 2006.[17]

REDUX was initially successful in reducing costs. In the mid-1990s when a majority of military personnel were under the new system, DoD's annual

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[15] Ibid., pp. 11-20.

[16] Data derived from Table 6-8 of the DoD National Defense Budget Estimates for FY 2013 (Greenbook) and adjusted for inflation using the Gross Domestic Product (GDP) deflators contained in Historical Table 10-1 of the President's Budget for FY 2013.

[17] Library of Congress Federal Research Division, *A Summary of Major Military Retirement Reform Proposals, 1976-2006* (Washington, DC: Library of Congress, November 2007), pp. 10-11.

retirement accrual charge—the amount of money set aside each year to pay for future retirement benefits—had fallen by more than one-third.[18] REDUX, however, was merely a cost-saving adjustment to the old retirement system, not a fundamental overhaul as the Gates Commission had recommended. Moreover, the changes REDUX imposed moved in the opposite direction than what the Gates Commission envisioned.

The changes REDUX imposed moved in the opposite direction than what the Gates Commission envisioned.

The Gates Commission had recommended shortening the time in service required to receive retirement benefits to incentivize personnel who served less than 20 years—precisely those that must be targeted to alleviate the need for conscription. But REDUX stretched out the vesting schedule for retirement benefits to encourage longer service rather than shorter service. It failed to address the underlying problem, which was the need to provide greater incentives for short-term service.

Ultimately, REDUX's undoing was the twenty-year waiting period before service members began to retire under the new system and the sharp change in benefits for those who joined before and after August 1, 1986. The twenty-year waiting period gave opponents of REDUX ample opportunity to mount a counter-offensive. In the late 1990s, concerns about REDUX began to surface in Congress and the Clinton administration. Then-Secretary of Defense William Cohen testified in 1999 that repealing REDUX would address "mounting warnings about retention and recruiting."[19] Advocates of overturning REDUX also argued that it "cheated" those who joined after 1986 by not providing the same level of benefits and that this disparity among service members was "enormously corrosive."[20]

Representative John Murtha was one of the leaders in Congress for overturning REDUX, and he based his arguments on anecdotal evidence. Sailors aboard the USS *Lincoln* had told him in a face-to-face meeting that ending REDUX was the best way to improve recruiting and retention. Yet Deputy Defense Secretary John Hamre argued that the Pentagon's data suggested that improving pay would be more effective than increasing retirement benefits.[21] Recruiting did suffer some during the late 1990s, but it is impossible to determine how much of this was due to REDUX or other factors, such as a robust economy pulling people away from the military. Despite a lack of hard evidence supporting one argument over the other, President Clinton's FY 2000 budget request proposed scrapping

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[18] Ibid., p. 11.

[19] House Committee on the Budget, *The Clinton Defense Plan: Shipshape or Treading Water*, 106th Cong., 1st sess., March 11, 1999, p. 12.

[20] Ibid., pp. 29-30.

[21] George C. Wilson, *This War Really Matters: Inside the Fight for Defense Dollars* (Washington, DC: CQ Press, 2000), pp. 99-112.

the REDUX system. Congress enacted this proposal into law in the FY 2000 Defense Authorization Act.[22]

The law now allows service members to retire under the old retirement system at 50 percent of base pay after 20 years of service, though they can still opt for REDUX and receive a $30,000 cash bonus.[23] According to the Center for Naval Analyses, an E-6 retiring at age 38 with 20 years of service would forego about $322,000 in retired pay (after taxes) by electing to retire under the REDUX system. For the $30,000 bonus to compensate fully for the $322,000 expected loss in retirement benefits, the bonus would need to be invested and earn a 15.8 percent annual rate of return—a highly unlikely proposition. A surprising number of service members, however, elect to retire under the REDUX system anyway. As recently as 2010, some 35 percent of enlisted marines chose the REDUX system and cash bonus.[24] What this suggests is that, as John Hamre noted a decade earlier, some service members place a high value on immediate cash compensation and heavily discount deferred compensation.

Reform of Another Kind

The repeal of REDUX in FY 2000 marked the beginning of a period in which Congress acted year after year to increase military compensation by creating new benefits, expanding existing benefits, and increasing pay and bonuses. The following section lists a few examples of major changes in military compensation enacted during the 2000s that have had a lasting effect on personnel costs.

TRICARE FOR LIFE: The FY 2001 National Defense Authorization Act created the TRICARE for Life benefit, which extends TRICARE coverage to Medicare-eligible military retirees (typically age 65 and older). TRICARE for Life is a free supplemental insurance policy that pays most costs that Medicare does not cover, leading one Pentagon official to call it the "golden supplemental."[25] Congress also made the benefit retroactive to cover retirees who left the military before the benefit was enacted. In FY 2012 DoD must set aside $10.7 billion annually to pay for the expected future cost of this benefit for those currently serving.[26]

CONCURRENT RECEIPT: In 2004 Congress created the Concurrent Retirement and Disability Pay program. Before this change retirees receiving disability pay

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[22] "Department of Defense Budget for FY 2000," Department of Defense News Release, February 1, 1999.

[23] Library of Congress Federal Research Division, *A Summary of Major Military Retirement Reform Proposals, 1976-2006* (Washington, DC: Library of Congress, November 2007), p. 11.

[24] Aline Quester et al., *Retirement Choice: 2011* (Alexandria, VA: Center for Naval Analyses, February 2011), pp. 9, 17.

[25] Tom Philpott, "Tricare for Life," *Air Force Magazine*, December 2000.

[26] Office of the Undersecretary of Defense (Comptroller), *Overview: FY 2013 Defense Budget* (Washington, DC: DoD, February 2012), p. 5-1.

from the Veterans Administration had their military retirement pay reduced dollar-for-dollar. Concurrent receipt allows military retirees to receive both retirement pay and disability pay at the same time.[27] The net effect of this change is a greater retirement benefit for disabled service members and an increase in outlays from the Military Retirement Trust Fund. In FY 2012 DoD set aside $5.4 billion for concurrent receipt.[28]

TRICARE FEES: While healthcare coverage is free for all active-duty military personnel and their dependents, retirees under the age of 65 must pay a fee. The annual fee retirees pay for TRICARE Prime was set in 1995 at $230 annually for individual coverage and $460 annually for family coverage. These fees did not increase from 1995 to 2011, despite the fact that the cost of healthcare coverage in the private sector more than doubled during that time.[29] This effectively improved the value of the benefit, incentivizing more working-age retirees to stay in the military healthcare system rather than shift to private sector healthcare plans.

BASIC PAY: From FY 2000 to FY 2010 the military received a raise in basic pay each year that exceeded the Employment Cost Index.[30] These raises were mostly across the board, but in some years they were targeted at specific ranks. In FY 2002, for example, the raises ranged from 5 percent to 15 percent based on rank for an overall increase of 6.9 percent.[31]

Recent Recommendations for Reform

Despite the ad hoc approach to increasing military pay and benefits over the past decade, several independent studies have recommended comprehensive reforms. The Tenth Quadrennial Review of Military Compensation, released in February 2008, noted that when the cost of benefits were included, enlisted members and officers made $10,600 and $17,800 more, respectively, than their civilian

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[27] Charles A. Henning, *Concurrent Receipt: Background and Issues for Congress* (Washington, DC: Congressional Research Service, September 24, 2010), p. 1.

[28] Office of Management and Budget, *Fiscal Year 2013 Budget of the U.S. Government: Appendix* (Washington, DC: Government Printing Office, February 2012), p. 257.

[29] Kaiser Family Foundation, *Employer Health Benefits 2011 Annual Survey* (Menlo Park, CA: Kaiser Family Foundation, 2011), p. 1.

[30] The Employment Cost Index (ECI) is a measure of the growth in the total cost of compensation in the private sector. Annual military pay raises are compared to the ECI for the 12-month period ending the September before the budget request is released, as required by law. ECI data are from the Bureau of Labor Statistic's Employment Cost Index Historical Listing, Table 9, available at http://www.bls.gov/web/eci/ecicois.pdf.

[31] Department of Defense, *National Defense Budget Estimates for FY 2013* (Washington, DC: Department of Defense, March 2012), p. 74.

counterparts.[32] The report recommended that the Department be given greater flexibility in personnel funding to make "targeted adjustments" as needed to achieve greater efficiency in how resources are allocated. It also recommended allowing service members greater choice in benefits, assignments, and duty stations, using the compensation system as an incentive to support such choices. More specifically, it recommended greater use of targeted special and incentive pays and performance-based pay to support recruiting and reenlistment, rather than across the board increases in basic pay.[33]

The Quadrennial Defense Review Independent Panel also recommended a number of sweeping changes to the military compensation system in its 2010 report to Congress. It noted that the cost per person was growing at a high rate relative to historic norms and that the all-volunteer force "has survived only through extraordinary efforts and at substantial additional costs."[34] The report recommended changing the composition of pay to emphasize cash in hand rather than in-kind or deferred benefits, using performance-based bonuses to reward high achievers, allowing service members greater choice in assignments, and expanding the use of bonuses for personnel with critical skills. The Independent Panel also recommended raising the fees military retirees pay for TRICARE and extending the time in service for career military personnel. Perhaps the most notable recommendation was to create a National Commission on Military Personnel, modeled on the Gates Commission of 1970. This bi-partisan commission would be charged with developing a comprehensive set of reforms to the military personnel system, including changes to pay, healthcare, retirement, and the overall military career model.[35]

The Defense Business Board, a group of outside advisors that provides the Secretary of Defense with advice on better business practices, released a report on modernizing the military retirement system in October 2011. The report noted that the retirement system has not changed substantially in the past forty years, despite increases in life spans, improvements in military pay relative to civilian pay, and a higher rate of military retirees pursuing second careers after leaving the service. It recommended changes to the retirement system in line with what the Gates Commission had recommended decades earlier, namely that the vesting period be shortened to benefit members who serve less than a full twenty-year career. It specifically recommended transitioning to a defined-contribution plan in which the military would contribute to individual retirement accounts on behalf

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[32] Department of Defense, *Report of the Tenth Quadrennial Review of Military Compensation*, vol. 1, *Cash Compensation* (Washington, DC: Department of Defense, February 2008), p. xv.

[33] Ibid., pp. xvi-xix.

[34] Stephen J. Hadley, William J. Perry, et al., *The QDR in Perspective: Meeting America's National Security Needs In the 21st Century (*Washington, DC: United States Institute of Peace, 2010), p. 68.

[35] Ibid., pp. 67-81.

of service members, similar to how many private employers contribute to their employees' 401(k) retirement plans.[36]

Under the current defined-benefit system, DoD makes accrual payments to the military retirement trust fund, held by the Treasury in government bonds, to fund the expected future cost of retirement pay under a predetermined formula. For example, someone serving 20 years is entitled to 50 percent of their highest three years of basic pay for the rest of their life. Under the defined-contribution system the Defense Business Board proposed, some portion of the funding used for these accrual payments would instead be redirected to individual retirement accounts. Service members could invest these funds as they wished, add additional funds from their own pay, and take vested funds with them when they leave. Both the vesting schedule[37] and the amount of funding contributed by the military could be varied based on rank, special skills, number of deployments, or other factors to improve retention in critical areas. The board noted that the transition to such a different retirement system could be difficult and explored the possibility of grandfathering in all current service members, although it made no specific recommendation.[38]

In August 2011, Congress passed the Budget Control Act of 2011 (BCA). This act set spending caps for both defense and non-defense discretionary spending over the next decade. It also created the Joint Select Committee on Deficit Reduction, charged with finding an additional $1.2 trillion in deficit reduction. Because this committee failed to reach an agreement on additional deficit reduction, the BCA mandates that across the board sequestration will occur on January 2, 2013, cutting roughly 10 percent of the base defense budget in FY 2013.

The Obama administration's FY 2013 budget request is the first to be submitted following the enactment of the BCA and the budget caps it imposes. As part of its cost cutting efforts, DoD includes several changes to military compensation in the FY 2013 budget request. It proposes slowing the growth in basic pay beginning in FY 2015 to 0.5 percent annually. It also raises the fees military retirees would pay for TRICARE on a progressive scale so that those who receive higher retirement pay would pay more than those who retired with lower pay, similar to a proposal in the Bush administration's FY 2007 request. Perhaps most significantly, it proposes the formation of an independent commission to study and recommend changes to

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[36] Defense Business Board, *Modernizing the Military Retirement System* (Washington, DC: Department of Defense, October 2011), pp. 2-6.

[37] A vesting schedule determines when a person owns the money their employer has contributed to their account. For example, if DoD created a retirement plan that fully vests after five years of service, then a service member leaving prior to five years would not be able to keep any of the money contributed to his retirement account by the military. He would, of course, be able to keep money contributed out of his own pocket. If a person were to serve for five years or more, then he would be able to keep all of the money contributed by the military. The longer he stayed, the more money the military would contribute to his account.

[38] Defense Business Board, *Modernizing the Military Retirement System,* pp. 2-6.

the military retirement system. While similar to the commission proposed by QDR Independent Panel in 2010, this commission would be narrower in scope—only focused on the retirement system—but would have greater power. If established by Congress, the Military Retirement Modernization Commission would be able to send a package of recommendations to Congress for a simple up or down vote, not subject to amendments and under expedited procedures.[39]

The military compensation system remains the primary means by which the nation can affect the decisions of individuals volunteering for military service.

Current State of the All-Volunteer Force

The health of the all-volunteer force is an ever-present concern for DoD. As Congress and the administration grapple with the overall budget deficit, the looming threat of sequestration, and the shift in focus called for in the new strategic guidance, the Pentagon must be mindful of the effect its decisions will have on those who serve. A more attractive compensation system does not necessarily translate into improved recruiting and retention. Compensation is an important factor for many people serving in the military, but it is by no means the only factor. The desire to serve one's country has been and will continue to be an important part of what motivates people to join the military. The inclination to serve also depends to some extent on the overall economy, the security environment, and the prestige associated with military service—factors that are largely out of DoD's control. The military compensation system, however, remains the primary means by which the nation can affect the decisions of individuals volunteering for military service.

Assessing the health of the all-volunteer force under the current compensation system is not straightforward. Many different metrics are available, each of which provides only a partial answer. One measure of the health of recruiting is the selectivity of the military in accepting new people—the ratio of accessions to applicants. For enlisted personnel, this ratio has hovered around 50 percent over the past four decades, meaning that roughly twice as many people apply to enlist as are accepted. The ratio fell to a low of 38 percent (i.e. the military was more selective in who it accepted) in the early 1980s, and reached a high of 57 percent in 2004, as shown in Figure 2. By this measure, there appears to be a sufficient and relatively stable quantity of applicants.[40]

The quality of recruits, however, has varied more significantly over time. The Armed Forces Qualifying Test (AFQT) is a standardized test administered to all recruits. It measures the aptitude of applicants in a variety of areas, including reading, math, and problem solving. The quality of recruits entering the military has improved significantly since the early 1980s based on their AFQT scores. The

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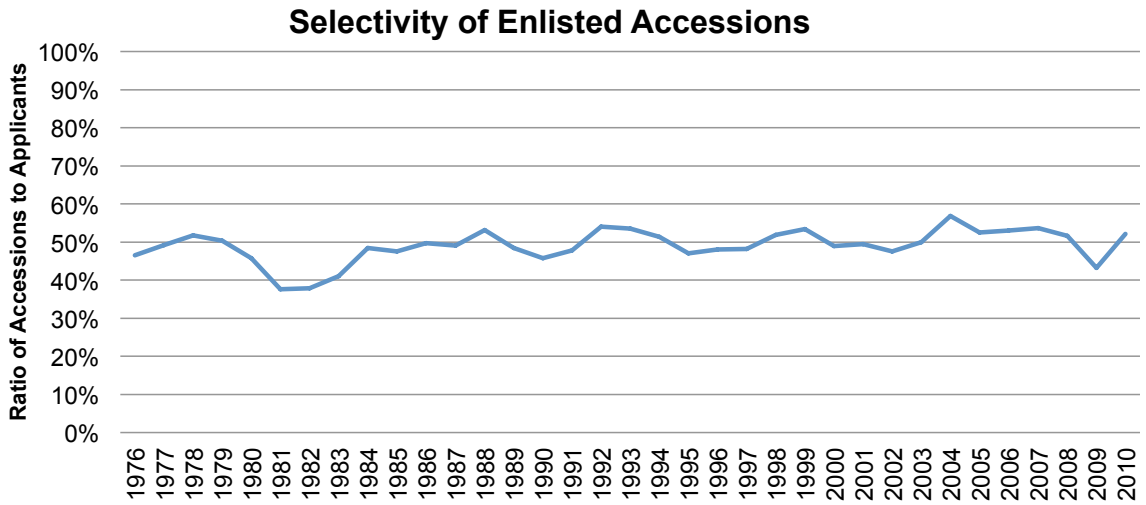
[39] Office of the Undersecretary of Defense (Comptroller), *Overview: FY 2013 Defense Budget,* pp. 5-1 to 5-5.

[40] Department of Defense, *Population Representation in the Military Services: Appendix D (Historical Component)* (Washington, DC: Department of Defense, 2012), Table D-3.

FIGURE 2: RATIO OF ACCESSIONS TO APPLICANTS FOR ENLISTED PERSONNEL FY 1976 TO FY 2010



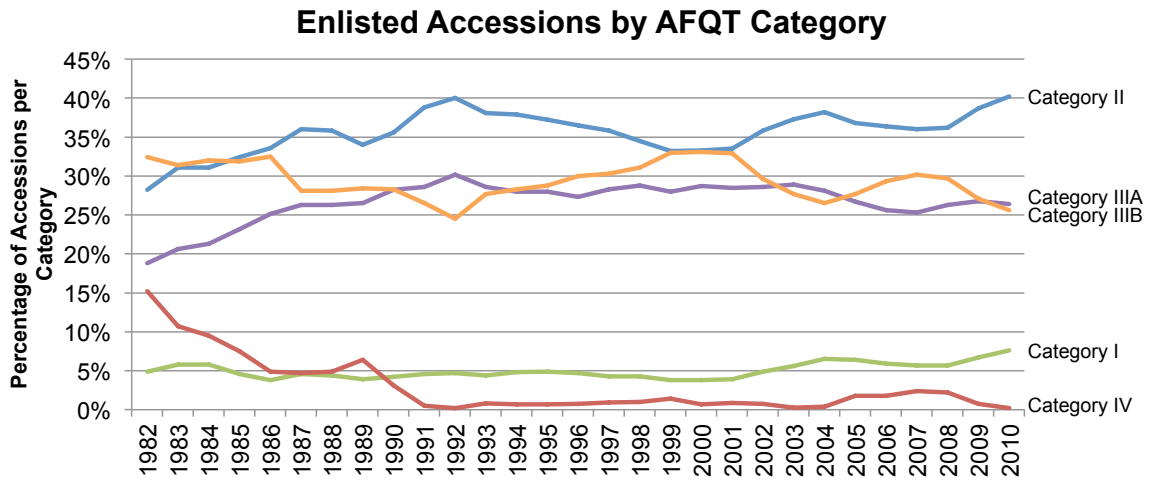
percentage of accessions in Category IV, those with scores between the 10th and 30th percentile, has fallen from over 15 percent in 1982 to near zero for most of the past two decades. The number of accessions in this category increased slightly to near 2 percent from 2005 to 2008 as the Army relaxed its standards in order to meet recruiting targets, but fell again to 0.2 percent in 2010. For most of the past three decades the percentage of enlistees coming from Category I, those with an AFQT score in the 93rd percentile or higher, has averaged around 5 percent. This category has increased above its historical norm in recent years, reaching 7.6 percent in 2010. By these measures, the quality of current recruits is the best it has been in decades—the number of low quality accessions (Category IV) is at a low and the number of high quality accessions (Category I) is at a high.[41]

Another measure of the health of the all-volunteer force is retention. The cumulative continuation rate measures the percentage of service members that stay in the military year after year. The enlisted cumulative continuation rate, shown in Figure 4, has gradually improved over the past two decades. Only 40 percent of enlisted personnel entering the service in the 1990s stayed through their fourth year of service. In comparison, an average of 47 percent of those entering in the early 2000s stayed through their fourth year. In the most recent cohort, 54 percent continued in the military through their fourth year of service. The percentage of enlisted personnel staying through 10 years of service has risen from 14 percent for cohorts in the early 1990s to 18 percent for those entering service in the early 2000s.[42]

41 Ibid., Table D-8.

42 Ibid., Table D-32.

FIGURE 3: PERCENTAGE OF ENLISTED ACCESSIONS PER AFQT CATEGORY FOR FY 1982 TO FY 2010



Officer retention, shown in Figure 5, has also improved since the 1990s. The percentage of officers continuing to five years of service has risen from an average of 68 percent in the early 1990s to 73 percent in the most recent cohort. Long-term retention has also improved. The percentage of officers staying through 10 years of service has risen from 40 percent for cohorts in the early 1990s to 45 percent for those entering service in the early 2000s. However, the cumulative continuation rate is not a perfect metric. In recent years the Services have involuntarily separated or offered incentives for personnel to leave due to higher than expected retention. This has had the effect of depressing the cumulative continuation rate from what it would have been without these actions.

By these measures, the military is healthy and robust in terms of recruiting and retention. Thus, reform of the military compensation system does not need to focus on improving recruiting and retention. Rather, the goal of reform should be to sustain the health of the force while reducing costs. The following chapters present a methodology for how to find that balance.

FIGURE 4: CUMULATIVE CONTINUATION RATES FOR ENLISTED PERSONNEL BY COHORT

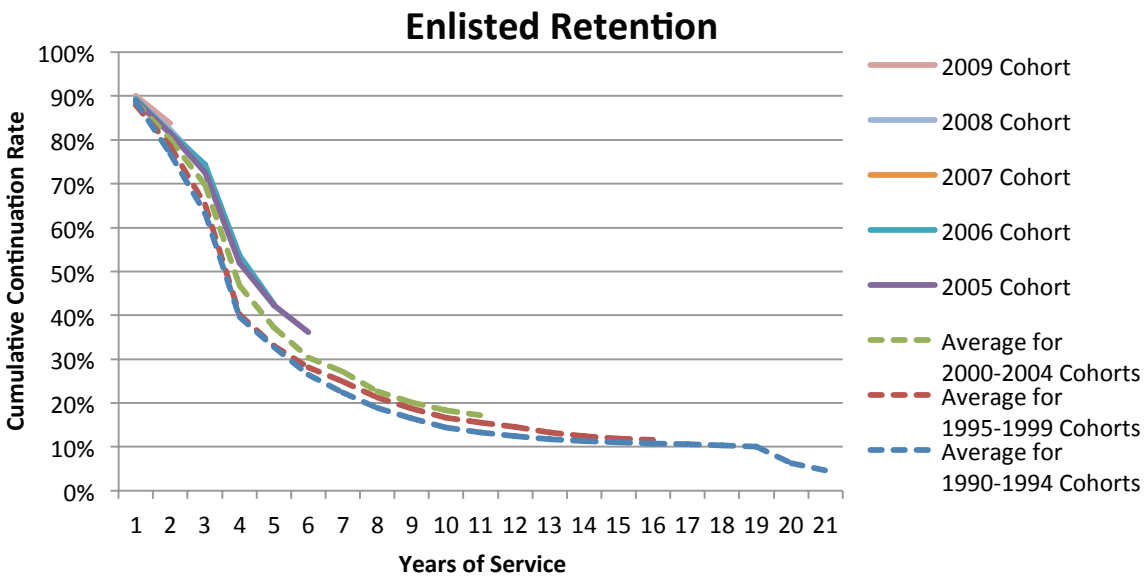
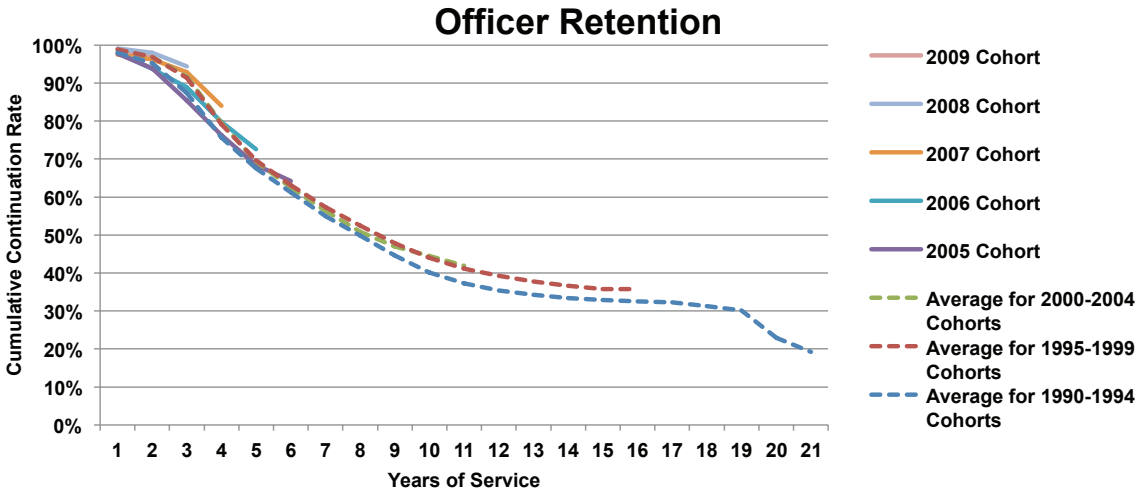


FIGURE 5: CUMULATIVE CONTINUATION RATES FOR OFFICERS BY COHORT



CHAPTER 2 > MEASURING THE VALUE OF PAY AND BENEFITS

Over the past four decades, dozens of studies have recommended major reforms to the military compensation system. These studies have used economic theory, focus groups, leading experts, and best practices from other organizations to suggest changes and estimate the cost savings to the Defense Department. But they have largely focused on only one part of the equation—how to reduce costs. Few studies have attempted to understand the value service members place on their total compensation package, and even fewer have used empirical evidence to support their conclusions. Diana Lien and Michael Hansen at the Center for Naval Analyses conducted a study in 2006 that used economic theory and focus groups to estimate how reservists would respond to changes in compensation.[43] Ryan Stitt at the Naval Postgraduate School used linear programming and interviews with 45 sailors to estimate the value military personnel place on non-monetary forms of compensation.[44] But in both cases the data obtained were limited to conversations with several dozen service members of a particular subgroup. What has been lacking is quantitative data from a large sample of service members across all segments of the force on how they value various types of compensation.

Few studies have attempted to understand the value service members place on their total compensation package.

This study uses an evidence-based approach to understand what benefits are most important to service members and how they make tradeoffs between different forms of compensation. The preferences of service members are used to identify opportunities where DoD can get better value from its compensation dollars. For example, do service members value certain benefits commensurate with

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[43] See Diana Lien and Michael Hansen, with Michael Moskowitz and Ian MacLeod, *Compensation and Voluntary Participation in a Continuum of Service* (Alexandria, VA: Center for Naval Analyses, March 2006).

[44] Ryan Stitt, *Identifying the Cost of Non-Monetary Incentives (ICONIC)* (Monterey, CA: Naval Postgraduate School, December 2009).

what they cost to provide? Or would they prefer a lower amount of one type of compensation in exchange for a greater amount of some other form of compensation? Moreover, understanding how these preferences vary by a person's rank, age, time in service, and other factors would allow DoD to better target its compensation dollars for key personnel at critical points in their careers and to keep the all-volunteer force affordable.

Differences from a Typical Survey or Poll

A typical survey or opinion poll measures responses in terms of yes/no or multiple choice questions. Such an approach is useful for determining what percentage of a population prefers one thing to another, but it does not indicate their degree of preference or how they would trade an increment of one thing for an increment of another. Moreover, it quickly breaks down when asking people to make choices across dissimilar items, such as asking a person if they prefer Diet Coke to steak. The methodology used in this study measures each individual's degree of preference both within and across different types of compensation. This approach collects data at a more granular level and allows for better comparisons across dissimilar attributes. Instead of asking if a person prefers Diet Coke to steak, it asks how the person prefers Diet Coke at different price points, how she prefers steak at different price points, and the relative importance she places on both the price of Diet Coke and the price of steak. This data can then be used to quantify the tradeoffs between pairs of attributes, something not possible in a typical survey.

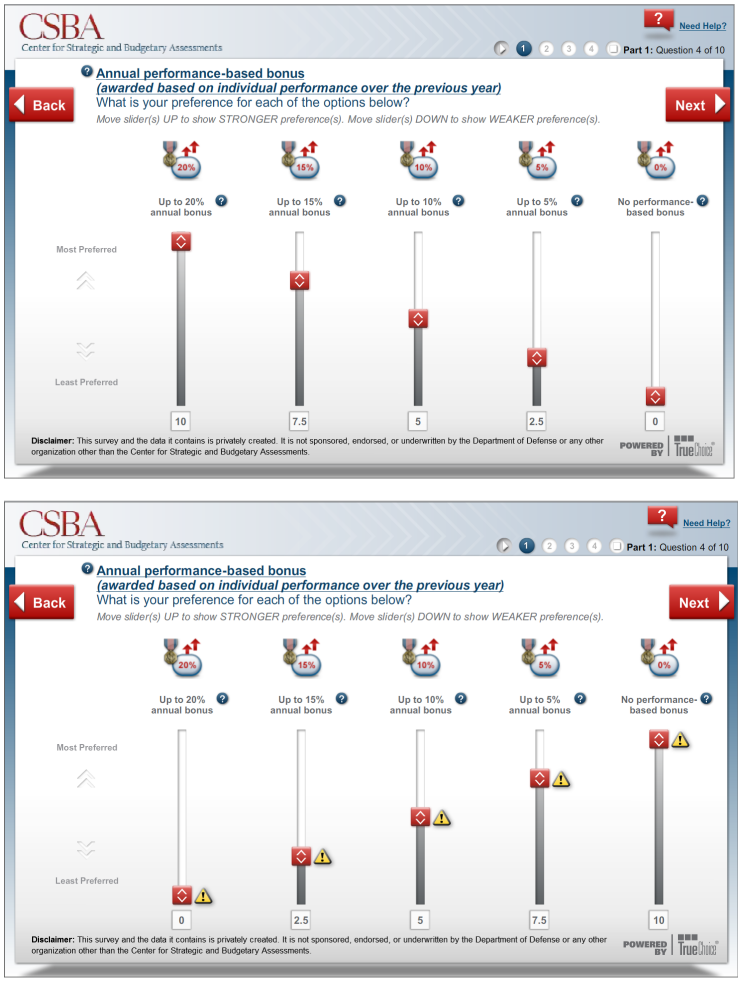
Methodology

The study used TrueChoice Solutions' patented self-adaptive interface and real-time analytics to measure the preferences and value perceptions of service members. TrueChoice's graphical user interface, shown in the figures below, presented the survey in an easy to use, Flash-based format, which allowed more content to be presented and more measurements to be obtained than would have been possible otherwise. The streamlined user interface helped minimize survey fatigue and resulted in a completion rate of 90 percent. Of those who completed the survey, the average amount of time spent was 10.4 minutes. The survey, which can be found at www.csbamilsurvey.org, ran from January 23, 2012 through April 13, 2012 and asked users about ten different types of military compensation, including basic pay, bonuses, healthcare benefits, retirement benefits, and in-kind benefits. The study was divided into three stages: learning, comparing, and verifying.

STAGE 1: LEARNING

During the learning stage, the system asked users to rate their preferences for different levels of each component of compensation being evaluated on a scale of 0 to 10. For example, one type of compensation measured in the study was the use of performance-based bonuses. Users were asked to rate their preferences for different levels of bonuses, as shown in Figure 6. One might expect users to simply rate the highest level, a 20 percent performance-based bonus, as the highest preference and lower levels of bonuses a progressively lower preference. But this may not always be the case. Some users may not like the idea of a preference-based bonus and would actually prefer no bonus, thus inverting the slope of the preference

FIGURE 6: SCREEN SHOT OF SURVEY SHOWING AN INCREASING PREFERENCE FOR A PERFORMANCE-BASED BONUS (TOP) AND A DECREASING PREFERENCE (BOTTOM).



curve.[45] While the user interacts with the front end, the econometric algorithms on the back-end estimate non-linear preference functions for each respondent in real-time.

Not only can the slope of the preference curve vary from person to person, but the shape of the curve can also differ. If a user's preference increases steadily as the level of the attribute increases, the preference curve is roughly linear, as shown in Figure 6. But in some cases a user's preference for a particular type of compensation may not be linear, as shown in Figure 7. If a user's preference declines marginally less as the level of the benefit decreases, the curve is concave (top figure). If a user's preference declines marginally more as the level of the benefit declines, the curve is convex (middle figure). It is also possible that a user's preference curve could increase to a certain level and then begin decreasing beyond that optimum level (bottom figure). Without measuring an individual's preference curve for each type of compensation, it is impossible to understand how he makes trades among different types of compensation.

STAGE 2: COMPARING

The second stage of the study, shown in Figure 8 below, asked users to assess the relative importance of each component of compensation. This stage was used to augment the preference functions obtained in the learning stage by presenting comparisons across different types of benefits. For example, users were asked to rate the importance of a performance-based bonus relative to other components of compensation, such as basic pay. The relative importance of each component expressed in Stage 2 was then multiplied by the preferences collected in Stage 1 to create a normalized set of preference functions.

This information is used to estimate how personnel make tradeoffs between types of compensation. For example, a person may value a performance-based bonus of up to 15 percent equally to paying $40 per month for active-duty dependent healthcare. Conceptually, the combination of two attributes for which a person is indifferent form an indifference curve.

STAGE 3: VERIFYING

The verifying stage of the study asked users to make pairwise comparisons between different types of compensation. The system generated a series of eight tradeoffs for the user to rate, shown in Figure 9, based on the individual

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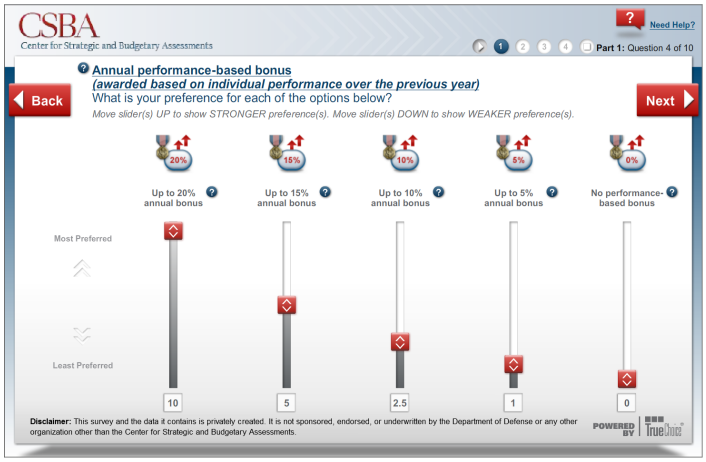
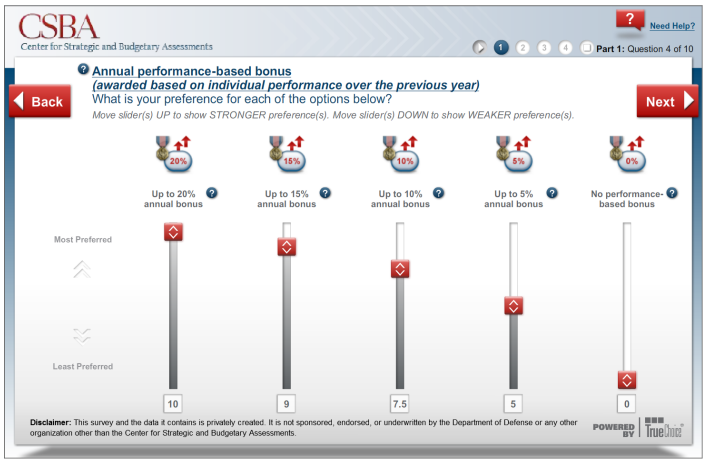
[45] In order to prevent inadvertent errors, the system included a warning message if a user rated a lower cost level of benefit as a higher preference. This warning message read, "Attention: Did you know that you have rated a less valued option equal to or above a more valued one? Do you want to proceed?" The message appeared the first time a user made such a movement in the slider bars. If the user did the same thing on another question, it placed a yellow warning icon next to the slider bars, as shown in Figure 6 (right), but did not repeat the warning message.

FIGURE 7: EXAMPLE CONCAVE, CONVEX, AND SINGLE HUMP PREFERENCE CURVES.





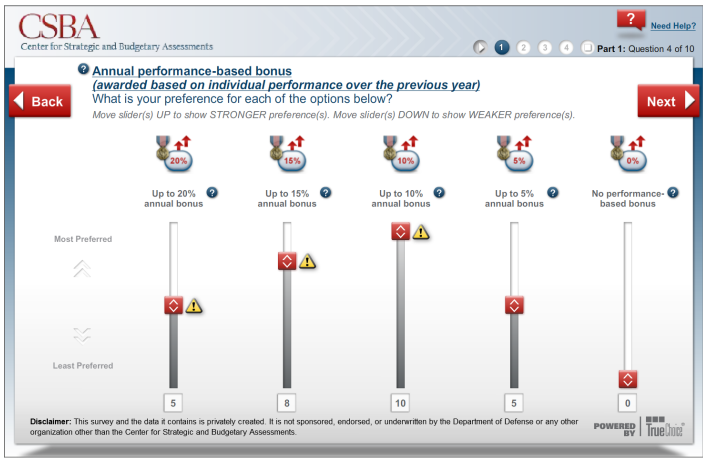


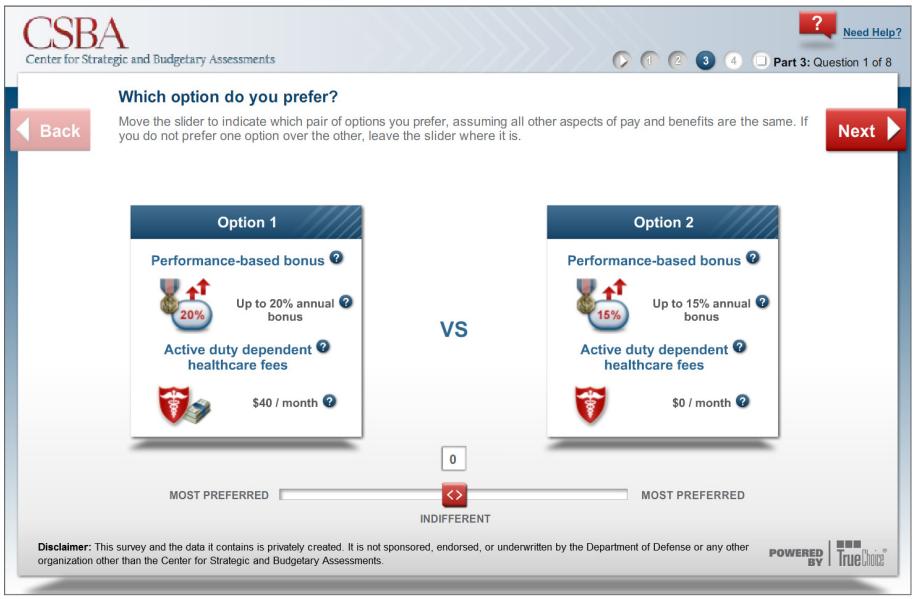
FIGURE 8: SCREEN SHOT OF THE SECOND STAGE OF THE STUDY.

The methodology does not present the respondent with unrealistic choices to establish trade-off boundaries, but rather with realistic and relevant trade-offs.

preferences expressed by each user in Stages 1 and 2. For example, the system might ask a given user if they preferred a performance-based bonus of up to 20 percent and no increase in basic pay, or a 15 percent performance-based bonus and a 5 percent increase in basic pay. As the user rated how he makes trades between different types of compensation, the system compared his answer to how he answered earlier questions. The additional data were then used to flag inconsistencies where a user's answer diverged significantly from his previous answers, since this could indicate that the user did not understand the questions being asked or was not sincere in his responses. The degree to which a user's answers in the verification stage diverged from his answers in the learning and comparing stages was stored as a rationality score for each respondent. The rationality score measures the internal consistency of an individual's answers.

Unlike traditional preference measurement or conjoint approaches, the trade-offs the study presents to respondents are not used in a regression model to estimate utilities. Instead, they are used to check the internal self-consistency of the respondent based on his individual answers. The methodology does not present the respondent with unrealistic choices to establish trade-off boundaries, but rather with realistic and relevant trade-offs. This allows more attributes to be measured, meaning more content can be presented and more insights obtained without creating a survey too long and burdensome for users to complete.

FIGURE 9: EXAMPLE PAIRWISE COMPARISONS POSED TO RESPONDENTS IN THE VERIFICATION STAGE.



Questions Posed

The specific wording of questions in any survey can influence the results. For this reason, the headlining questions in Stage 1 were formulated as a topic statement followed by a consistent question to prompt a response. For example, the first attribute measured had the topic statement, "Monthly fee for healthcare coverage of active-duty dependents," followed by the question, "What is your preference for each of the options below?" The topic statements varied by attribute, but the question did not. Table 1 lists the exact wording of each topic statement as well as the different levels of options allowed for each response.

Question nine on an across-the-board increase in basic pay served as a normalizing question to translate a person's preferences into actual dollars. Since active-duty personnel taking the survey were required to input their rank and years of service before continuing, the system referenced this against the current pay table to translate each percentage increase in basic pay to the dollar increase in basic pay for that person.

The second and third stages each used a single question. The second stage asked the user to, "Rate the importance of the following aspects of military compensation. By moving the sliders, indicate how important the features are relative to one another." The third stage consisted of eight computer-generated comparisons for each user. For each comparison it asked, "Which option do you prefer?

TABLE 1: ATTRIBUTES AND OPTIONS IN STAGE ONE

Attribute Measured	Options						
1. Monthly fee for healthcare coverage of active duty dependents	$0 / month	$40 / month	$80 / month	$120 / month	$160 / month		
2. Monthly fee for healthcare coverage for military retirees under the age of 65	$20 / month (no dependents) $40 / month (w/ dependents)	$40 / month (no dependents) $80 / month (w/ dependents)	$60 / month (no dependents) $120 / month (w/ dependents)	$80 / month (no dependents) $160 / month (w/ dependents)	$100 / month (no dependents) $200 / month (w/ dependents)		
3. Monthly fee for healthcare coverage for military retirees over the age of 65	No monthly fee	$16.50 / month	$30 / month	$40 / month			
4. Annual performance-based bonus (awarded based on individual performance over the previous year)	Up to 20% annual bonus	Up to 15% annual bonus	Up to 10% annual bonus	Up to 5% annual bonus	No performance-based bonus		
5. Number of years of service required to qualify for retirement benefits	15 years	20 years	25 years	30 years			
6. Age at which retirees can begin receiving retirement pay	No age limit	Age 50	Age 55	Age 60	Age 65		
7. Military contribution to a defined contribution retirement plan	25% of basic pay	20% of basic pay	15% of basic pay	10% of basic pay			
8. Vesting period for defined contribution retirement plan	5 years	10 years	15 years	20 years			
9. One-time, permanent increase in basic pay for all service members	15% increase	10% increase	5% increase	0% increase			
10. Additional benefits and services	Child, Youth, and School Services	Exchanges	Commissary	Extra Vacation Days	Family Counseling	Career Counseling / Outplacement	Chose next duty station and length of tour

Move the slider to indicate which pair of options you prefer, assuming all other aspects of pay and benefits are the same. If you do not prefer one option over the other, leave the slider where it is." See Appendix 1 for screenshots of each page of the survey as they appeared to users taking the study.

Study Sample

The study ran for 12 weeks and generated 2,655 responses. Of these, just over half (54 percent) are active duty. Retired military constitute 27 percent of the sample, while 8 percent are currently serving in the Guard or Reserves. Other responses include: active-duty family members (4 percent), former military – not retired (3 percent), military retiree family members (1 percent), and civilians (1 percent).

Ninety-two percent of the study responses have a rationality score greater than zero. The rationality score is a measure of internal consistency in a person's answers. A rationality score of zero or less means that a person's answers in Stage 3 of the study differ significantly from their earlier responses. This can occur, for example, if a person indicates in the first part of the study that he prefers an increase in basic pay to a performance-based bonus but then later says the opposite. This situation usually arises when the user does not understand the question or is not sincere in his answers. For this reason, responses with a rationality score of zero or less are excluded from this analysis. The full set of study responses, including those with rationality scores of zero or less, is available for download from the CSBA website at: http://www.csbaonline.org/research/rebalancing-military-compensation/.

The focus of this analysis is the active-duty population, although for specific questions some analysis of military retirees and others are included. Just over half of the responses (1,338) are from active-duty personnel with a rationality score greater than zero. The study sample includes responses from all four Services and from men and women in roughly the same proportions as the actual active-duty population, as shown in Figure 10 and Figure 11. While the overall

The study sample includes responses from all four Services and from men and women in roughly the same proportions as the actual active-duty population.

FIGURE 10: COMPARISON OF ACTIVE-DUTY POPULATION TO STUDY POPULATION BY SERVICE

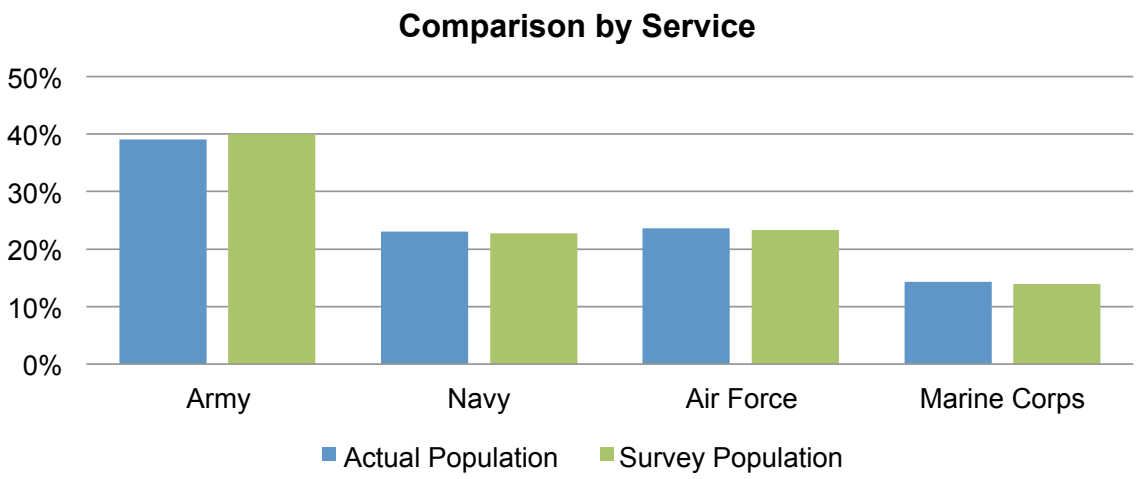
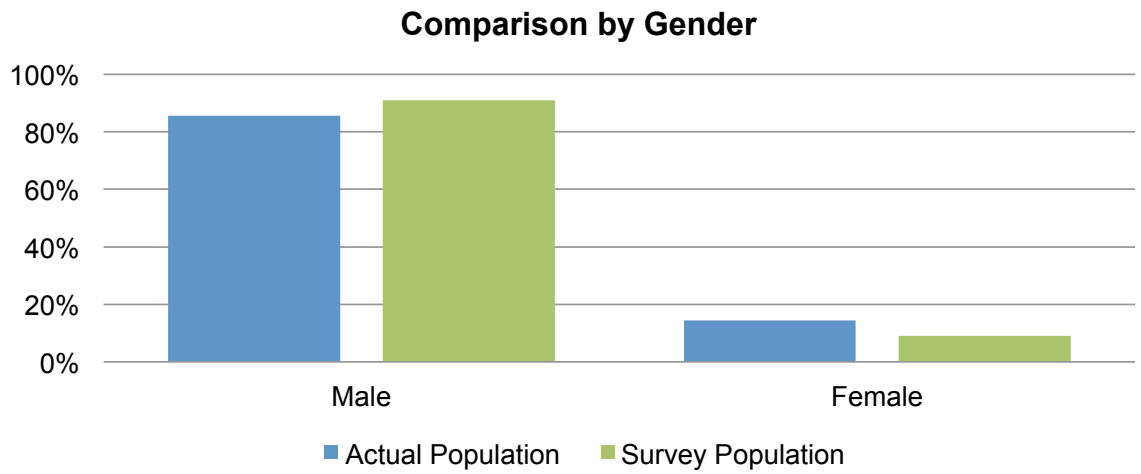


FIGURE 11: COMPARISON OF ACTIVE-DUTY POPULATION TO STUDY POPULATION BY GENDER



Junior enlisted make up 45 percent of the active-duty force but only 5 percent of the study sample.

sample size is robust and the representation of men, women, and each of the Services is proportionate, the sample differs from the actual active-duty population in several important ways.

The most significant deviation in the study sample is the proportion of responses from junior enlisted personnel (pay grades E-1 to E-4). Junior enlisted make up 45 percent of the active-duty force but only 5 percent of the study sample. As shown in Figure 12, other ranks are relatively overrepresented in the study, particularly senior officers, who compose only 6 percent of the active-duty force but are 32 percent of the study sample.

The underrepresentation of junior enlisted personnel in the study sample also manifests itself in the distribution of responses by age, years of service, and marital status. More than half of the active duty force has five years or less time in service compared to only 14 percent in the study sample, as shown in Figure 13. The representation of personnel below the age of 30 in the study sample is well below the actual population, as shown in Figure 14. Moreover, 81 percent of respondents reported that they are married compared to 56 percent in the actual population of active-duty personnel.

Limitations of Study

One obvious limitation of this study is that it is not based on a random sample. Instead, CSBA relied primarily on free publicity generated by discussing the study with members of the defense media. Two stories, both of which included

FIGURE 12: COMPARISON OF ACTIVE-DUTY POPULATION TO STUDY POPULATION BY RANK GROUPS

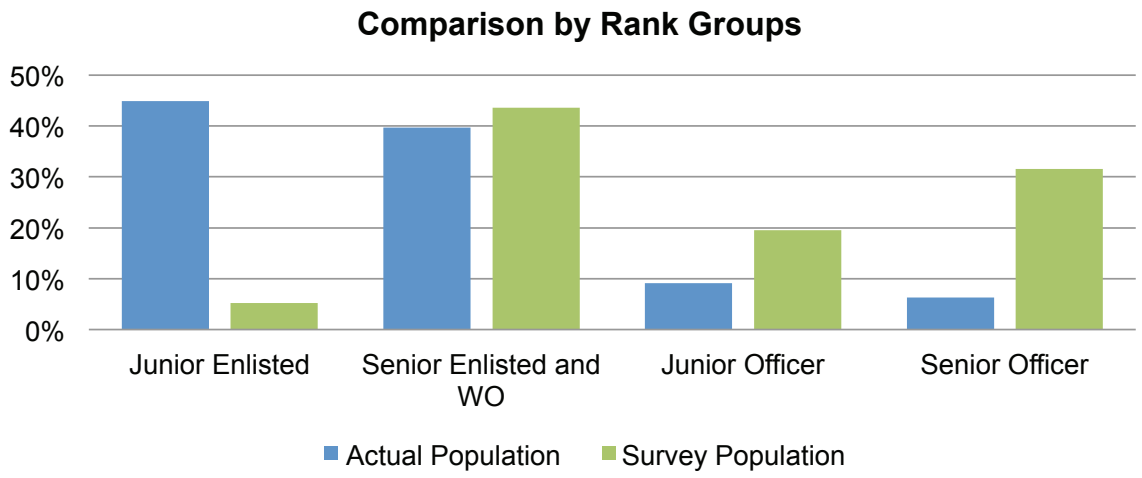


FIGURE 13: COMPARISON OF ACTIVE-DUTY POPULATION TO STUDY POPULATION BY YEARS OF SERVICE

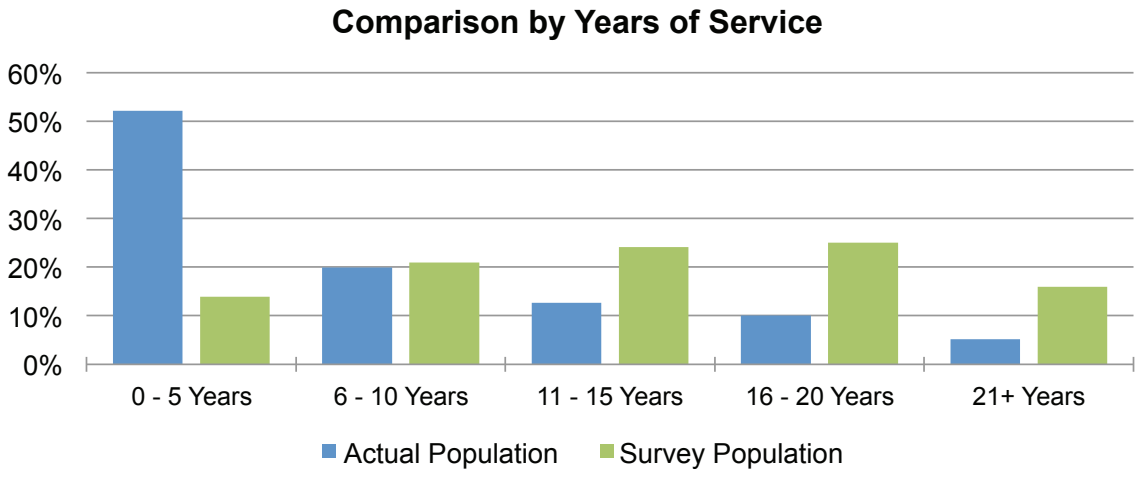


FIGURE 14: COMPARISON OF ACTIVE-DUTY POPULATION TO STUDY POPULATION BY AGE GROUPS

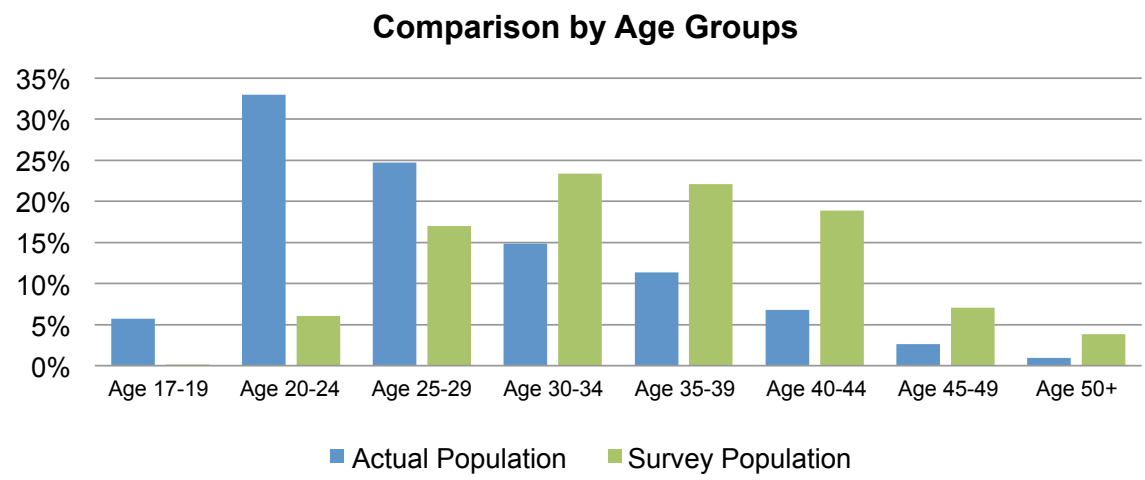
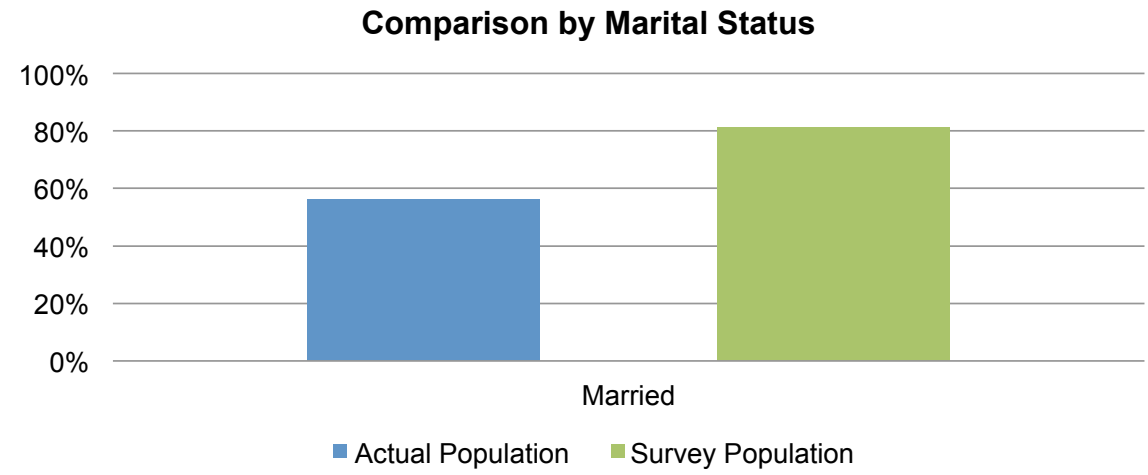


FIGURE 15: COMPARISON OF ACTIVE-DUTY POPULATION TO STUDY POPULATION BY MARITAL STATUS



hyperlinks to the survey, appear to have generated the most traffic to the site. One is an article by Rick Maze in *Military Times* published on January 30, 2012.[46] The other is an article by Leo Shane in *Stars and Stripes* the following day.[47] Almost half of the responses came the week these stories were published.[48]

The use of free publicity introduces the potential for a self-selection bias in the results because those who read these publications and take the time to click on a link for a survey may have different preferences than those who do not. While a random sampling of DoD personnel would have been preferred, it was not possible due to the fact that DoD did not sponsor the study and thus was not willing to provide access to its personnel data in order to generate a random sample. Even if a random sample had been possible, it would not be entirely free of self-selection bias since the people asked to take the survey still have a choice as to whether to respond. Again, those who chose to take a survey, even if chosen by random sampling, may have different preferences than those who elect not to take a survey.

The study's results are not analyzed in aggregate because of the self-selection bias and the clear differences in demographics between the study sample and the actual active-duty population.

The study's results are not analyzed in aggregate because of the self-selection bias and the clear differences in demographics between the study sample and the actual active-duty population. Since junior enlisted are underrepresented in the study sample, aggregating the results would dilute the weighting of their responses from what they would be if junior enlisted were represented in the study according to their proportion in the actual population. Aggregating the results also diminishes the value of the preference-based benefits optimization methodology. A key advantage of this methodology is that it provides a deeper look into the preferences of service members, and how these preferences vary across demographic groups. Therefore this report analyzes the results by groups within the sample rather than aggregating across the entire force. Because the sample size for junior enlisted was small (70 responses) some caution is warranted when drawing conclusions about this particular segment. Analysis of the confidence interval of the results by rank group is included in Appendix 2.

Another key limitation of this analysis is that it measures the preferences of service members, not their actual behavior. Making the compensation system more or less attractive does not guarantee that recruiting and retention will improve or falter. As previously noted, an individual's decision to join the military or

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46 Rick Maze, "Independent survey seeks your input on benefits," *Military Times*, January 30, 2012, available at http://www.militarytimes.com/news/2012/01/military-independent-survey-seeks-your-input-on-benefits-013012w/, accessed on April 16, 2012.

47 Leo Shane, "Think tank asks troops to weigh in on pay, benefits," *Stars and Stripes*, January 31, 2012, available at http://www.stripes.com/blogs/stripes-central/stripes-central-1.8040/think-tank-asks-troops-to-weigh-in-on-pay-benefits-1.167246, accessed on April 16, 2012.

48 Following the story in *Stars and Stripes*, the Veterans of Foreign Wars released a public statement "denouncing" the survey and urging its members not to participate. According to the VFW's statement, "the survey's pointed questions on specific cuts and proposed changes actually pit different demographic groups of service members and veterans against each other." The full VFW statement is available at http://www.vfwonthehill.org/2012/01/vfw-denounces-survey-on-military.html

stay in the military depends on many factors, only one of which is compensation. Compensation is nevertheless the primary tool by which DoD can influence recruiting and retention. Given that both are now at relatively high levels, DoD does not need to improve recruiting and retention, but rather maintain them. It is not a leap of logic to assume that changes to the compensation system that maintain or improve its attractiveness are consistent with maintaining the status quo in recruiting and retention. Moreover, if DoD were to implement a performance-based benefits optimization program of its own, it could link survey responses to actual behavior and, over time, establish a correlation between expressed preferences and actions.

CHAPTER 3 > **ANALYSIS**

This chapter analyzes the study data, focusing primarily on the active duty force. The analysis is segmented based on rank, age, years of service, and other factors that emerge as being important in determining how service members value different forms of compensation.[49] The results presented in this chapter are *findings* based on the data collected in the study, not *recommendations* for changes in compensation policy. Many other factors must be taken into account before a change can be recommended, such as fairness, equity, feasibility, and the potential operational effects on military operations. Rather, this analysis uses an evidence-based approach to identify where opportunities exist to reduce costs while maintaining or improving the overall value the compensation system provides to service members.

The results presented in this chapter are *findings* based on the data collected in the study, not *recommendations* for changes in compensation policy.

Several metrics are used throughout the analysis that should be understood in advance:

- RELATIVE IMPORTANCE measures the value placed on different types of compensation relative to one another. It is expressed as a percentage, and the relative importance of all ten types of compensation measured in the study sum to 100 percent for any individual or group of individuals.
- NORMALIZED UTILITY indicates the preference for levels of different types of compensation. It is calculated by comparing the utility of a particular level of compensation to that of the least preferred level of the same type of compensation and

[49] It is important to keep in mind that not all groups should be given equal weight because the size of each group in the actual population can vary substantially. For example, junior enlisted make up nearly half of the military (45 percent) while senior officers only account for only 6 percent. While these groups appear together throughout the analysis, it does not mean that they represent equal populations within the overall force.

then normalizing that difference (i.e., dividing it) by the utility of the level with the highest utility across all types of compensation. This allows for direct comparison of the importance of levels both within and across different types of compensation. Normalized utility values can range from 0 to 10.

- PERCEIVED VALUE quantifies the dollar value placed on a change in level of benefit for a particular type of compensation. It computes this by comparing the change in a respondent's utility to the amount of basic pay that would yield an equivalent change in utility value for the respondent, based on his preference function for basic pay. The basic pay for active-duty service members is calculated based on their pay grade and years of service.

Overview

One of the first things that becomes evident when analyzing the study results is the distinct differences in the relative importance service members place on different types of compensation. There is general agreement across the ranks about how they value active-duty dependent healthcare and the vesting period for a defined-contribution retirement plan, as shown in Figure 16. But there is significant disagreement in how they value an increase in basic pay and a performance-based bonus. Junior enlisted value these forms of immediate cash compensation much more than officers and senior enlisted.

Junior enlisted place the highest importance on basic pay and active-duty dependent healthcare and the lowest importance on the monthly fees retirees pay for TRICARE Prime and TRICARE for Life.

Another general observation is that the three most important types of compensation are the same for senior enlisted and warrant officers, junior officers, and senior officers. These groups place the highest value on retirement collection age, time in service to qualify for retirement, and active-duty dependent healthcare, in that order, as shown in Figure 17. These three groups also agree on their lowest priority: a performance-based bonus. In contrast, junior enlisted place the highest importance on basic pay and active-duty dependent healthcare and the lowest importance on the monthly fees retirees pay for TRICARE Prime and TRICARE for Life. Senior officers had the greatest difference between the most important and least important types of compensation, with a factor of three difference in the relative importance placed on the retirement collection age (most important) and a performance-based bonus (least important). In contrast, junior enlisted had the lowest difference between the most important (basic pay) and least important (TRICARE fees for retirees) types of compensation. The following sections explore each area of compensation measured in the study in more detail.

FIGURE 16: RELATIVE IMPORTANCE BY COMPENSATION TYPES

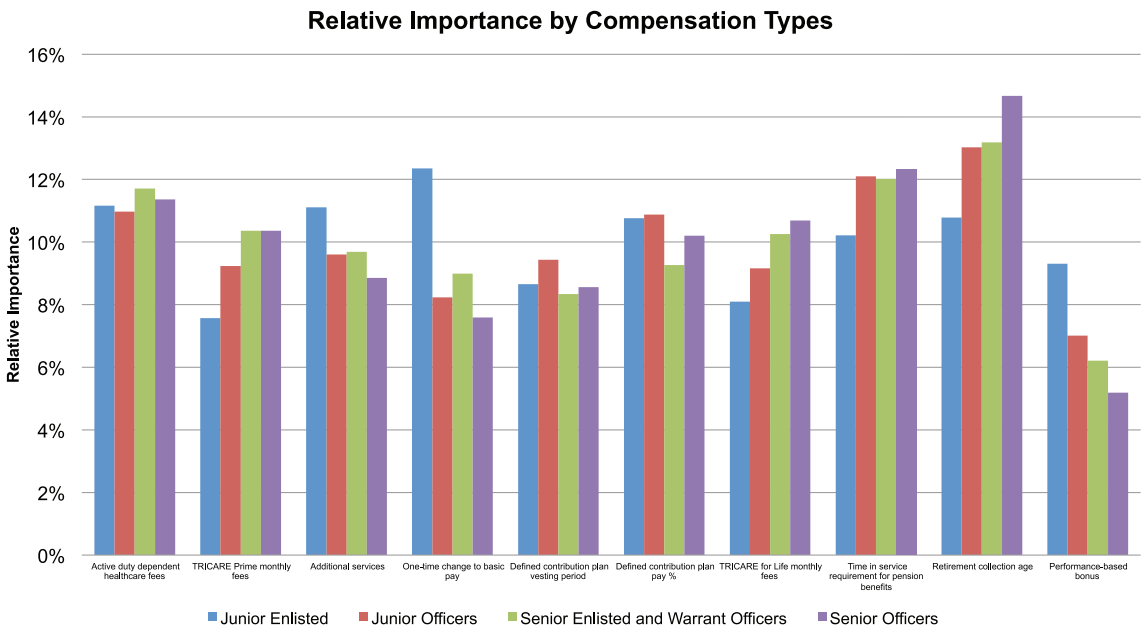
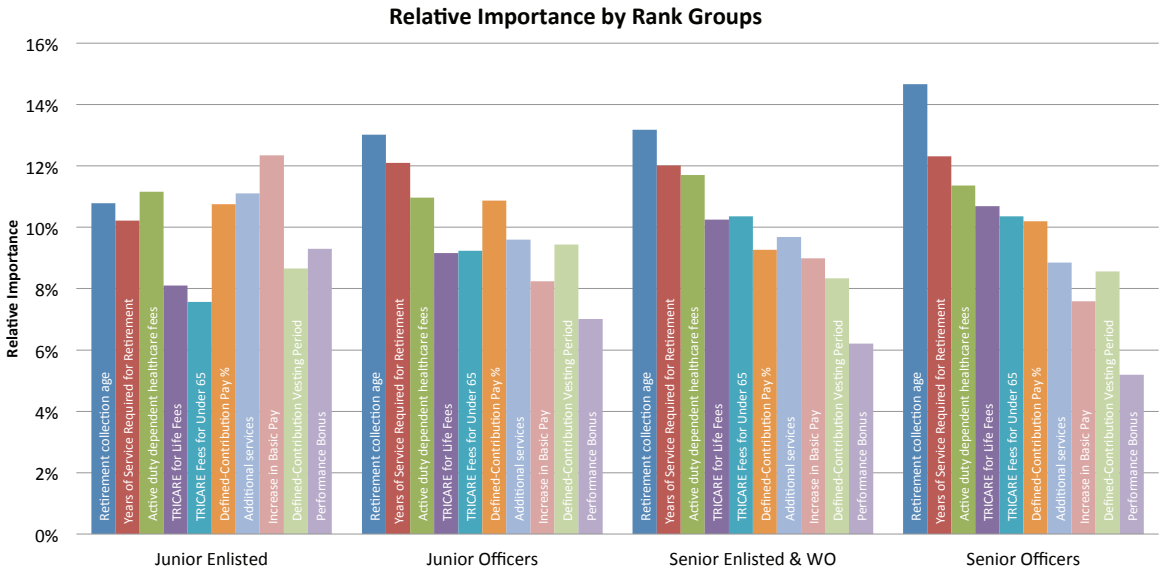


FIGURE 17: RELATIVE IMPORTANCE BY RANK GROUPS



Cash Compensation

Cash compensation is the single largest component of military compensation. The base defense budget enacted for FY 2012 provides $52.8 billion in basic pay, $27.7 billion in allowances for housing and subsistence, and $5.0 billion in other types of cash compensation for active-duty troops.[50] When combined, these sources of cash compensation account for half of all funding for military personnel. The study measured service members' preferences for two types of cash compensation: basic pay and a performance-based bonus.

BASIC PAY

As one would expect, service members indicate a steadily increasing preference for basic pay. The most notable difference among service members is by rank. Junior enlisted service members have the highest preference for increases in basic pay, followed by senior enlisted and warrant officers. Junior officers and senior officers have the lowest preference for an increase in basic pay. At the highest level of pay increase tested in the study, a one-time increase of 15 percent, the normalized utility for junior enlisted is 65 percent higher than that of senior officers, as shown in Figure 18.

Increasing basic pay for junior enlisted has more than six times the impact per dollar than increasing basic pay for senior officers.

The pay grade and years of service data collected in the study allow the pay increase to be translated from a percentage of basic pay to actual dollars using the military pay scale. The differences among the ranks are even more pronounced when viewed in terms of dollars of basic pay, as shown in Figure 19. For every increase of a thousand dollars in basic pay, the average normalized utility for junior enlisted rises by 2.1, senior enlisted and warrant officers by 0.87, junior officers by 0.57, and senior officers by 0.34. Thus, increasing basic pay for junior enlisted has more than six times the impact per dollar than increasing basic pay for senior officers. This finding calls into question the wisdom of across-the-board pay raises.

PERFORMANCE-BASED BONUS

The study also asked respondents about their preferences for a performance-based bonus awarded annually based on individual performance over the previous year. The levels offered were: no bonus, up to 5 percent of basic pay, up to 10 percent of basic pay, up to 15 percent of basic pay, and up to 20 percent of basic pay. The details of how the bonus would be paid out, such as what percentage of the force would receive the maximum amount and what percentage would receive no bonus at all, were not specified in the question for the sake of simplicity.

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[50] Office of the Undersecretary of Defense (Comptroller), *Military Personnel Programs (M-1): Department of Defense Budget Fiscal Year 2013* (Washington, DC: Department of Defense, February 2012).

FIGURE 18: PREFERENCE FOR BASIC PAY BY RANK GROUP

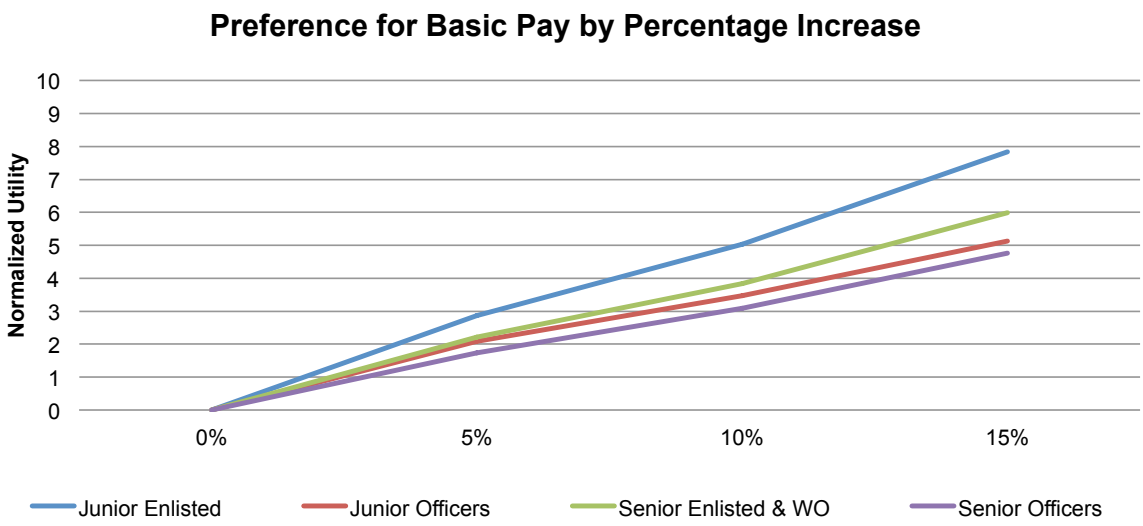
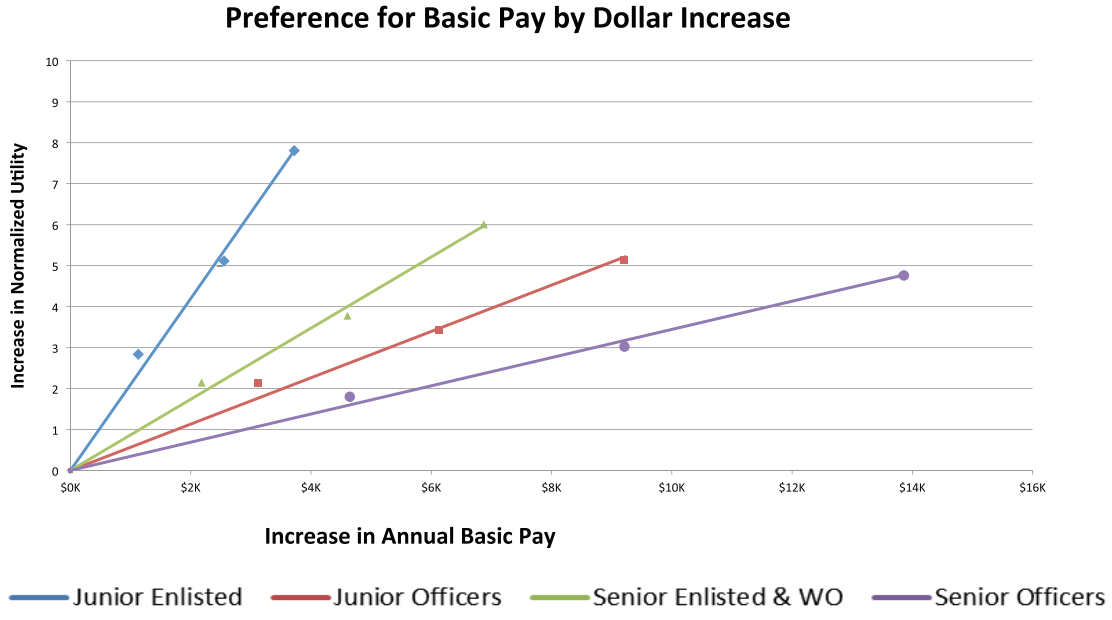


FIGURE 19: PREFERENCE FOR BASIC PAY BY DOLLAR AMOUNT



The QDR Independent Panel in 2010 made a similar recommendation for a performance-based bonus "to attract, retain, and reward critical specialties and outstanding performance."[51]

The study data, however, suggest that a performance-based bonus would not be a good use of resources. Preferences for the bonus vary most significantly by age groups, with younger service members having a higher average preference than older service members. Those ages 50 and older are virtually indifferent about the bonus at any level, as shown in Figure 20, and place essentially no value on this type of compensation.

A performance-based bonus does not appear to be an efficient form of compensation—service members do not value it commensurate with what it would cost to provide.

Figure 21 shows the perceived value of service members for a performance-based bonus. The change in perceived value of personnel age 50 and older is slightly negative for all bonus levels above 0 percent. On average, this group views a performance-based bonus as a *negative* form of compensation, much like a pay cut. Moreover, even the 18 to 29 age group—the group that values a performance-based bonus the most—does not value it as much as it would likely cost to implement. The average annual basic pay of personnel age 18 to 29 in the data sample is $39,600. If a 5 percent bonus was awarded to just the top 10 percent of this group (and the other 90 percent received no bonus) it would cost $198 per person in the overall group. Yet the increase in perceived value for a 5 percent bonus is only $57.[52] Thus, a performance-based bonus does not appear to be an efficient form of compensation—service members do not value it commensurate with what it would cost to provide.

Healthcare

Military healthcare is a driving factor in the overall growth of military compensation costs. DoD's healthcare costs have risen significantly over the past decade as benefits have been added and expanded, usage rates have increased, and overall healthcare costs in the economy have outpaced inflation. The military healthcare system serves some 9.6 million people, including active-duty service members, retirees, and dependents. The FY 2013 budget request proposes several changes in healthcare benefits, which, if enacted, would lower the overall cost from $52.8 billion in FY 2012 to $48.7 billion in FY 2013.[53] The proposed changes include raising the fee charged to military retirees under the age of 65 using TRICARE Prime and instituting a fee for the first time for military retirees over the age of 65 using the TRICARE for Life program.

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[51] Hadley et al., *The QDR in Perspective: Meeting America's National Security Needs In the 21st Century,* p. 78.

[52] The breakeven point for the 18 to 29 age group—the point at which the cost of the bonus program equals the perceived value assigned to it—is when the 5 percent bonus is only awarded to 2.9 percent of personnel.

[53] Office of the Undersecretary of Defense (Comptroller), *Overview: FY 2013 Defense Budget*, p. 5-2.

FIGURE 20: PREFERENCE FOR PERFORMANCE-BASED BONUS BY AGE GROUP

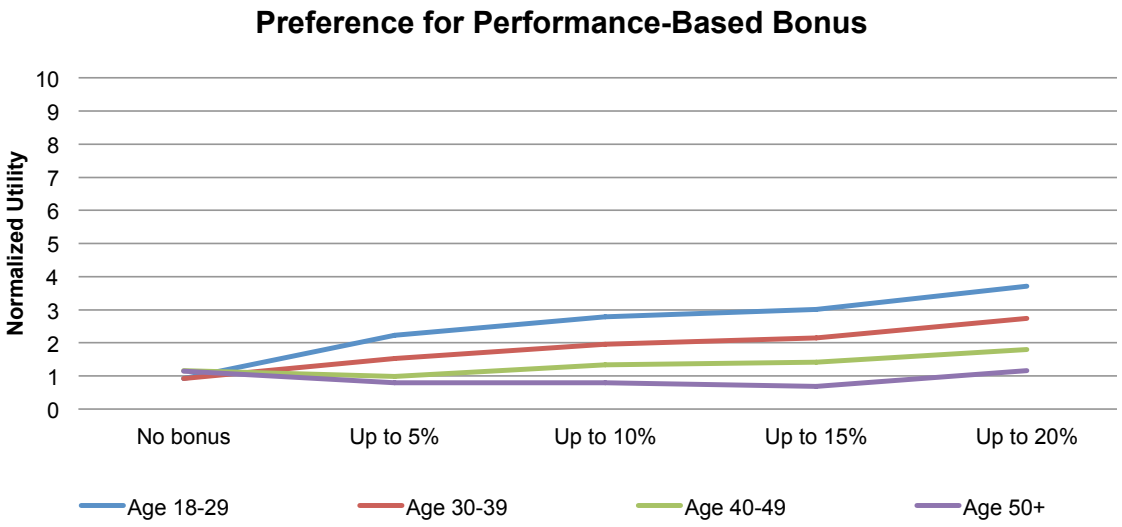
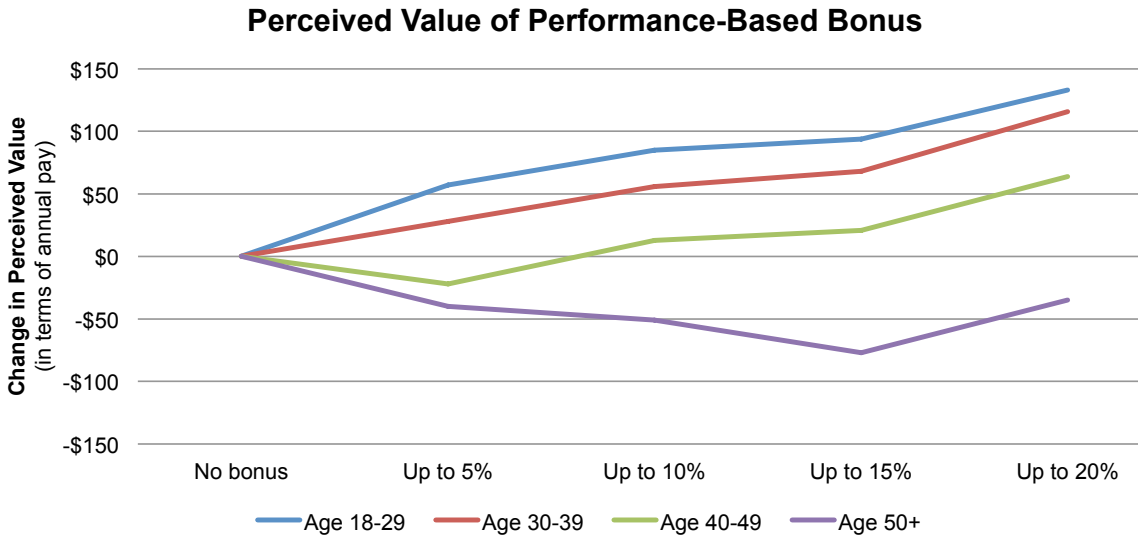


FIGURE 21: PERCEIVED VALUE OF A PERFORMANCE-BASED BONUS BY AGE GROUP



TRICARE PRIME FEE FOR RETIREES UNDER 65

The differences in service members' preferences for the TRICARE fee paid by military retirees under the age of 65 are most pronounced when viewed by the number of years in service rather than by rank or age. As shown in Figure 22, those with 1 to 5 years of service have a notably lower preference for the lowest level of fee measured, which roughly corresponds to the current fee military retirees under 65 pay.[54] Maintaining the current fee is 50 percent more important, on average, for those with 20 years or more years of service than it is for those with 1 to 5 years of service. This is not surprising since service members with 20 years or more years of service already qualify for a retirement and thus are virtually certain to receive this benefit. Those with one to five years of service are less likely to stay the full 20 years required to retire, and so are less likely to receive this benefit.

What is also interesting in Figure 22 is that the preferences converge after the initial drop from the lowest level ($20 per month for single coverage / $40 per month for family coverage) to the next level ($40 per month single / $80 per month family). This indicates that while an initial increase in the fee would be viewed more adversely by those farther along in their military career, additional increases would be viewed roughly the same across the force.

The administration's FY 2013 budget request proposes a three-tiered approach for increasing the annual TRICARE Prime fee paid by military retirees under the age of 65. The middle tier, those with retirement pay between $22,590 and $45,178 annually, includes 39 percent of current active-duty, non-disabled retirees. Once the increases are fully phased in by FY 2017, the middle tier would pay $127 per month for family coverage, roughly equivalent to the middle option presented in the study ($120 per month for family coverage). Forty-seven percent of current retirees would fall into the bottom tier and pay $74 per month for the family plan, similar to the $80 option in the study. The 14 percent of current retirees in the upper tier would pay $171 per month (similar to the $160 option in the study).[55]

The change in perceived value from raising the TRICARE fee for retirees under 65, shown in Figure 23, reveals how service members value this benefit with respect to annual pay. In other words, it quantifies how much of an increase in annual pay would be needed, on average, to maintain the same level of overall satisfaction with the compensation system. One potential concern with the proposed fee increase is that retention of mid-career personnel (6 to 15 years of service) could be adversely affected since they are at or near a decision

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54 Currently retired service members under the age of 65 pay $260 annually for single coverage and $520 annually for family coverage under TRICARE Prime.

55 The percentage of current retirees in each tier group was calculated using data from: Department of Defense, Office of the Actuary, *Statistical Report on the Military Retirement System: Fiscal Year 2010* (Washington, DC: Department of Defense, May 2011), p. 176-177.

FIGURE 22: PREFERENCE FOR RETIREE TRICARE FEES BY YEARS OF SERVICE

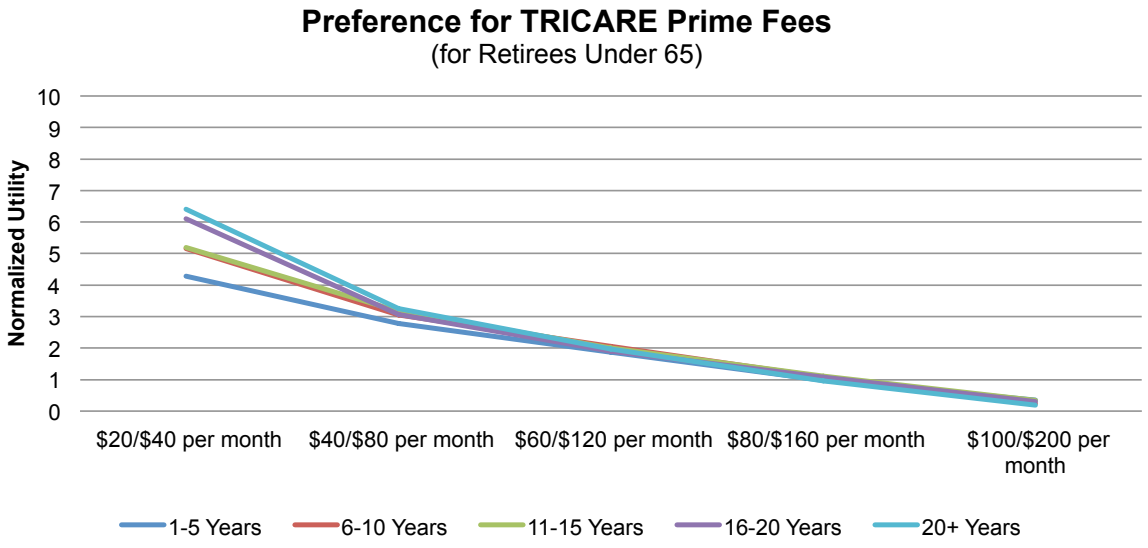
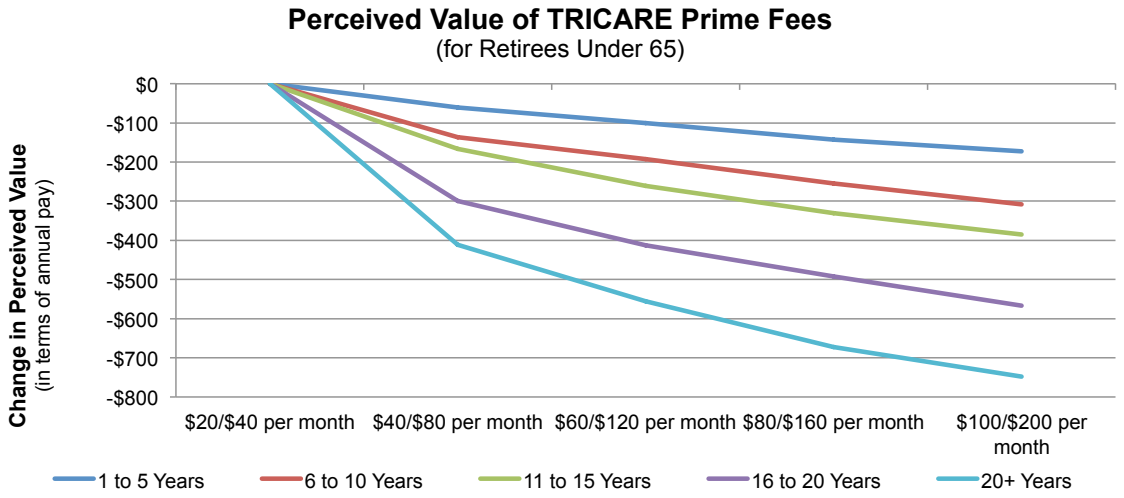


FIGURE 23: PERCEIVED VALUE OF INCREASES IN TRICARE FEES FOR RETIREES BY YEARS OF SERVICE



point on whether to make a career of the military. The data from the study show that 89 percent of personnel with 6 to 15 years of service would prefer a modest $350 increase in annual pay even if it means the monthly TRICARE fee they would pay in retirement would increase to $80 single/$160 family—an increase of $1400 in annual fees for the family plan.

TRICARE FOR LIFE FEE FOR RETIREES 65 AND OLDER

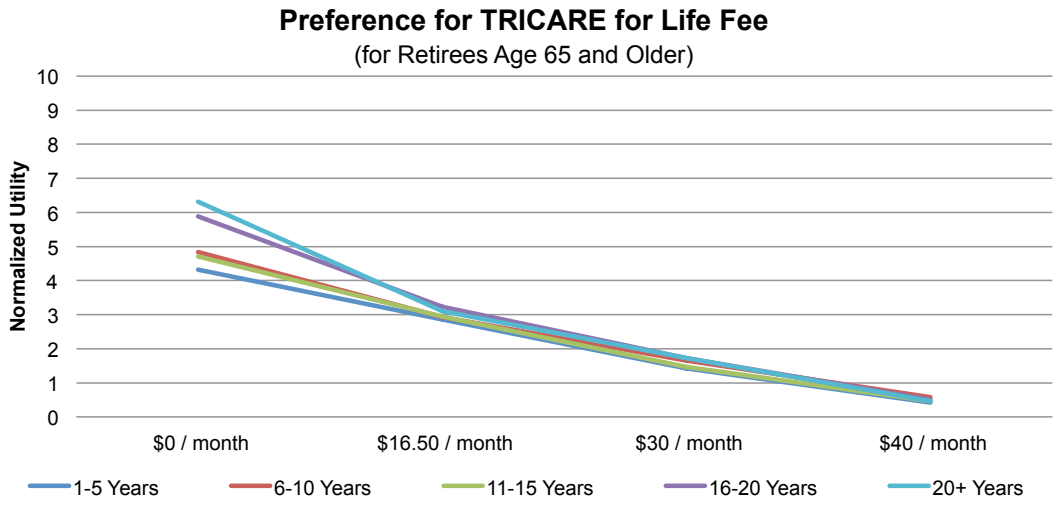
TRICARE for Life is a Medicare supplemental insurance program for military retirees age 65 and older. Prior to its creation in 2001, military retirees transitioned from TRICARE to Medicare when they turned 65. The new benefit provides supplemental coverage beyond standard Medicare. Military retirees 65 and older do not currently pay a fee for this additional coverage. The FY 2013 budget request proposes a three-tiered fee structure for TRICARE for Life, using the same tiers as those proposed for retirees under 65. The middle tier would pay $26 per month once the increase is fully phased in by FY 2017 (similar to the $30 per month option in the study). The lower tier would pay $13 per month (similar to the $16.50 per month option in the study), and the higher tier would pay $40 per month (identical to the $40 per month option in the study).

Again, the preferences of service members for an increase in the TRICARE for Life fee differ most notably when viewed by years of service. As shown in Figure 24, those with 20 or more years of service prefer the current level of fee ($0 per month) nearly 50 percent more than those with one to five years of service. Similar to the preferences for TRICARE Prime fees paid by retirees under the age of 65, the preferences for TRICARE for Life fees converge after the initial increase from $0 per month to $16.50 per month. The declining preferences for fee levels from $16.50 to $40 per month are roughly equal across the groups by years of service.

The TRICARE for Life benefit is funded on an accrual basis, which means DoD must set aside a certain amount of funds each year for each person in the military based on how much the benefit is expected to cost and what percentage of the force will eventually qualify for it. According to the DoD Office of the Actuary, the Department was planning to set aside $4,702 per active-duty service member for this benefit in FY 2013 before the proposed fee increase was announced.[56] If enacted, the proposed fee would reduce the amount DoD must set aside by roughly

[56] Department of Defense, Office of the Actuary, *Valuation of the MEDICARE-Eligible Retiree Health Care Fund* (Washington, DC: Department of Defense, December 2011), p. 2.

FIGURE 24: PREFERENCE FOR TRICARE FOR LIFE FEE BY YEARS OF SERVICE



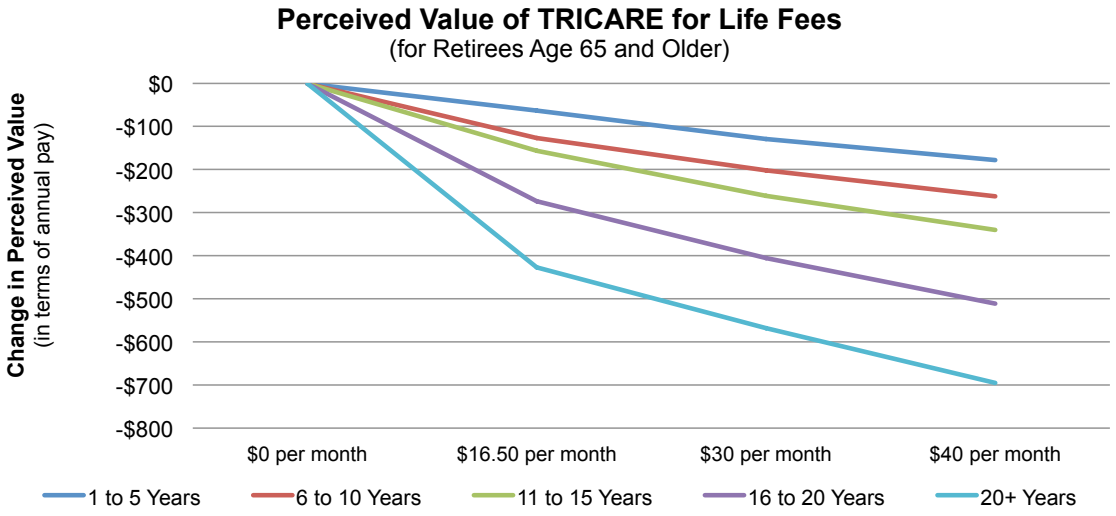
$1,224 per person.[57] Therefore, the appropriate question is do people perceive this benefit at the current level ($0 per month) as being worth $1,224 more than the reduced benefit proposed in the budget? In other words, do they value the level of benefit commensurate with what it costs to provide?

The answer is a clear no, as shown in Figure 25. Even those with 20 years of service or more—those who value this benefit the most—have an average reduction in perceived value of only $695 for the highest fee level. The change in perceived value is even less for those who would fall into the lower fee levels based on their retirement pay. What this means is that while service members, particularly those with 20 years of service or more, do value the TRICARE for Life benefit with no annual fee, it is not an efficient means of providing compensation. More than 90 percent of service members in each group prefer an increase in basic pay of less than $1,224 in exchange for raising the TRICARE for Life fee to $40 per month. Among those with ten or fewer years of service, 90 percent would prefer a mere $200 increase in basic pay—a savings of more than $1,000 per person. This presents a win-win situation: the Department could save money

More than 90 percent of service members in each group prefer an increase in basic pay of less than $1,224 in exchange for raising the TRICARE for Life fee to $40 per month.

[57] This is calculated by comparing the cost per active-duty service member for the Medicare-Eligible Retiree Health Care Fund (MERHCF) contribution in the FY 2013 budget request to the FY 2013 MERHCF per capita active-duty normal cost computed by the DoD Office of the Actuary before the proposal was made. In its budget request, DoD included a total of $4.9 billion in the MERHCF base budget for 1,413,000 active-duty service members, or $3,478 per person. This is $1,224 less than the Office of the Actuary per capita cost of $4,702.

FIGURE 25: PERCEIVED VALUE OF TRICARE FOR LIFE FOR RETIREES BY YEARS OF SERVICE



while maintaining, and in most cases improving, the level of satisfaction with the compensation system by raising the TRICARE for Life fee and offering a less costly increase in a more highly valued form of compensation, such as basic pay.

ACTIVE-DUTY DEPENDENT HEALTHCARE

The study also asked about instituting a healthcare fee for dependents of active-duty service members. Currently, active-duty service members receive healthcare coverage for themselves and their dependents with no annual premium. The study measured preferences for an active-duty dependent healthcare fee from $0 to $160 per month in increments of $40. Not surprisingly, the most notable difference in preference for this benefit is between those with and without dependents. Service members with dependents value keeping the annual premium at $0 per month 52 percent more than those without dependents, as shown in Figure 26.

Also revealing is that even for service members with dependents—those who value this benefit the most—the decline in perceived value from raising the fee is less than the increase in out of pocket costs incurred. Instituting a $40 per month fee for dependent healthcare would cost a service member with dependents an extra $480 per year but would only lower their perceived value by $295 on average, as shown in Figure 27. Raising the fee to $80 per month would cost a service member with dependents $960 per year but would only result in an average decrease in perceived value of $423. Some 75 percent of personnel with dependents do not value

FIGURE 26: PREFERENCE FOR DEPENDENT HEALTHCARE FEE BY DEPENDENT STATUS

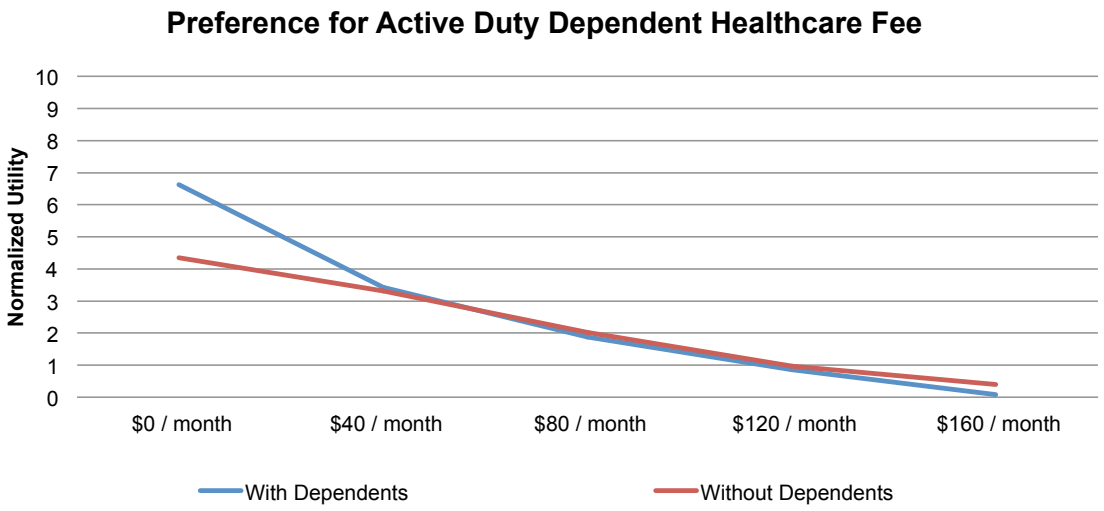
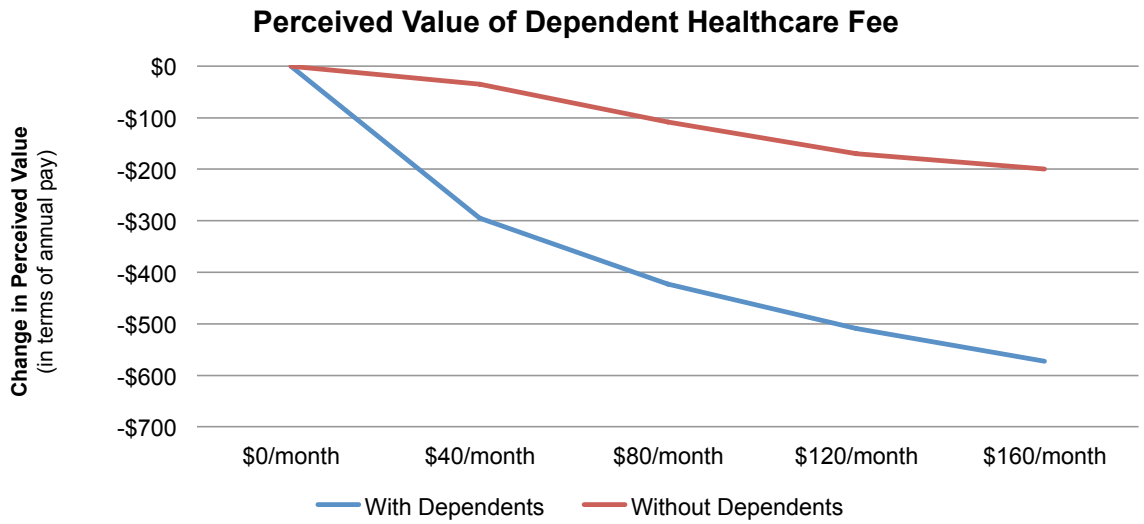


FIGURE 27: PERCEIVED VALUE OF DEPENDENT HEALTHCARE FEE BY DEPENDENT STATUS



Overall, DoD does not appear to be getting good value for the level of fees charged for healthcare.

free dependent healthcare commensurate with what it saves them in annual premiums. Moreover, the savings to DoD would likely be greater than the additional funds it would collect from raising the fee because some dependents would opt to exit the military healthcare system completely if the fee were raised, thus saving the department the full cost of their coverage. Working spouses, for example, may have healthcare options available to them through their employer and could be incentivized to use private-sector healthcare rather than military healthcare.

Overall, DoD does not appear to be getting good value for the level of fees charged for healthcare. Among the three healthcare fees explored in the study, the active-duty dependent healthcare fee is the most important to service members at all stages of their career. Yet the vast majority of service members, even those with dependents, do not value this benefit commensurate with its cost. DoD could get better value from its compensation dollars by shifting resources from providing low healthcare fees to offering more valued forms of compensation, such as basic pay.

Retirement Pay

In FY 2012 DoD will contribute $18.1 billion of its annual discretionary budget to the military retirement fund. The true cost of the military retirement system, however, is more than is set aside in DoD's discretionary budget. In FY 2012 the U.S. Treasury must set aside an additional $5.4 billion to pay for the concurrent receipt benefit, discussed in Chapter 2, as well as $64.8 billion to amortize the unfunded liability of the military retirement fund.[58] The study measured four components of the retirement system, two of which concern changes to the existing defined-benefit retirement system and two that deal with elements of a hypothetical defined-contribution retirement system.

YEARS OF SERVICE REQUIREMENT

Service members indicate a strong preference for maintaining the current 20 years of service requirement to qualify for retirement under the existing defined-benefit plan. The levels offered in the study are 15 years, 20 years, 25 years, and 30 years. Despite the fact that lowering the years of service required to 15 while keeping all other factors constant would amount to a more generous (and expensive) benefit,

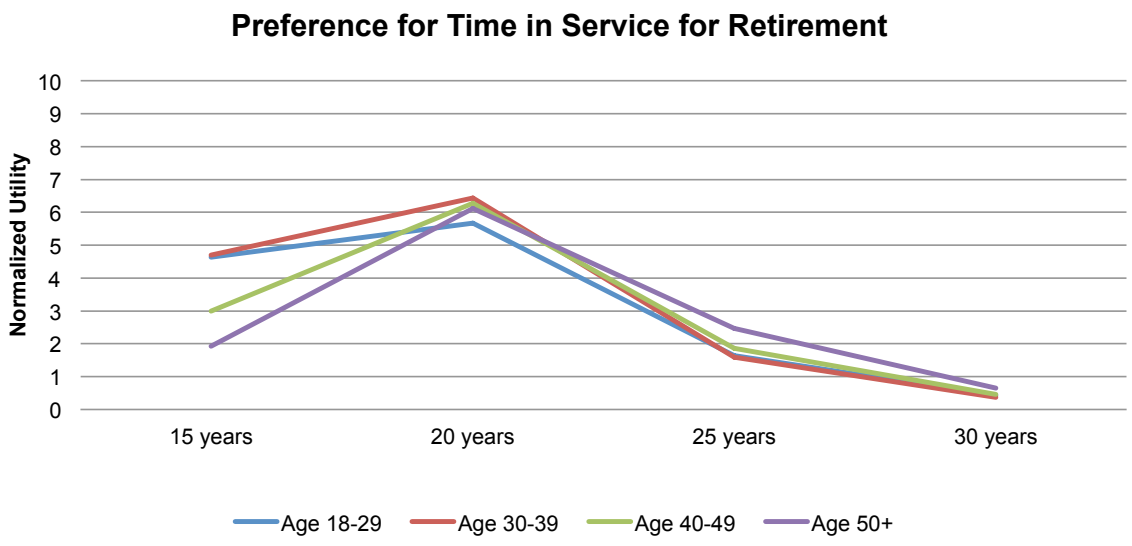
[58] The unfunded liability in the military retirement fund is primarily the result of a shift on October 1, 1984 to fund the retirement system on an accrual basis. Normal cost contributions had not been made to the military retirement fund prior to this date, thus creating an unfunded liability. DoD initially amortized this amount over 60 years, but later revised the amortization period to 50 years and then 42 years. Under current assumptions, the initial unfunded liability in the military retirement fund will be fully amortized in 2025. For more details, see Department of Defense, Office of the Actuary, *Valuation of the Military Retirement System* (Washington, DC: Department of Defense, January 2012), pp. 24-25.

service members of all ranks, ages, and years of service favor keeping the current level of 20 years of service. The preference for 20 over 15 years of service is most pronounced in those ages 50 and older, as shown in Figure 28. This group values a 20-year retirement more than three times as much as they value a 15-year retirement. Nearly all members of this group have accrued more than 20 years of service, so lowering the years of service would provide no benefit for them personally. The preference for 20 years is less pronounced in the 18 to 29 age group, all of which could potentially benefit from a reduction in the years of service required for retirement.

Looking deeper into the data, the results are a bit more mixed. The 18 to 29 age group is evenly split with nearly half (48 percent) preferring a 15-year retirement option. But the *intensity* of preference for those who prefer a 20-year retirement is much greater. The average change in normalized utility for people in the 18 to 29 age group who prefer a 15-year retirement option is +2.8 compared to an average change of -4.6 for those who prefer a 20-year retirement. The same is true for other age groups, with the greatest difference in intensity in the 50+ age group. Overall, the data suggest that the years of service required for retirement should not be reduced because it would both cost more and have a negative impact on the way the majority of service members in all age groups value their compensation.

The data suggest that the years of service required for retirement should not be reduced because it would both cost more and have a negative impact on the way the majority of service members in all age groups value their compensation.

FIGURE 28: PREFERENCE FOR TIME IN SERVICE FOR RETIREMENT BY AGE GROUP



RETIREMENT COLLECTION AGE

The study also measured preferences for changing the age at which retirees can begin collecting their retirement pay. Under the current system, there is no age limit—service members begin collecting retirement pay as soon as they retire regardless of age. The average age for active-duty, non-disabled retirees at the time of retirement is 47 for officers and 43 for enlisted, with some receiving retirement pay as early as age 37.[59] The study asked for respondents' retirement collection age preferences at five levels: no age limit, age 50, age 55, age 60, and age 65.

The results indicate a strong preference for maintaining the status quo of no age limit. The change in normalized utility is greatest for those in their 30s and 40s, as shown in Figure 29. Those ages 50 and older have the lowest preference for maintaining the status quo, which may be because this age group is already beyond the point at which this option would benefit them personally. After the steep drop in preference from no age limit to age 50, the preferences of all age groups converge and decline more gradually as the age is further increased.

The data show that more than 80 percent of service members in each age group would prefer a 1 percent or less increase in basic pay in exchange for raising the retirement collection age to 50.

Whether or not the efficiency of the compensation system could be improved by establishing a minimum age for the collection of retirement pay depends on the cost savings such a change would achieve. These savings would primarily be from reduced payouts during the first years of an individual's retirement. If the age were set at 50, the delay in receiving pay upon retirement would be an average of three years for officers and seven years for enlisted. However, the change could also induce some people to serve longer in order to reach the retirement collection age. Serving longer would increase a person's retirement pay for the remainder of their life and thus reduce the savings to DoD from this change. A full actuarial analysis, something beyond the scope of this study, would be needed to understand the net savings from establishing a retirement collection age and the resulting change in the normal cost percentage used to fund the military retirement system.

The current normal cost percentage used by DoD is 34.3 percent of basic pay, which means that DoD must set aside an additional 34.3 percent of basic pay each year in the military retirement fund.[60] Increasing the retirement collection age would likely reduce the normal cost percentage DoD must set aside each year. The question is: do service members value this benefit as a percentage of basic pay commensurate with the resulting reduction in the normal cost percentage? The data show that more than 80 percent of service members in each age group would

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[59] Department of Defense, Office of the Actuary, *Statistical Report on the Military Retirement System: Fiscal Year 2010* (Washington, DC: Department of Defense, May 2011), p. 82.

[60] Additional funds must be set aside by the Treasury to fund other aspects of the retirement system, such as concurrent receipt and the unfunded liability. The normal cost percentage can be found in Department of Defense, Office of the Actuary, *Valuation of the Military Retirement System* (Washington, DC: Department of Defense, January 2012), p. 5.

FIGURE 29: PREFERENCE FOR RETIREMENT COLLECTION AGE BY AGE GROUP

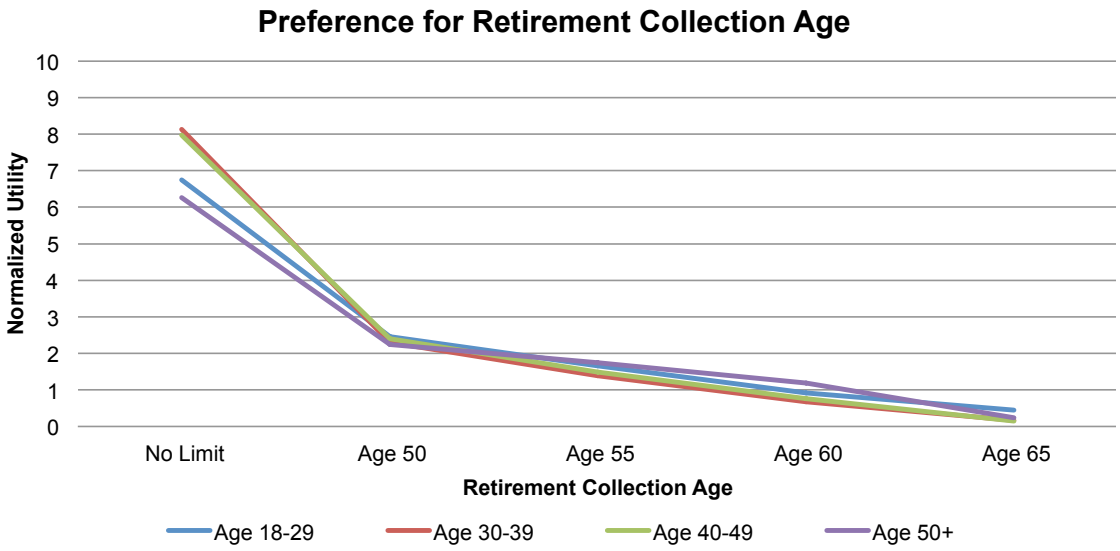
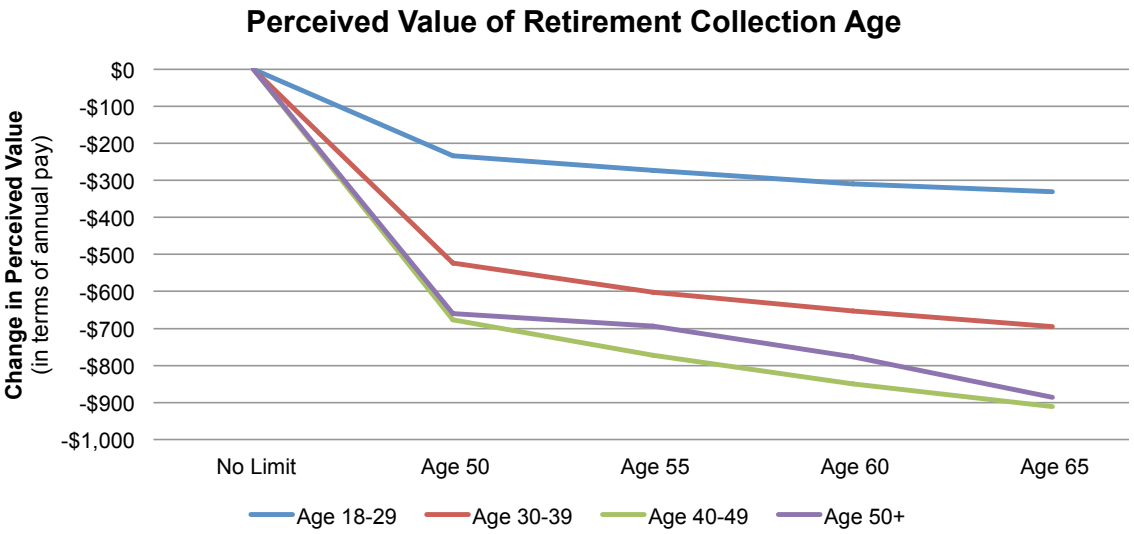


FIGURE 30: PERCEIVED VALUE OF RETIREMENT COLLECTION AGE BY AGE GROUP



prefer a 1 percent or less increase in basic pay in exchange for raising the retirement collection age to 50. This means that if the reduction in the normal cost percentage is 1 percent or more, DoD could save money and improve the value of its compensation system for more than 80 percent of personnel by raising the retirement collection age to 50 and increasing basic pay by 1 percent. For comparison, the REDUX change to the military retirement system, discussed in the first chapter, lowered the normal cost percentage by roughly 5 percent.[61]

DEFINED-CONTRIBUTION PLAN

Unlike the current defined-benefit retirement plan, which pays a pre-defined retirement pension for the rest of one's life, a defined-contribution plan sets aside a pre-defined amount of funds in a personal retirement account. Each individual would be able to invest these retirement savings, take any vested portion of these savings with him when he leaves the military, and manage how he draws down funds from the account when he is ready to retire.[62] The study measured the preferences of service members for the two main elements of a defined-contribution retirement plan: 1) the contribution made by the military into an individual's retirement account (as a percentage of basic pay) and 2) the vesting period of these funds. The vesting period determines how long a person has to serve before he is allowed to leave with the contributions made to his retirement account by the military.

The results indicate that service members do not value a defined-contribution plan commensurate with its cost.

Preferences for the contribution percentage and vesting schedule of a defined-contribution retirement plan vary most notably by years of service. As one would expect, those with 20 or more years of service are essentially indifferent to vesting schedules that range from 5 years to 20 years, since this group would be fully vested under any of these options. Those with 10 or fewer years of service express a stronger preference for a 5-year vesting schedule and a lower preference for a 20-year vesting schedule, as shown in Figure 31. Preferences for the contribution made by the military to a defined-contribution plan vary slightly less, with those having 6 to 10 years of service valuing a higher contribution rate the most and those with 20 years or more valuing a higher contribution rate the least.

When viewed in terms of perceived value relative to annual pay, the results indicate that service members do not value a defined-contribution plan commensurate with its cost. Figure 33 shows the perceived value of increasing the contribution rate

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[61] Ibid., p. 11.

[62] A key advantage of a defined-contribution plan is that it allows greater flexibility for an individual to manage his own retirement savings. A person can invest these savings and potentially earn a greater rate of return than the military retirement fund currently earns in the U.S. Treasury. The potential to earn more also comes with risks—an individual's investments could lose money and he could outlive his savings.

FIGURE 31: PREFERENCE FOR VESTING SCHEDULE BY YEARS OF SERVICE

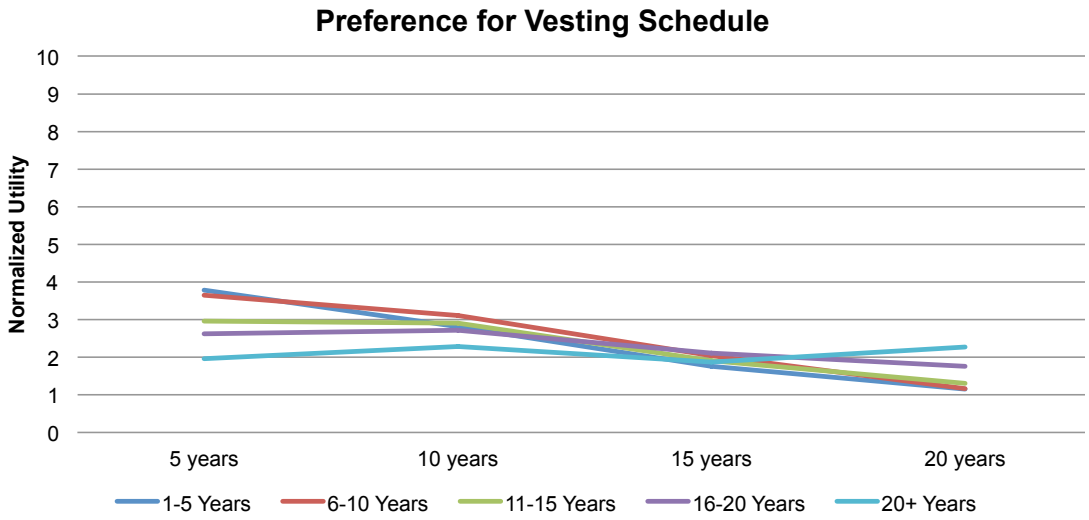


FIGURE 32: PREFERENCE FOR CONTRIBUTION PERCENTAGE BY YEARS OF SERVICE

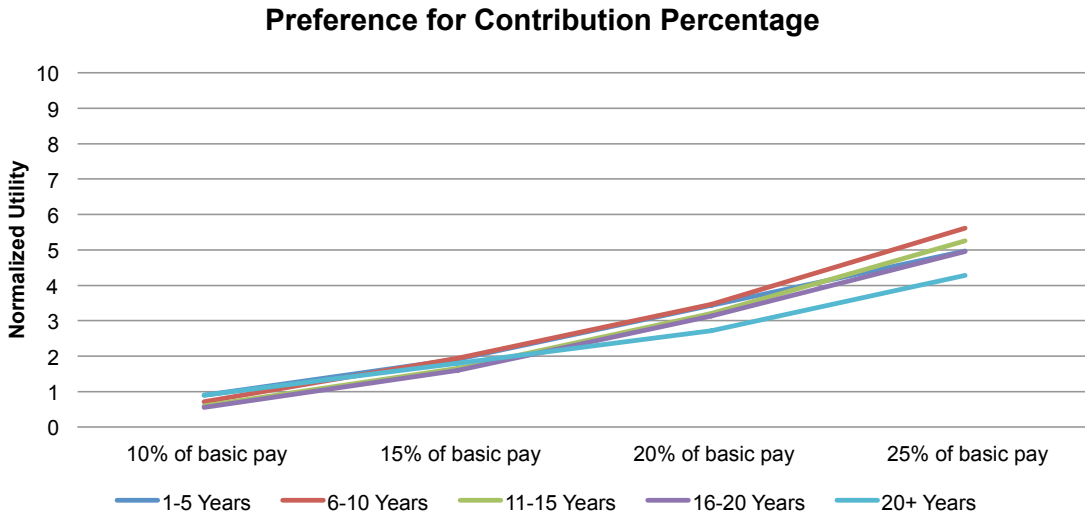
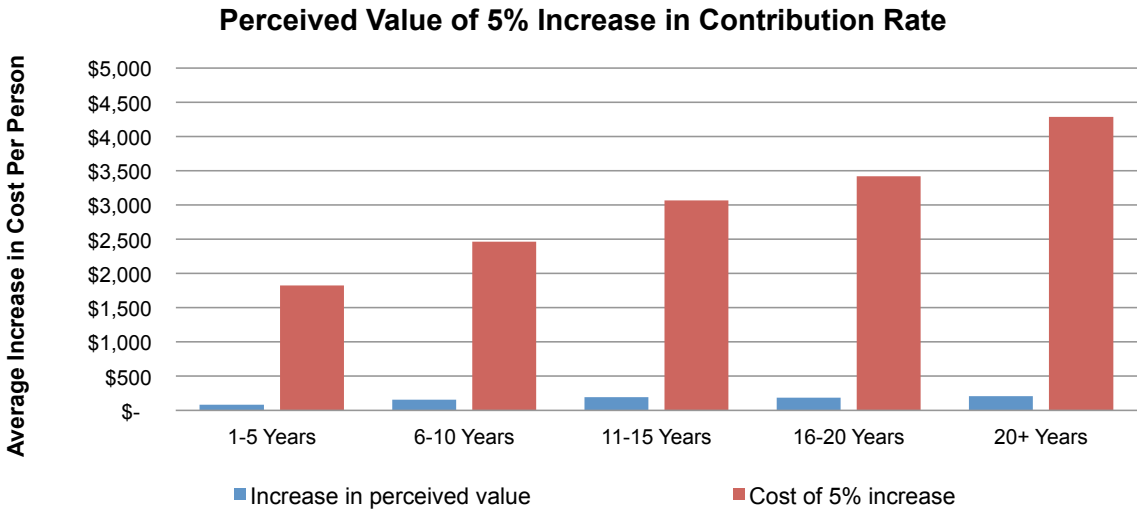


FIGURE 33: PERCEIVED VALUE OF CONTRIBUTION PERCENTAGE BY YEARS OF SERVICE



by 5 percent compared to the cost to DoD.[63] Service members in all groups value the increase at only a fraction of what it would cost DoD. Thus, they are not likely to value this type of retirement plan commensurate with what it would cost to provide.[64]

Additional Services and Other Benefits

In addition to cash compensation, healthcare benefits, and retirement benefits, DoD also provides a wide array of additional services and in-kind benefits as part of its total compensation package. Overall, junior enlisted tend to value these additional services more and senior officers value them less, as shown in Figure 17 at the beginning of this chapter. The study measured how service members value seven different types of additional services and benefits, each of which is discussed in detail below. For simplicity, the study measured preferences for the *existence* of these additional benefits but not for different *levels* of the benefits.

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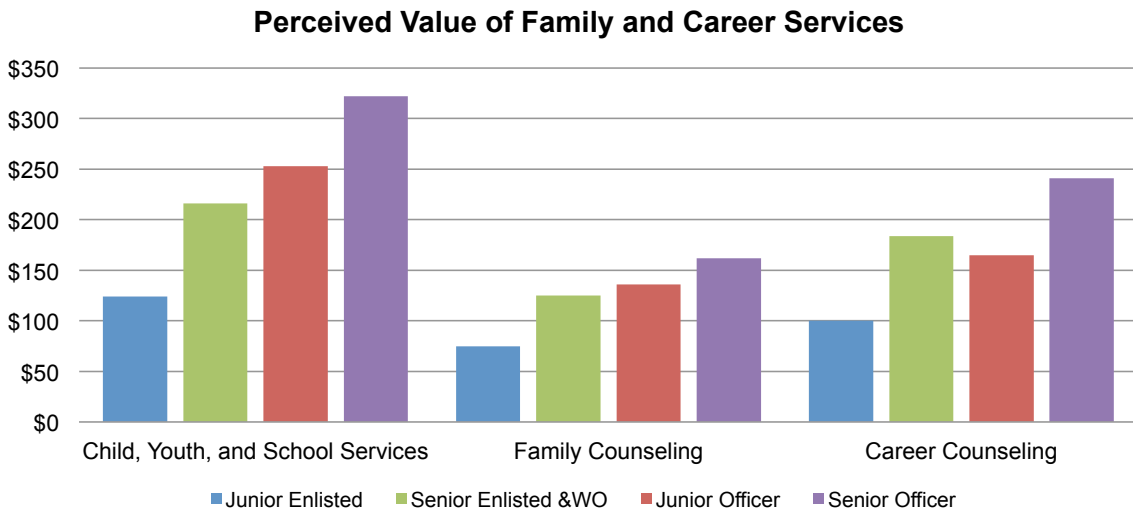
[63] The increase in perceived value was largest from 20 to 25 percent, which is what this analysis used for the 5 percent increase in contribution rate.

[64] This may be because service members prefer the current defined-benefit plan or because they are not familiar with how a defined-contribution plan operates. The study results only indicate *what* service members prefer and by *how much*, they do not indicate *why*.

FAMILY AND CAREER SERVICES

Officers place a higher value on family and career services than enlisted members do, as shown in Figure 34. This is due in part to the fact that officers tend to earn more in basic pay (the baseline for calculating perceived value) than enlisted. But the data suggest that service members at all ranks do not value family and career services commensurate with what they cost to provide. For example, child, youth, and school services are the most preferred of the three family services analyzed, yet service members of all ranks greatly undervalue this benefit. DoD spends some $3.7 billion annually on childcare, youth programs, and DoD K-12 schools—nearly $2,500 annually per active-duty service member.[65] More than 75 percent of junior officers and 99 percent of all other rank groups value this benefit less than it costs to provide.

FIGURE 34: PERCEIVED VALUE OF FAMILY AND CAREER SERVICES BY RANK GROUP



RETAIL SALES

The military operates four chains of retail stores: the Commissaries, Army and Air Force Exchange, Navy Exchange, and Marine Corps Exchange. The three military exchanges are general retail stores that operate on military installations around the world. They are largely self-funded and do not receive a direct appropriation from Congress, although DoD subsidizes their operations through various means

[65] Office of the Undersecretary of Defense (Comptroller), *Overview: FY 2013 Defense Budget*, p. 5-6.

at a cost of roughly $250 million annually.[66] The commissaries sell groceries to service members, dependents, and retirees at below market rates and receive an annual subsidy of $1.4 billion in the DoD budget.[67] Because the commissaries and exchanges are a benefit for guard and reserve members as well, the per person cost can be apportioned over both the active and reserve component. Including all 2.3 million active duty, guard, and reserve personnel, the per person cost of the military exchanges and commissaries are $110 and $600, respectively.

The study reveals that the military exchanges are valued more than they actually cost by a majority of service members in each rank group. As shown in Figure 35, there is little difference among the ranks in the percentage of service members that place a high value on the exchanges. This is not true in the case of the commissaries, shown in Figure 36. Roughly one-third of officers value the commissaries as much or more than they cost to provide, compared to less than 6 percent of enlisted service members. There is no significant difference in how either the exchanges or commissaries are valued by service members living on base versus off base. Commissaries are valued slightly more by service members with dependents.

The data suggest that DoD should not eliminate the military exchanges because they are a good value as a form of compensation across all ranks.

The data suggest that DoD should not eliminate the military exchanges because they are a good value as a form of compensation across all ranks. This does not preclude reforms to make the exchanges more efficient, such as combining the three exchanges systems to lower overhead costs, as long as these reforms do not degrade the essential benefit provided to service members. The data are less conclusive on commissaries. Previous proposals to eliminate the commissaries have suggested replacing them with a $300 per person cash subsidy, roughly half their cost.[68] The data suggest that while junior enlisted would overwhelmingly prefer a $300 cash subsidy, roughly a third of senior enlisted and a majority of officers would not.

ON THE JOB BENEFITS

Of all the additional services and benefits tested in the study, service members of all ranks place the highest value on having greater choice in duty station and length of tour. Moreover, officers and senior enlisted with dependents tend to value this choice more than their peers without dependents, as shown in Figure 37. Giving service members greater choice in the location and length of their next assignment would cost DoD essentially nothing. While there would certainly need to be some constraints to ensure operational needs are met, reforming this aspect of the

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66 Congressional Budget Office, *Budget Options: Volume 2* (Washington, DC: Congressional Budget Office, August 2009), p. 28.

67 Office of the Undersecretary of Defense (Comptroller), *Overview: FY 2013 Defense Budget,* p. 5-6.

68 The author, among others, has supported this proposal in the past. See Todd Harrison, testimony before the Subcommittee on National Security and Foreign Affairs, Committee on Oversight and Government, *Evaluating Options for a Sustainable Defense,* July 20, 2010, available at http://www.csbaonline.org/wp-content/uploads/2010/07/2010.07.20-Evaluating-Options-For-a-Sustainable-Defense.pdf, accessed on May 10, 2012.

FIGURE 35: PERCENTAGE OF SERVICE MEMBERS VALUING EXCHANGES MORE THAN THEY COST

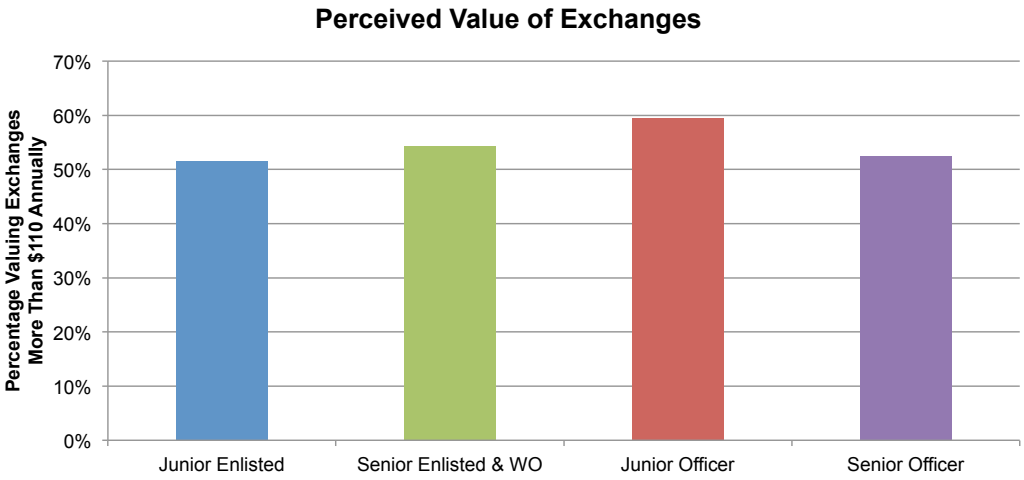


FIGURE 36: PERCENTAGE OF SERVICE MEMBERS VALUING COMMISSARIES MORE THAN THEY COST

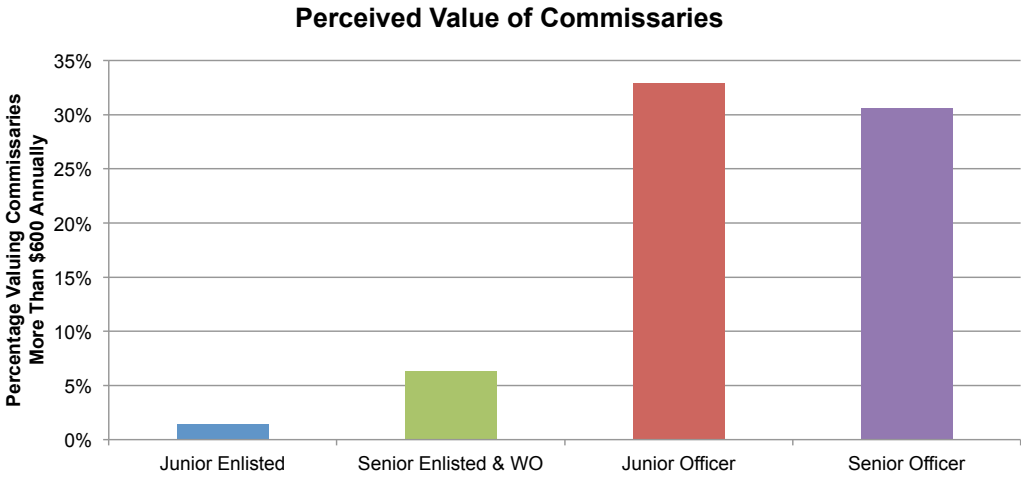


FIGURE 37: PERCEIVED VALUE OF CHOICE IN DUTY STATION AND LENGTH OF TOUR BY RANK GROUP

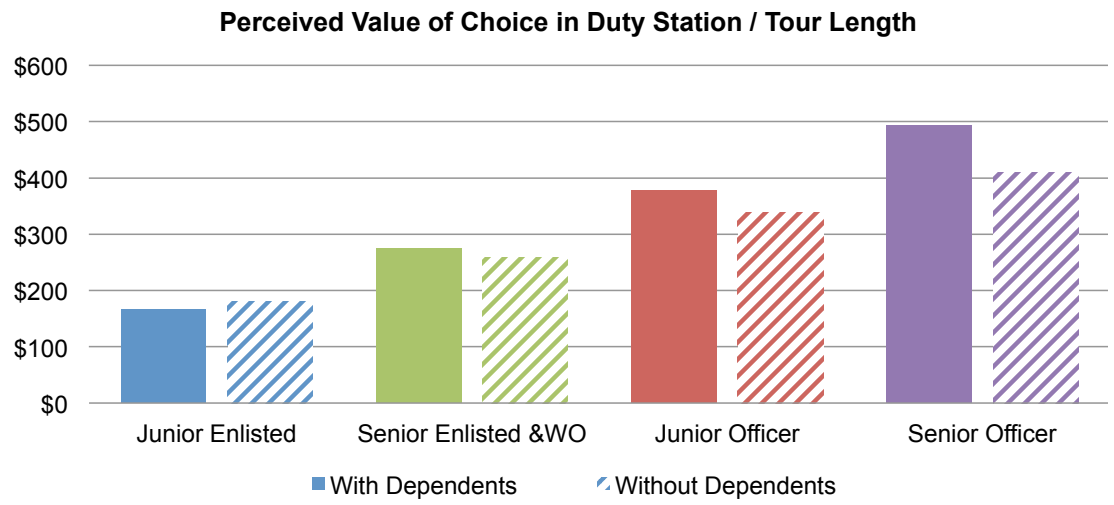
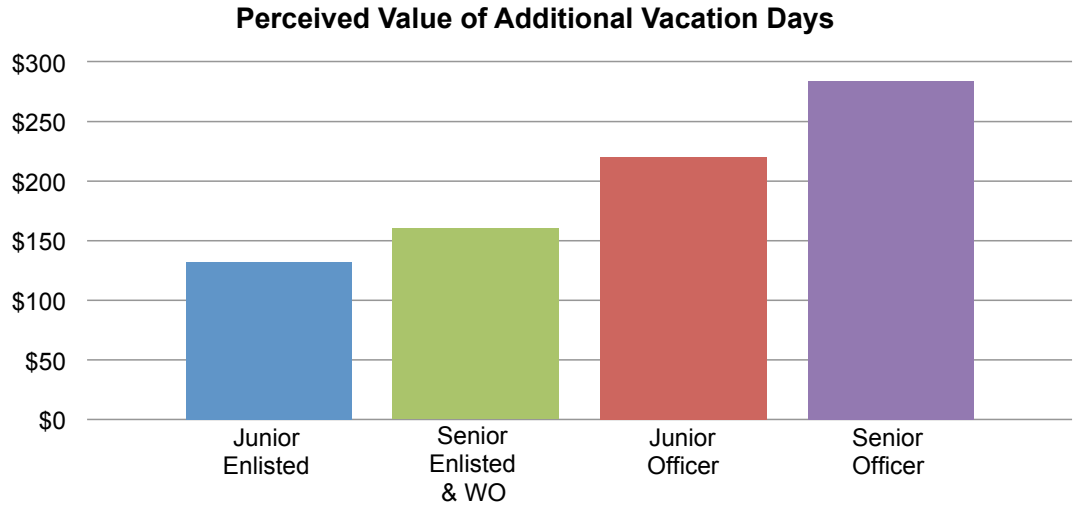


FIGURE 38: PERCEIVED VALUE OF ADDITIONAL VACATION DAYS BY RANK GROUP



personnel system could offset the negative effects of other benefits being reduced to save costs. For example, allowing greater choice in duty station and tour length would more than offset the loss in perceived value of instituting a $40 per month fee for dependent healthcare for 62 percent of junior enlisted, 59 percent of senior enlisted, 70 percent of junior officers, and 63 percent of senior officers.

Service members also place a relatively high value on additional vacation days compared to other additional services and benefits measured in the study. For example, junior enlisted and junior officers value additional vacation days, on average, as much or more than they do the commissaries and military exchanges. The perceived value of additional vacation days did not vary significantly between those with and without dependents. Members of the military currently receive 30 days of annual leave. Military personnel use an average of 22.2 days per year and can accumulate unused leave up to a maximum of 60 days. Any unused leave is paid out at separation. An increase in vacation days could have a cost impact by increasing the payout for unused leave. Costs could also increase for situations in which a person must be backfilled while they are on leave, thus requiring a slightly larger end strength or greater use of guard and reserve members. However, these costs would be tempered by the fact that some people would not necessarily use the additional leave even if it were available. As service members lose an average of 0.6 days of leave each year due to the 60 day cap, giving them additional vacation days without increasing the cap could merely result in more days being lost at the end of each year.[69] Moreover, since many positions do not need to be backfilled while a person is on leave, the cost impact could be minimal.

Allowing greater choice in duty station and tour length would more than offset the loss in perceived value of instituting a $40 per month fee for dependent healthcare

Other Stakeholders

Many of the changes in compensation explored in this analysis would affect other stakeholders in addition to active-duty personnel. Military retirees, for example, would see changes in their benefits if the annual fees for TRICARE Prime and TRICARE for Life are increased. Likewise, family members of military personnel could be affected by allowing service members more choice in duty station and length of tour or by reducing child, youth, and school services. While these groups were not the primary target of the survey or this study, data collected from these groups do provide additional insights into how different forms of compensation are valued.

MILITARY RETIREES

The next largest group of respondents after active-duty personnel was military retirees (723 out of 2655 total responses). Of the 723 military retirees in the study

[69] Undersecretary of Defense for Personnel and Readiness, *Military Compensation Background Papers* (Washington, DC: Department of Defense, November 2012), p. 703.

Enlisted retirees expressed a stronger preference for keeping the TRICARE for Life and TRICARE Prime fees low than did retired officers.

sample, 91 percent had a rationality score greater than zero.[70] Not surprisingly, military retirees have a stronger preference for healthcare fees charged to retirees both under age 65 (TRICARE Prime) and age 65 and older (TRICARE for Life) than active-duty personnel. Enlisted retirees expressed a stronger preference for keeping the TRICARE for Life and TRICARE Prime fees low than did retired officers. Both enlisted and officer retirees placed a higher priority on the commissaries and exchanges than active-duty personnel did, ranking them as their top two additional services and benefits. The results were mixed for career counseling and outplacement services; compared to active-duty personnel, enlisted retirees expressed a 25 percent stronger preference for this benefit and retired officers expressed a 6 percent lower preference.

It is difficult to draw actionable conclusions from the responses of military retirees because by definition they are no longer in the active-duty force. Thus improving the value of the compensation system for retirees does not directly affect recruiting and retention. However, significant reductions in benefits for existing retirees, particularly reductions that are viewed as "breaking faith," could have a secondary effect on active-duty personnel by reducing their confidence that future benefits will materialize as promised. That said, attempts to understand how future retirees (those currently serving) value retirement benefits by surveying current retirees could lead to spurious conclusions due to generational differences. A better way to measure how active duty-personnel value retirement benefits is to simply ask them directly, as was done in this study.

MILITARY FAMILY MEMBERS

Family members also play an important role in a service member's decision to join or continue in the military. A total of 113 active-duty family members took part in the study. This group expressed the strongest preference for the active-duty dependent healthcare fee and the lowest preference for a performance-based bonus. Family members ranked choice of duty station and length of tour the highest among additional services and benefits—higher than all ranks of active-duty personnel with the exception of junior enlisted. They also expressed a higher preference than active-duty personnel of all ranks for: commissaries; child, youth, and school services; family counseling; and career counseling and outplacement services.

The data from family members suggest that their preferences may differ in important ways from service members. Additional research should explore the influence of family member preferences on the decisions of service members in terms of recruiting and retention. The preferences of family members may be an important factor in establishing a correlation between service member actions and preferences.

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[70] This is similar to the proportion of active-duty respondents with a rationality score greater than zero, as discussed in chapter 2.

CHAPTER 4 > **OPTIMIZATION**

The study results suggest that there are opportunities to maintain or improve the value of the military compensation system while also reducing costs. This can be accomplished by rebalancing the compensation system—shifting resources from undervalued forms of compensation to more highly valued forms of compensation. Highly valued forms of compensation, or benefits that service members value as much or more than they cost, appear to include: basic pay, military exchanges, choice of duty station and length of tour, and additional vacation days. Many other forms of compensation, while still valued, do not appear to be valued commensurate with what they cost to provide. These include the fees charged for healthcare benefits for active-duty dependents and military retirees, and childcare, youth, and school services. Other types of compensation tested in the study either require additional data before conclusions can be reached, such as raising the retirement collection age, or are mixed in their impact, such as maintaining the subsidy for commissaries.

The findings also reveal potential opportunities to better target compensation resources to improve the perceived value for critical subgroups of personnel. For example, if recruiting and retaining junior enlisted personnel is of concern, then raising basic pay, allowing greater choice in duty station and length of tour, and increasing the number of vacation days are all improvements that appear to be more valued by junior enlisted than by other subgroups. In the study sample, each dollar of additional basic pay, for example, is valued six times as much by junior enlisted than by senior officers. Moreover, just as value can be enhanced for some subgroups by increasing certain forms of compensation, the loss of value can be minimized by targeting which types of compensation are reduced. Junior enlisted value commissaries, the fees charged for military retiree healthcare, and retirement collection age less than higher-ranking personnel. Thus, the overall value of the compensation system would be less diminished for junior enlisted if

these benefits are reduced. Similar tradeoffs can be made for other subgroups by rank, age, years of service, or other factors deemed important.

A chief advantage of the preference-based benefits optimization approach used in this study is that the data collected can be used to inform a more comprehensive effort that aims to develop compensation packages that are more efficient at delivering value to service members. Moreover, this approach would allow the military to anticipate better how a package of proposed changes will be received by service members and whether it will, on net, improve or diminish their perceived value. The following analysis explores how the data generated from this approach can be used to better optimize the compensation system for service members overall and on a targeted basis.

For general optimization of the compensation system, the competing goals are to find compensation packages that are preferred by as many people as possible in each subgroup and to maximize the overall savings.

The analytic tool provided by TrueChoice Solutions provides a graphical user interface to explore such options. The optimization analysis in this study is limited to the types of compensation measured in the study in which reasonable estimates could be made for the cost impact of the proposed changes.[71] The detailed cost assumptions used in the optimization analysis are included in Appendix 3.

The charts that follow show the trade-space of options, where each data point represents one of 64,000 unique compensation packages analyzed. Each compensation package is plotted by the fraction of service members that would prefer it to the status quo (vertical axis) versus the per person savings it would provide relative to the status quo (horizontal axis). The upper right quadrant of these charts contain the compensation packages of most interest—those that a majority of service members would prefer and would save the Department money. The red line in each of the optimization charts is the Pareto optimal frontier—the set of compensation packages that cannot be improved in terms of maximizing one variable (savings or preference) without making the other variable worse. Any compensation package not on the frontier is less optimal in terms of delivering the best value to personnel. Compensation packages near the Pareto frontier are noted in green.

General Optimization

The most basic level of optimization is to improve the value of the compensation system for the total force. Because the sample in this study does not reflect the actual active-duty population, particularly in terms of the representation of junior enlisted personnel, the results should not be viewed in aggregate. Instead, the results are analyzed by rank to ensure that the compensation packages most preferred overall are also preferred within each subgroup. For general optimization

[71] Because changes to the retirement pay system would require complex actuarial analysis, the four attributes related to retirement pay (collection age, years of service required, defined-contribution pay percentage, and vesting schedule) are not included in the optimization analysis. Career counseling/outplacement and family counseling are also excluded from the optimization because reliable cost data were not available.

of the compensation system, the competing goals are to find compensation packages that are preferred by as many people as possible in each subgroup and to maximize the overall savings.

The optimization charts for each of the rank groups are shown in Figure 39 to Figure 42. Two compensation packages are highlighted as examples. The compensation package in Example A is the only one on the Pareto optimal frontier for all rank groups. It eliminates child, youth, and school services while giving service members additional vacation days and greater choice in duty location and length of tour. The total annual cost of child, youth, and school services is $3.7 billion, or roughly $2,500 per active-duty troop; the cost of additional vacation days and the choice of duty station and length of tour are assumed to be negligible, as detailed in Appendix 3. Given these cost assumptions and the limited set of attributes varied in the optimization tool, this is the optimum set of changes to the compensation system that maximizes both preferences and savings across all ranks.

The data obtained through the study also allows the analysis to take into account the intensity of preference. This allows compensation packages to be compared not just by how many personnel would prefer them and how much they would save, but also by how intense the opposition is from people who do not

FIGURE 39: OPTIMIZATION RESULTS FOR JUNIOR ENLISTED

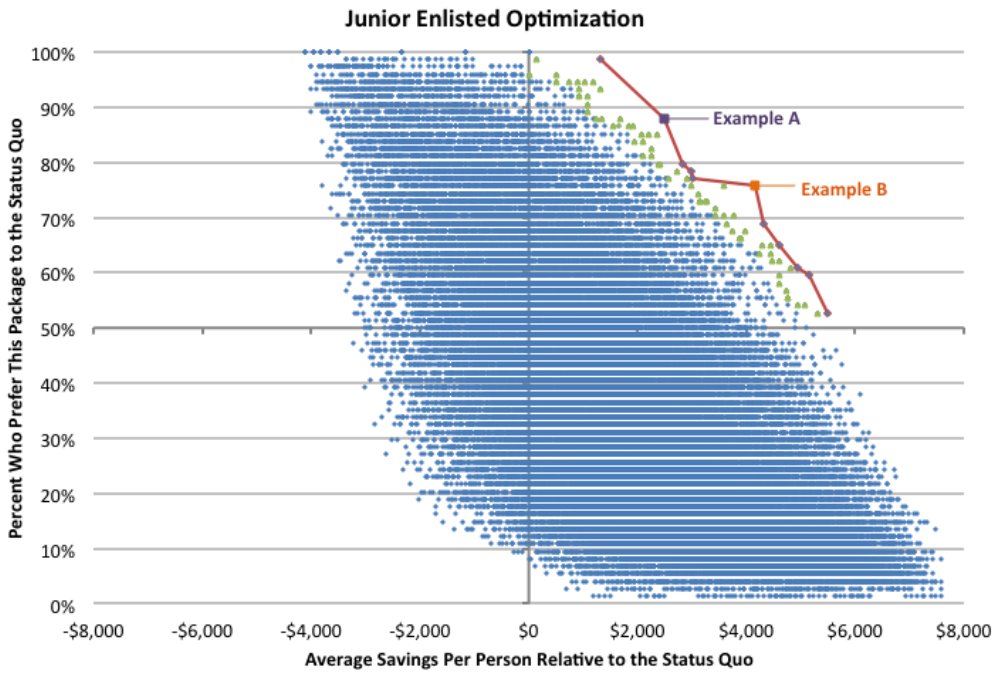


FIGURE 40: OPTIMIZATION RESULTS FOR SENIOR ENLISTED

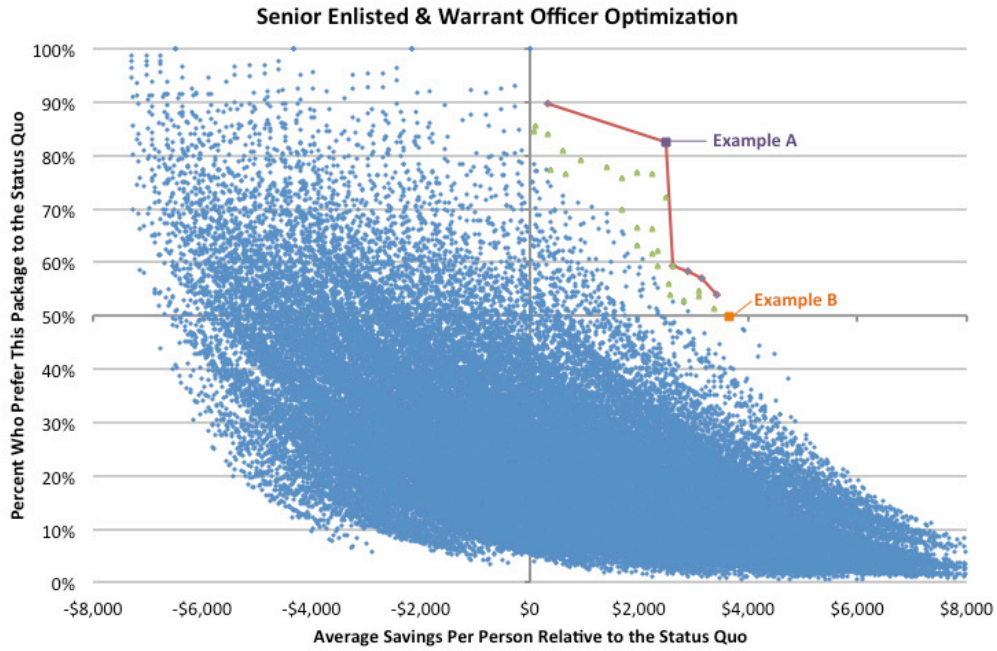


FIGURE 41: OPTIMIZATION RESULTS FOR JUNIOR OFFICERS

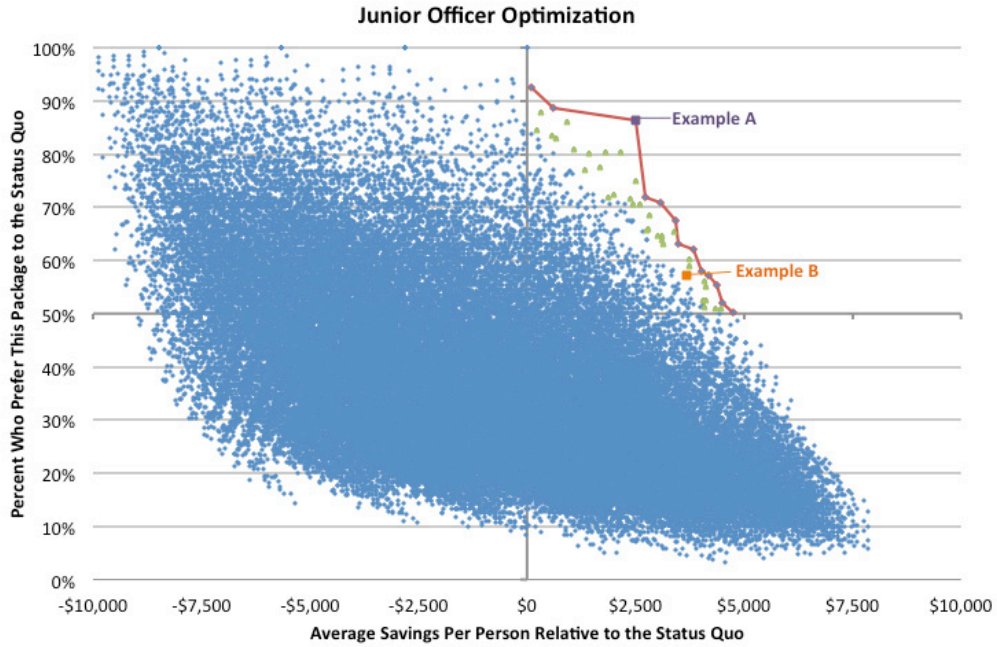
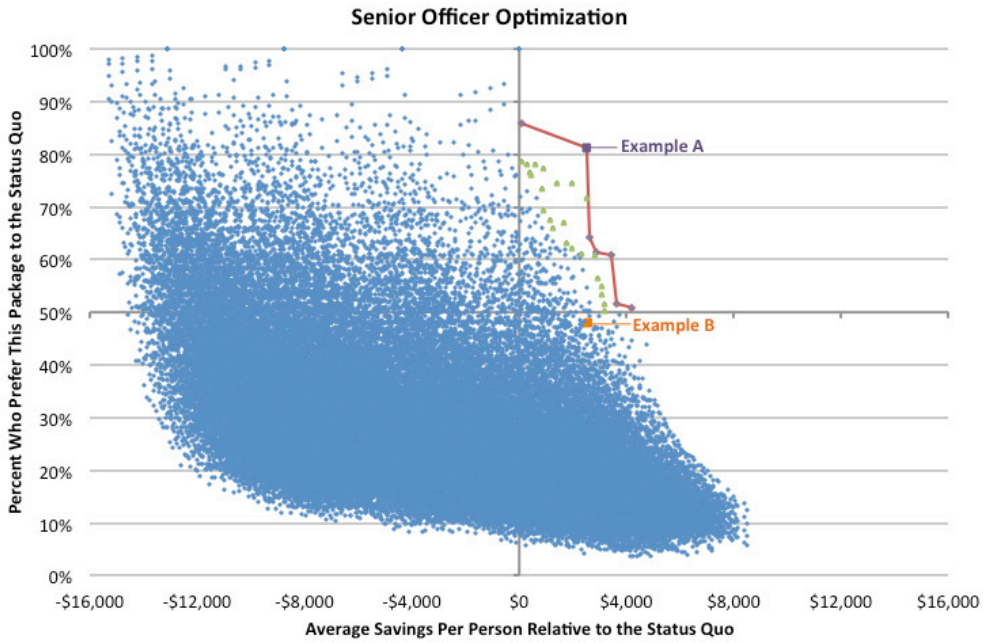


FIGURE 42: OPTIMIZATION RESULTS FOR SENIOR OFFICERS



prefer them. For example, a particular compensation package may be preferred by 60 percent or more of people in each subgroup compared to the status quo. But if the intensity of opposition in the 40 percent who prefer the status quo is many times greater than that of the 60 percent who prefer the change, then this particular compensation package may not be a good option.

Targeted Optimization

While general optimization is useful for identifying across-the-board changes that would benefit the total force, even greater value can be obtained by targeting the optimization at key groups of personnel. The upper right quadrant of each rank group's optimization chart contains the compensation packages that are preferred by a majority of members in this group and would result in net savings. For junior enlisted personnel, 84 percent of the compensation packages in the upper right quadrant of Figure 39 include an increase in basic pay. But only 1 percent of the compensation packages in the upper right quadrant of Figure 42 for senior officers include an increase in basic pay. This is because junior enlisted assign a much higher value to an increase in basic pay than senior officers. Likewise, 72 percent of the compensation packages in the upper right quadrant

While general optimization is useful for identifying across-the-board changes that would benefit the total force, even greater value can be obtained by targeting the optimization at key groups of personnel.

for junior enlisted personnel include an increase in the TRICARE for Life fee paid by retirees 65 and older compared to only 44 percent for senior enlisted.

If the goal is to improve the value of compensation for junior enlisted personnel, for example, the optimum compensation package could be substantially different than if the goal is to optimize for all ranks. Example B highlights one such compensation package that is on the Pareto frontier for junior enlisted personnel but not for other rank groups. This particular compensation package would: 1) raise the TRICARE for Life fee paid by retirees age 65 and older to $40 per month; 2) create a performance-based bonus of up to 20 percent; 3) eliminate child, youth, and school services; 4) give personnel additional vacation days; and 5) give personnel greater choice in duty station and length of tour.

Relative to the status quo, these changes would be preferred by 76 percent of junior enlisted personnel and would save an average of $4,153 per person. In comparison, this same compensation package would be viewed unfavorably by a slight majority of senior officers (52 percent) and senior enlisted (50 percent). The average savings would also be less for these groups: $2,551 per senior officer and $3,659 per senior enlisted. For junior officers, whose preferences are in many ways similar to those of junior enlisted, this compensation package is preferred by 57 percent and would save an average of $3,681 per person, making it near the Pareto frontier (shown in Figure 41).

Differentiated offers could be used as a cost effective approach to improve recruiting and retention of key personnel at critical points in their careers.

Differentiated Offers

The Department could use also use this tool to develop differentiated offers—customized compensation packages—to target key personnel at the individual level. It may not be possible to customize some types of compensation on an individual level, such as the commissaries where all service members share in a collective benefit. But other forms of compensation, such as basic pay, bonuses, and choice of duty station, could be tailored based on how an individual values these benefits and how the military values an individual's skills and experience. Differentiated offers could be used as a cost effective approach to improve recruiting and retention of key personnel at critical points in their careers, such as enlistment or reenlistment.

For example, if DoD wants to increase the quality of recruits, it could create a set of compensation options it only makes available to potential recruits who score in the highest level, Category I, of the Armed Forces Qualifying test. By having potential recruits take a survey that measures their preferences for different types of compensation and linking that data to their application and test scores, the military could make better offers to the most desirable recruits tailored to their individual preferences.

A similar approach could be used at reenlistment or when a service commitment expires. Knowing in advance how service members at different points in their career value different forms of compensation, DoD could tailor compensation packages on an individual level. Rather than offering a uniform reenlistment bonus to everyone in a particular career field, for example, it could offer individuals within that career field different combinations of cash and non-cash benefits depending on their preferences. Such an approach would better optimize the use of increasingly scarce resources in a time of growing budget pressure.

CHAPTER 5 > **CONCLUSION**

Since its founding in 1775, the U.S. military has always maintained a volunteer force, usually made up of career military personnel and supplemented with conscripts as needed. The challenge of an all-volunteer force is that the military must be able to attract a sufficient number of short-term, non-career volunteers to alleviate the need for conscription. A military career has no exact parallel in the private sector, yet the military must compete directly with the private sector for these volunteers. While compensation is not the only factor in an individual's decision to join the military, it is an important factor and one that DoD and Congress can control.

The challenge of an all-volunteer force is that the military must be able to attract a sufficient number of short-term, non-career volunteers to alleviate the need for conscription.

The problems the military compensation system currently faces—rising costs and the failure to adapt to the needs of an all-volunteer force—were largely anticipated. More than four decades ago the Gates Commission warned that if the compensation system was not reformed its costs would begin to encroach on other areas of the budget. The Gates Commission and other studies that followed recommended various reforms to the military compensation system, but few of these changes were enacted into law. The consequence of this inaction is an all-volunteer force on an unsustainable path.

Rather than focusing exclusively on how to reduce costs, policy makers should instead focus on getting better value from the compensation system. This study demonstrates that opportunities likely exist for the military to maintain or even improve the value of its compensation system to service members while simultaneously reducing costs. However, if DoD does not reduce personnel costs during this anticipated period of flat or declining defense budgets, it will be faced with a risky dilemma—either downsize the force substantially or hollow out the budgets for other priorities, such as procurement and readiness. For these reasons, it is critical that decisions on how best to reform the military compensation system be made based on evidence, not anecdotes.

Obstacles to Reform

Numerous obstacles exist to reforming the military compensations system. At the top of this list is bureaucratic inertia—the inability or unwillingness of those working on compensation issues at the policy level to rethink how they do their job. Over the years, restrictions placed on DoD by Congress and the elevated political sensitivity to altering military benefits may have created a climate in which the professionals at the heart of the personnel system are severely constrained in what reforms they can propose. As Charles Lindblom, Professor Emeritus of Economics and Political Science at Yale University, once noted, bureaucracies that are limited to "relatively few alternative policies among the countless alternatives that might be imagined" will inevitably pursue an incremental approach of "small policy steps" rather than comprehensive change.[72] In such a restrictive environment, those willing to imagine comprehensive reform can grow frustrated after repeated attempts at reform are stalled or rebuffed. Over time this can create a self-selected bureaucracy that instinctively rejects new forms of data collection or analysis that may upset the status quo.

Keeping faith with the troops should not preclude changes to the compensation system. The military can do better, and the troops deserve better.

An equally formidable obstacle to reform is the political uneasiness of many elected officials to reform the military compensation system while the nation is at war. Since September 11, 2001, some 2 million Americans—less than 1 percent of the population—have been deployed to Iraq or Afghanistan. Nearly half of these personnel have been deployed more than once.[73] More than 6,400 have been killed and 48,000 wounded.[74] The fact that such a heavy sacrifice has been made by such a small fraction of the population no doubt weighs heavily on the minds of policy makers. Keeping faith with the troops and ensuring that they are taken care of when they return should not preclude changes to the compensation system. The military can do better, and the troops deserve better. As this study demonstrates, DoD can improve the value of its compensation system by making changes the troops prefer while also reducing costs.

Another obstacle to reform is that senior leaders in the military are products of the system. Senior military leaders are often the ones called upon by Congress to evaluate proposals to modify the compensation system. These leaders are by definition career military—part of the minority (17 percent) that stay the 20 years required to earn a retirement and, thus, are more likely to view the status quo favorably. As this study demonstrates, the preferences of senior officers and senior enlisted are often at odds with those of the junior personnel who make up the majority of the force. Roughly half of those who serve in the military stay for

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[72] Charles E. Lindblom, "The Science of 'Muddling Through,'" *Public Administration Review*, 19, No. 2, Spring, 1959, pp. 79-80.

[73] Luis Martinez, "U.S. Veterans: By the Numbers," *ABC News*, November 11, 2011.

[74] Data obtained from the Defense Manpower Data Center, available at http://siadapp.dmdc.osd.mil/personnel/CASUALTY/gwot_reason.pdf, accessed on May 7, 2012.

five years or less. They are the non-career volunteers—the indispensable group that makes an all-volunteer force possible. As this study demonstrates, the preferences of junior personnel are significantly different from those of the senior leaders who represent them.

This report does not attempt to offer a solution to overcome these three obstacles to reform. Rather, it addresses a fourth obstacle—the lack of evidence needed to rebalance the compensation system in a rational manner. For too long proposals to reform the compensation system have focused on the inputs—how much DoD spends on different forms of compensation. Where attention has been paid to the output—the value imparted to service members—it has often been anecdotal in nature and qualitative rather than quantitative. The old adage "if you cannot measure it, you cannot improve it" holds true for military compensation.[75] The approach presented in this study provides a quantitative way to measure the output of the compensation system so that it can be improved.

Recommendations

The findings of this study suggest that ample opportunities exist to improve the compensation system by shifting resources from undervalued forms of compensation to more highly valued forms of compensation. Moreover, the compensation system can be further optimized if changes are made on a targeted basis to focus on critical groups of personnel or if differentiated offers are instituted to customize compensation packages on an individual basis. The findings of this study, however, should not be construed as recommendations for specific changes in compensation policy. Many other factors, such as fairness, equity, feasibility, and potential operational impacts, must be taken into account before a change can be recommended.

The chief recommendation of this study is that DoD should conduct a full study of its own using the methodology presented.

The chief recommendation of this study is that DoD should conduct a full study of its own using the methodology presented. If the Department sponsors such a study, it can overcome many of the limitations encountered during this study. Specifically, DoD could draw from its own personnel databases to create a larger, randomized sample. A sample size of at least 3,000 completed surveys from active-duty personnel, roughly twice the size of this study, would be ideal to allow detailed analysis of important subgroups. Particular attention should be paid to junior enlisted personnel. Given the significantly lower participation rate of junior enlisted personnel observed in this trial study, DoD should consider including a larger population of junior enlisted in its invitation to take the survey and perhaps offer an incentive for completing the survey.[76]

A second recommendation is that future studies expand both the types of compensation examined and the levels within each type of compensation,

[75] This quotation is often attributed to Lord Kelvin.

[76] The incentive could be as simple as a chance to win an iPhone, Xbox, or similar prize.

particularly in the areas of retirement benefits, in-kind benefits, and bonuses. For example, questions should be asked about each of the major components of both defined-benefit and defined-contribution retirement systems: collection age, vesting/years of service required, and contribution rate/payout rate. For additional services and in-kind benefits, the questions should be restructured to measure the preferences for different levels of each benefit, such as adding 5 vacation days, 10 vacation days, or 15 vacation days. Overall, the questions should be more specific and provide more supporting details.

The tradeoff in expanding the number of compensation attributes and levels measured in the study is that as the number of questions and amount of information presented increases, the amount of time required to take the survey increases. The ten compensation attributes examined in this study required an average of 10.4 minutes for respondents and resulted in a completion rate of 90 percent. To maintain a similar time requirement and completion rate, the survey could be split into two or three versions. Each version would ask a different set of questions about different types of compensation, and respondents would be randomly assigned a version of the survey. This approach would require a larger pool of respondents to achieve the same quality of results.

A further recommendation is that in order to get the most value from implementing this methodology, it should not be a single study. Once the survey instrument is in place, it should be used on a periodic basis to monitor shifts in the preferences of service members. Moreover, the study responses should be linked with personnel data to track how the stated preferences of service members in the survey correlate with their actions. Over time, this would allow DoD to establish a relationship between how users value certain types of compensation and how they behave in terms of retention, performance, and other metrics. For example: do retention bonuses really improve retention, and if so by how much? Are personnel who place a high value on choice of duty station more likely to separate if assigned to a location they did not select? Do high performers place a higher value on a performance-based bonus?

A final recommendation is that separate surveys be designed for family members of active-duty personnel and for guard and reserve personnel. For simplicity, this survey asked the same set of questions to all respondents, but in reality the concerns of these groups and the benefits offered are substantially different and warrant different sets of questions. The inclusion of active-duty family members would provide useful insights, especially when correlated with additional personnel data. If a service member who seems to be satisfied with the current compensation system separates, is it because his spouse is not satisfied? Guard and reserve members would also need a separate survey to inform any potential changes to their compensation because the pay, benefits, and additional services they receive are fundamentally different from those of their active-duty counterparts.

Final Thoughts

The military compensation system has failed to adapt since the transition to an all-volunteer force some four decades ago. As this study demonstrates, the preferences of junior personnel—the short-term, non-career volunteers that make an all-volunteer force possible—are significantly different from those of the career personnel the compensation system was designed for before the transition to an all-volunteer force. Keeping an all-volunteer force viable without fundamentally reforming the compensation system has proven costly and it is almost certainly unsustainable.

The fiscal crisis DoD and the nation now face provides a unique opportunity to address the long-term structural problems in the military compensation system. Military personnel costs are on an unsustainable trajectory, and if these structural problems are not addressed the military will be left with essentially one choice to control personnel costs—reduce the number of personnel. This would limit the range of strategic choices available to future presidents and, if left unchecked, would eventually result in a military too small for even the most basic missions.

Keeping an all-volunteer force viable without fundamentally reforming the compensation system has proven costly and it is almost certainly unsustainable.

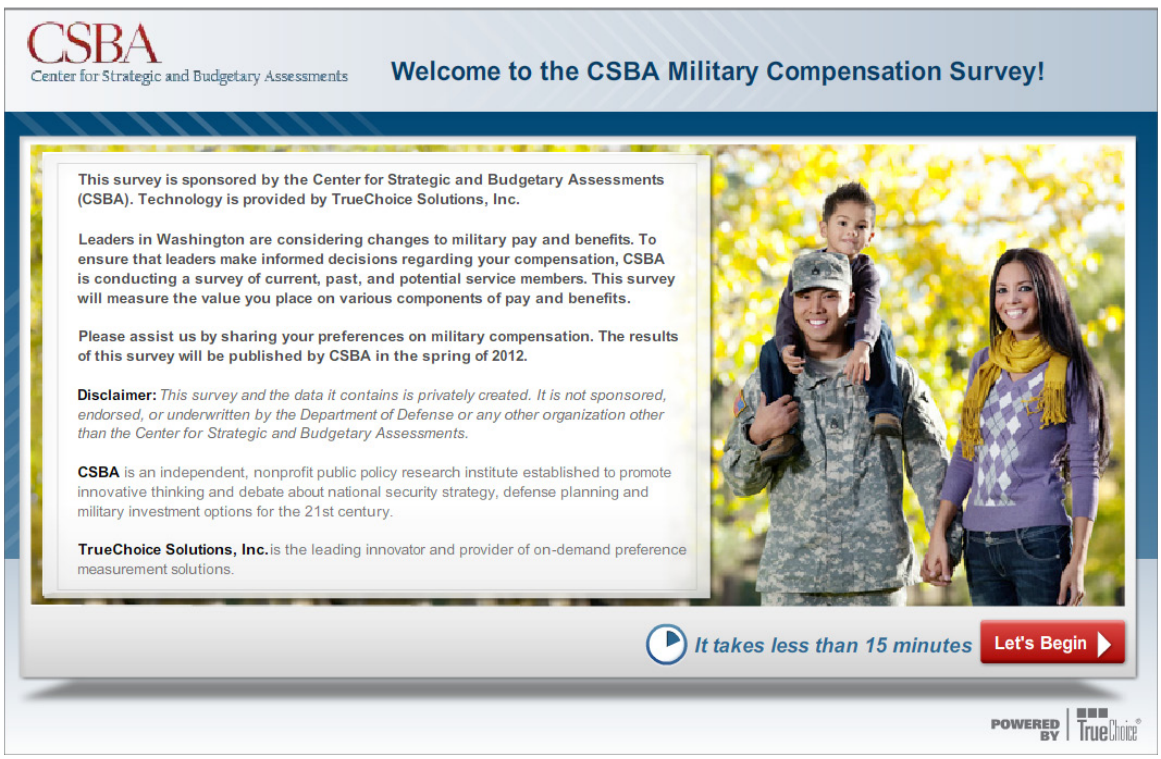
To address the structural problems underlying the compensation system, DoD should use the preference-based benefits optimization approach presented in this study. This approach is grounded in empirical evidence and focused on the needs and desires of those who serve. DoD should make decisions regarding compensation policy with its eyes open, fully aware of the consequences of both its actions and inactions. The goal should not simply be to reduce costs, although that is a necessary component of reform to ensure the sustainability of the all-volunteer force. Rather, the focus should be on improving the value of the compensation system by shifting resources from undervalued forms of compensation to more highly valued forms of compensation.

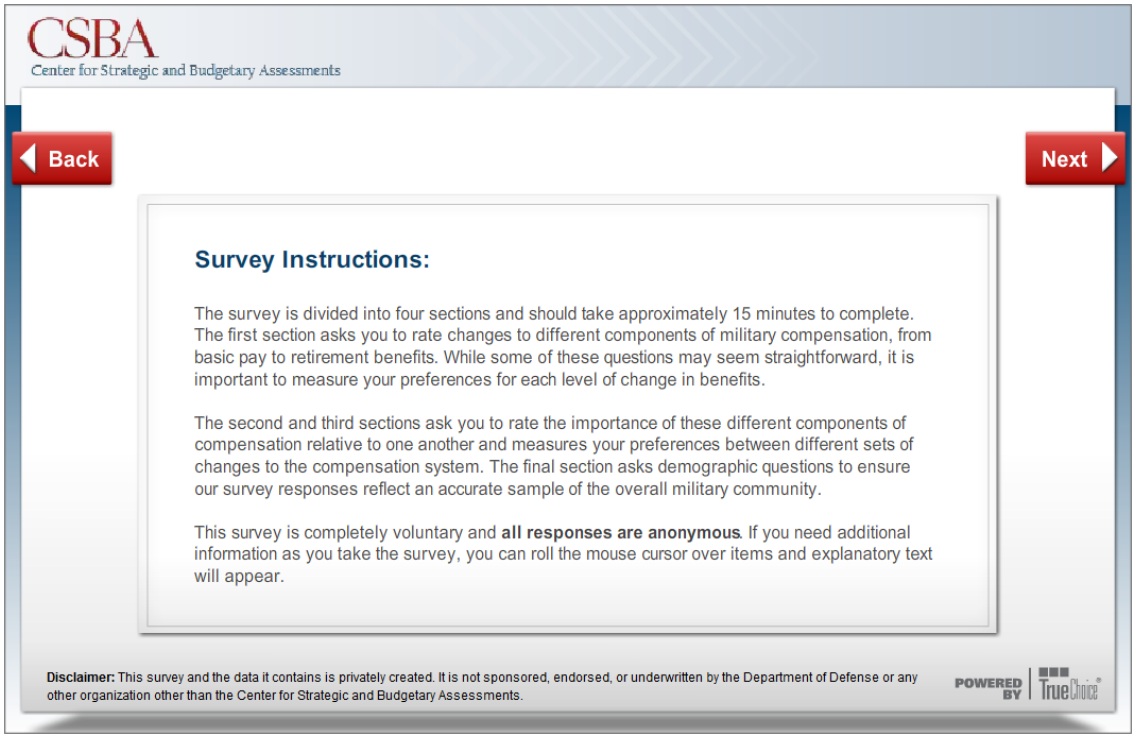
While the impending fiscal crisis may provide an impetus for reform, getting better value out of the compensation system is a sound idea regardless of the budget environment. This report does not provide the solution; it provides a methodology and preliminary data as a proof of concept. Preference-based benefits optimization has been used by private-sector organizations for years. The question is not can it be done, but rather how much longer must the military wait? How much more money must be poured down the drain on inefficient forms of compensation, putting the all-volunteer force at risk?

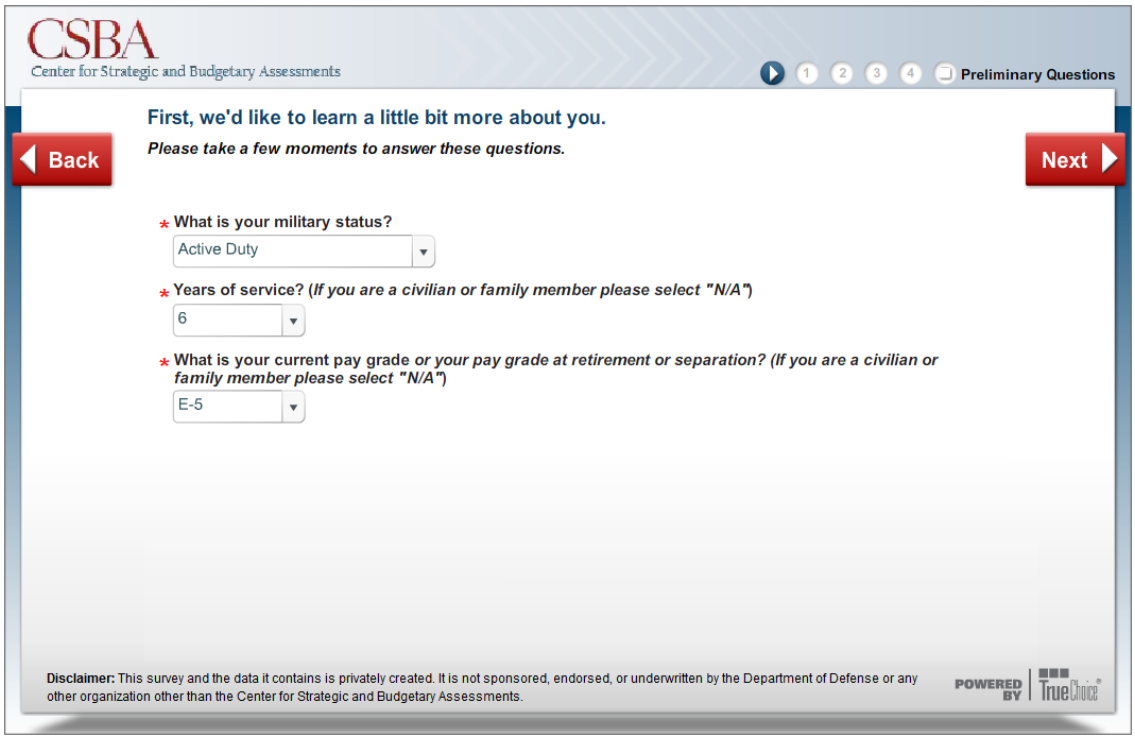
The high cost of the military compensation system would be a price worth paying if there were no alternative. It is intolerable when an alternative exists that is consistent with our national security needs and the preferences of those who serve.

APPENDIX 1 > **SURVEY INSTRUMENT**

The following pages contain screen shots of the online tool used for the survey as it appeared to users taking the survey. The tradeoffs presented to users in Stage 3 of the study varied based on how they rated different options in Stages 1 and 2. While eight unique tradeoffs were presented to each user in Stage 3, only one example is shown here.




CSBA
Center for Strategic and Budgetary Assessments
Back
Next
Survey Instructions:
The survey is divided into four sections and should take approximately 15 minutes to complete. The first section asks you to rate changes to different components of military compensation, from basic pay to retirement benefits. While some of these questions may seem straightforward, it is important to measure your preferences for each level of change in benefits.
The second and third sections ask you to rate the importance of these different components of compensation relative to one another and measures your preferences between different sets of changes to the compensation system. The final section asks demographic questions to ensure our survey responses reflect an accurate sample of the overall military community.
This survey is completely voluntary and all responses are anonymous. If you need additional information as you take the survey, you can roll the mouse cursor over items and explanatory text will appear.
Disclaimer: This survey and the data it contains is privately created. It is not sponsored, endorsed, or underwritten by the Department of Defense or any other organization other than the Center for Strategic and Budgetary Assessments.
POWERED BY TrueChoice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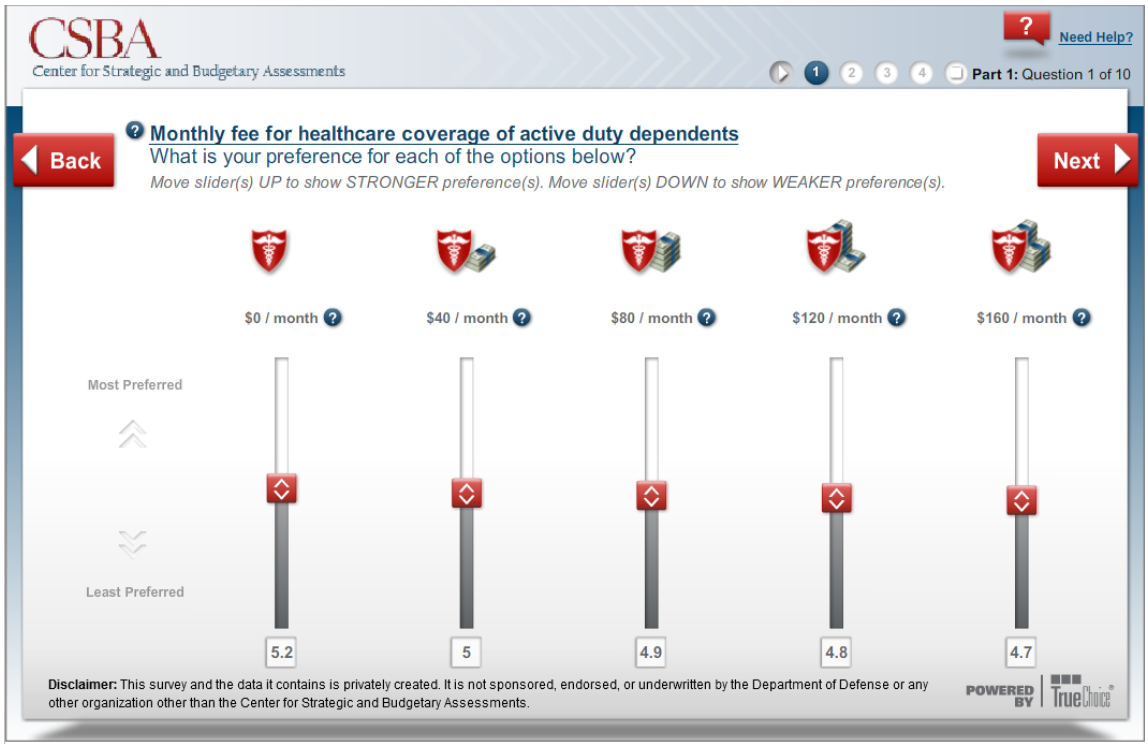
1 2 3 4 Preliminary Questions
Back
Next
First, we'd like to learn a little bit more about you.
Please take a few moments to answer these questions.
* What is your military status?
Active Duty
* Years of service? (If you are a civilian or family member please select "N/A")
6
* What is your current pay grade or your pay grade at retirement or separation? (If you are a civilian or family member please select "N/A")
E-5
Disclaimer: This survey and the data it contains is privately created. It is not sponsored, endorsed, or underwritten by the Department of Defense or any other organization other than the Center for Strategic and Budgetary Assessments.
POWERED BY TrueChoice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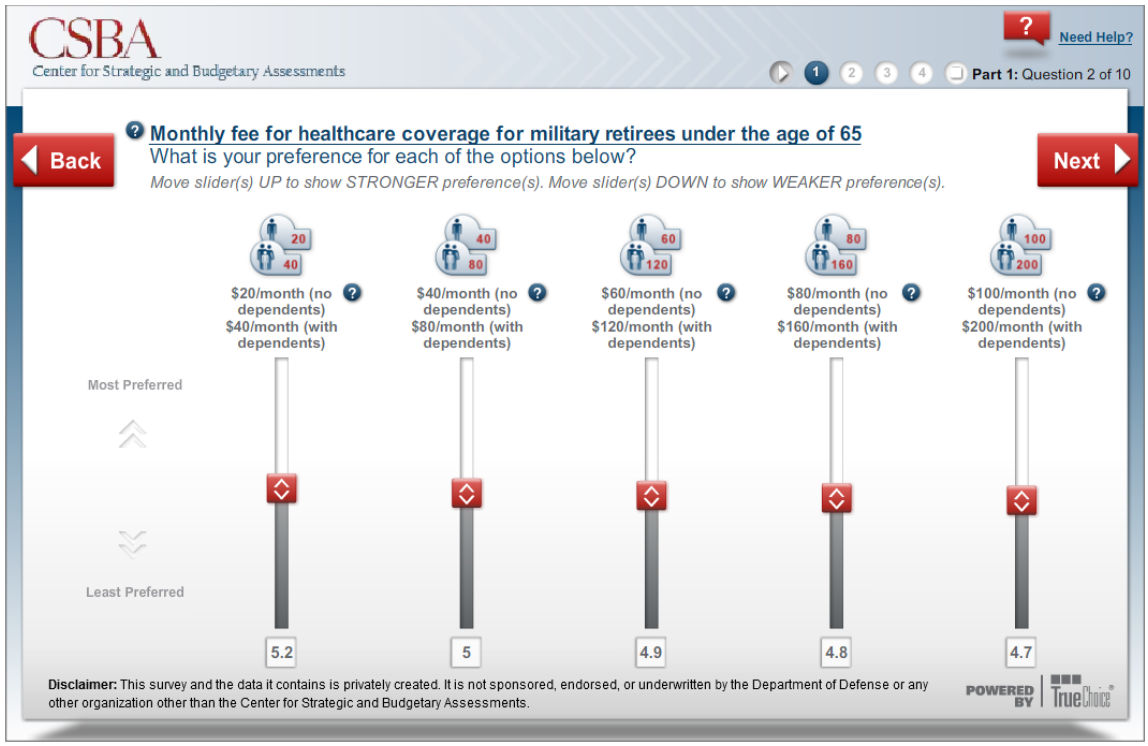
Need Help?
1 2 3 4 Part 1: Question 1 of 10
Back
Next
Monthly fee for healthcare coverage of active duty dependents
What is your preference for each of the options below?
Move slider(s) UP to show STRONGER preference(s). Move slider(s) DOWN to show WEAKER preference(s).
$0 / month
$40 / month
$80 / month
$120 / month
$160 / month
Most Preferred
Least Preferred
5.2
5
4.9
4.8
4.7
Disclaimer: This survey and the data it contains is privately created. It is not sponsored, endorsed, or underwritten by the Department of Defense or any other organization other than the Center for Strategic and Budgetary Assessments.
POWERED BY TrueChoice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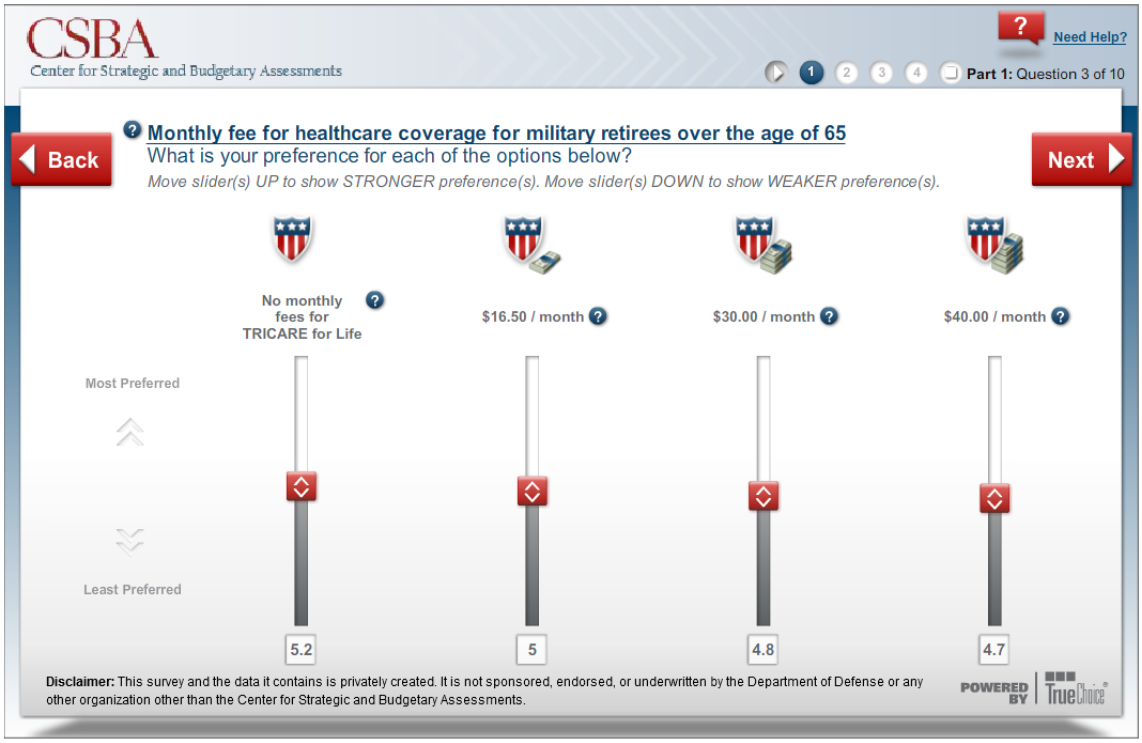
Need Help?
1 2 3 4 Part 1: Question 2 of 10
Back
Next
Monthly fee for healthcare coverage for military retirees under the age of 65
What is your preference for each of the options below?
Move slider(s) UP to show STRONGER preference(s). Move slider(s) DOWN to show WEAKER preference(s).
20 40
$20/month (no dependents) $40/month (with dependents)
40 80
$40/month (no dependents) $80/month (with dependents)
60 120
$60/month (no dependents) $120/month (with dependents)
80 160
$80/month (no dependents) $160/month (with dependents)
100 200
$100/month (no dependents) $200/month (with dependents)
Most Preferred
Least Preferred
5.2
5
4.9
4.8
4.7
Disclaimer: This survey and the data it contains is privately created. It is not sponsored, endorsed, or underwritten by the Department of Defense or any other organization other than the Center for Strategic and Budgetary Assessments.
POWERED BY TrueChoice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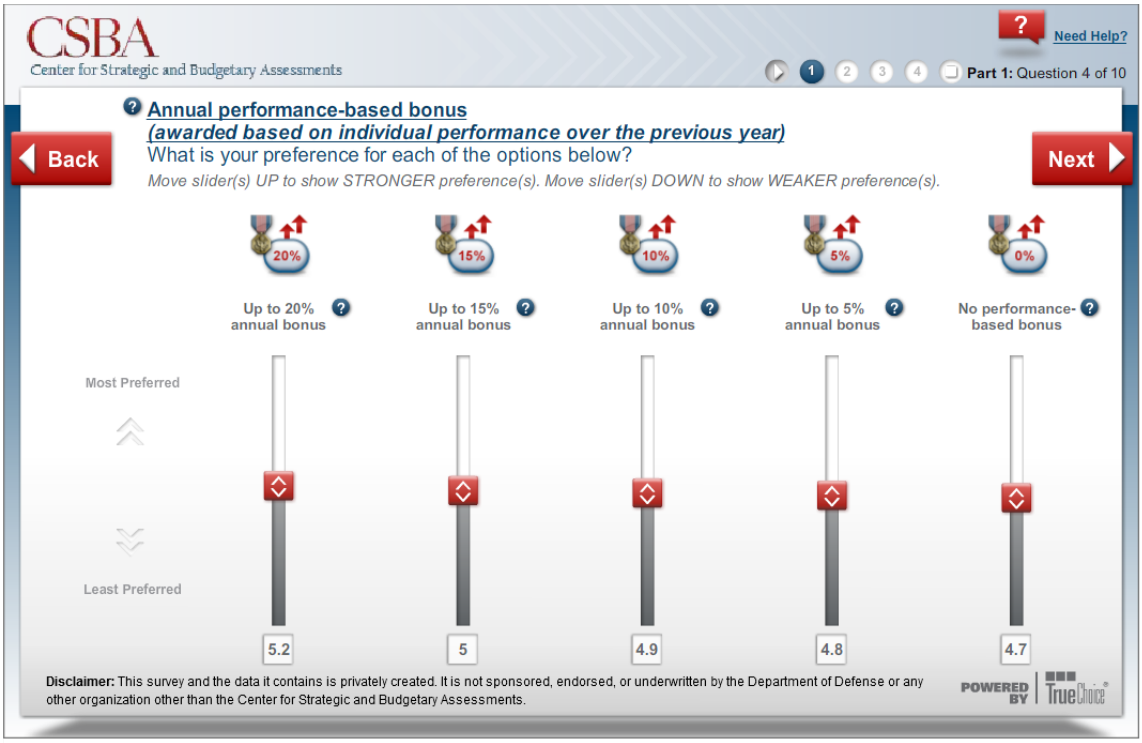
Need Help?
1 2 3 4 Part 1: Question 3 of 10
Back
Next
Monthly fee for healthcare coverage for military retirees over the age of 65
What is your preference for each of the options below?
Move slider(s) UP to show STRONGER preference(s). Move slider(s) DOWN to show WEAKER preference(s).
No monthly fees for TRICARE for Life
$16.50 / month
$30.00 / month
$40.00 / month
Most Preferred
Least Preferred
5.2
5
4.8
4.7
Disclaimer: This survey and the data it contains is privately created. It is not sponsored, endorsed, or underwritten by the Department of Defense or any other organization other than the Center for Strategic and Budgetary Assessments.
POWERED BY TrueChoice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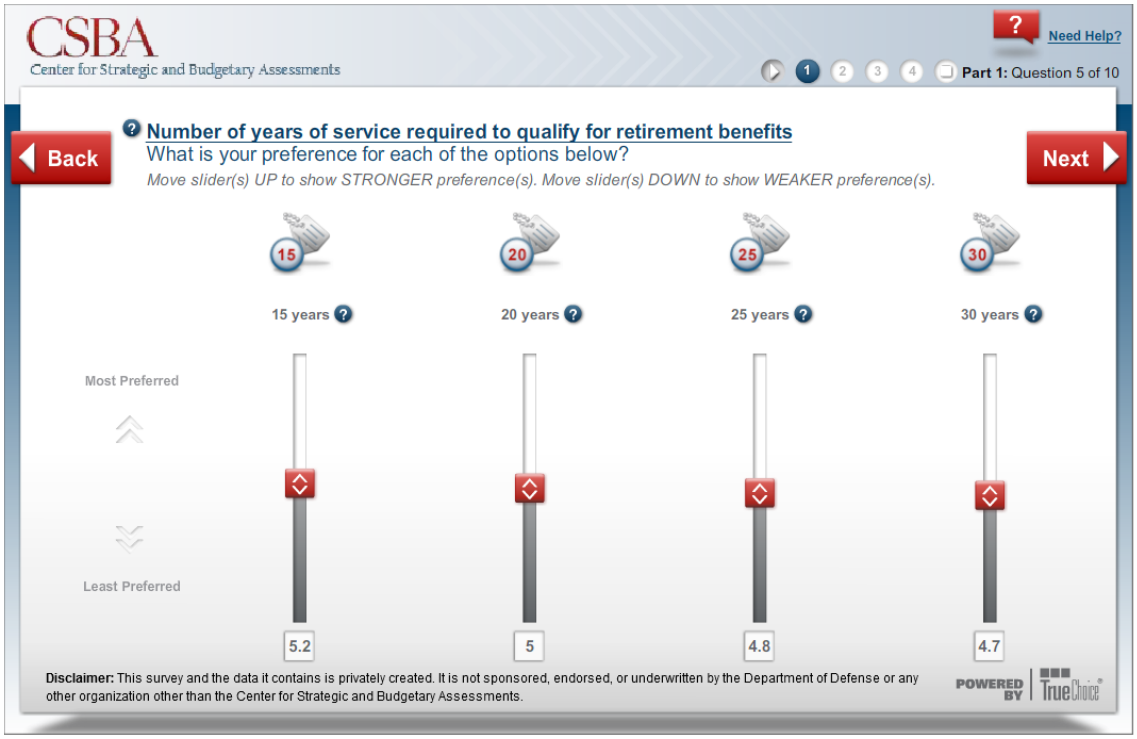
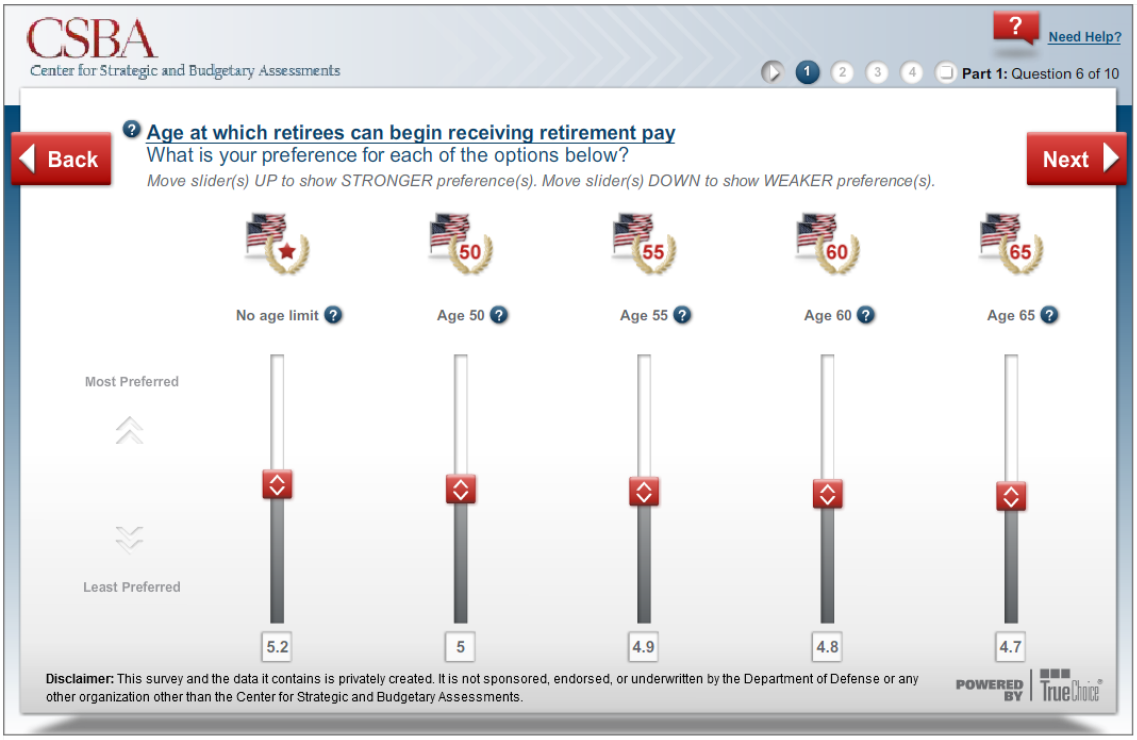
Need Help?
1 2 3 4 Part 1: Question 4 of 10
Back
Next
Annual performance-based bonus
(awarded based on individual performance over the previous year)
What is your preference for each of the options below?
Move slider(s) UP to show STRONGER preference(s). Move slider(s) DOWN to show WEAKER preference(s).
20%
15%
10%
5%
0%
Up to 20% annual bonus
Up to 15% annual bonus
Up to 10% annual bonus
Up to 5% annual bonus
No performance-based bonus
Most Preferred
Least Preferred
5.2
5
4.9
4.8
4.7
Disclaimer: This survey and the data it contains is privately created. It is not sponsored, endorsed, or underwritten by the Department of Defense or any other organization other than the Center for Strategic and Budgetary Assessments.
POWERED BY TrueChoice


CSBA
Center for Strategic and Budgetary Assessments
Need Help?
Part 1: Question 5 of 10
Back
Next
Number of years of service required to qualify for retirement benefits
What is your preference for each of the options below?
Move slider(s) UP to show STRONGER preference(s). Move slider(s) DOWN to show WEAKER preference(s).
15
20
25
30
15 years
20 years
25 years
30 years
Most Preferred
Least Preferred
5.2
5
4.8
4.7
Disclaimer: This survey and the data it contains is privately created. It is not sponsored, endorsed, or underwritten by the Department of Defense or any other organization other than the Center for Strategic and Budgetary Assessments.
POWERED BY TrueChoice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Need Help?
Part 1: Question 6 of 10
Back
Next
Age at which retirees can begin receiving retirement pay
What is your preference for each of the options below?
Move slider(s) UP to show STRONGER preference(s). Move slider(s) DOWN to show WEAKER preference(s).
50
55
60
65
No age limit
Age 50
Age 55
Age 60
Age 65
Most Preferred
Least Preferred
5.2
5
4.9
4.8
4.7
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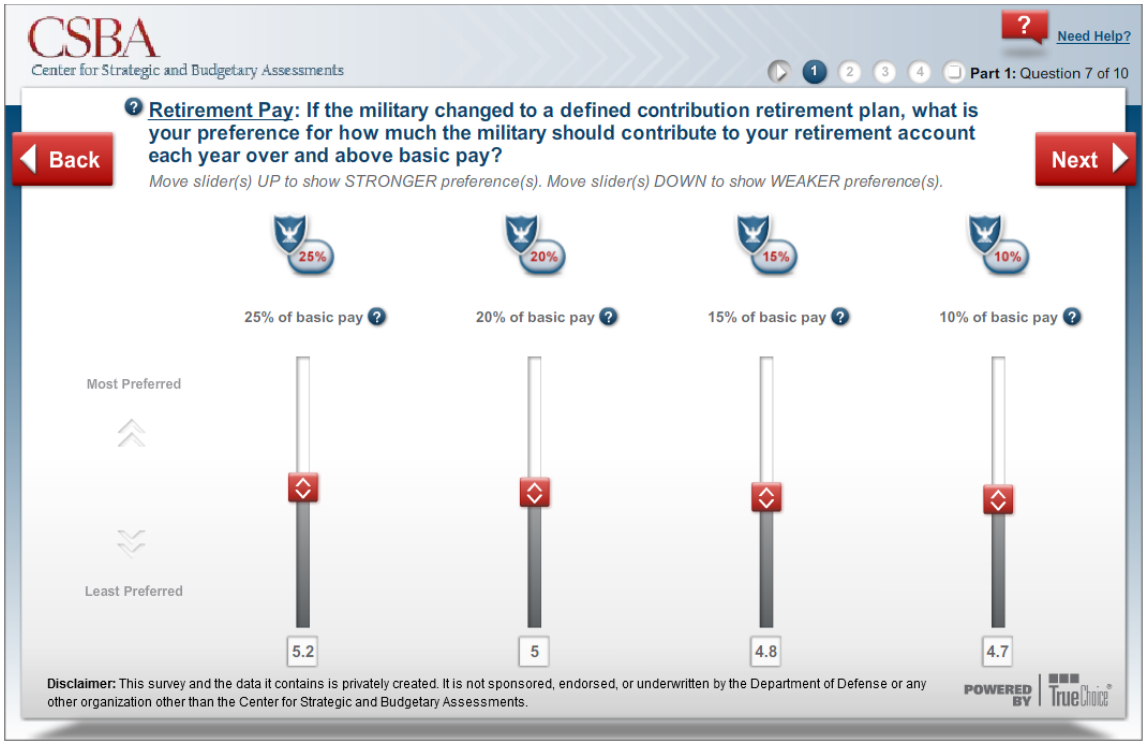
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Back
Next
Retirement Pay: If the military changed to a defined contribution retirement plan, what is your preference for how much the military should contribute to your retirement account each year over and above basic pay?
Move slider(s) UP to show STRONGER preference(s). Move slider(s) DOWN to show WEAKER preference(s).
25%
20%
15%
10%
25% of basic pay
20% of basic pay
15% of basic pay
10% of basic pay
Most Preferred
Least Preferred
5.2
5
4.8
4.7
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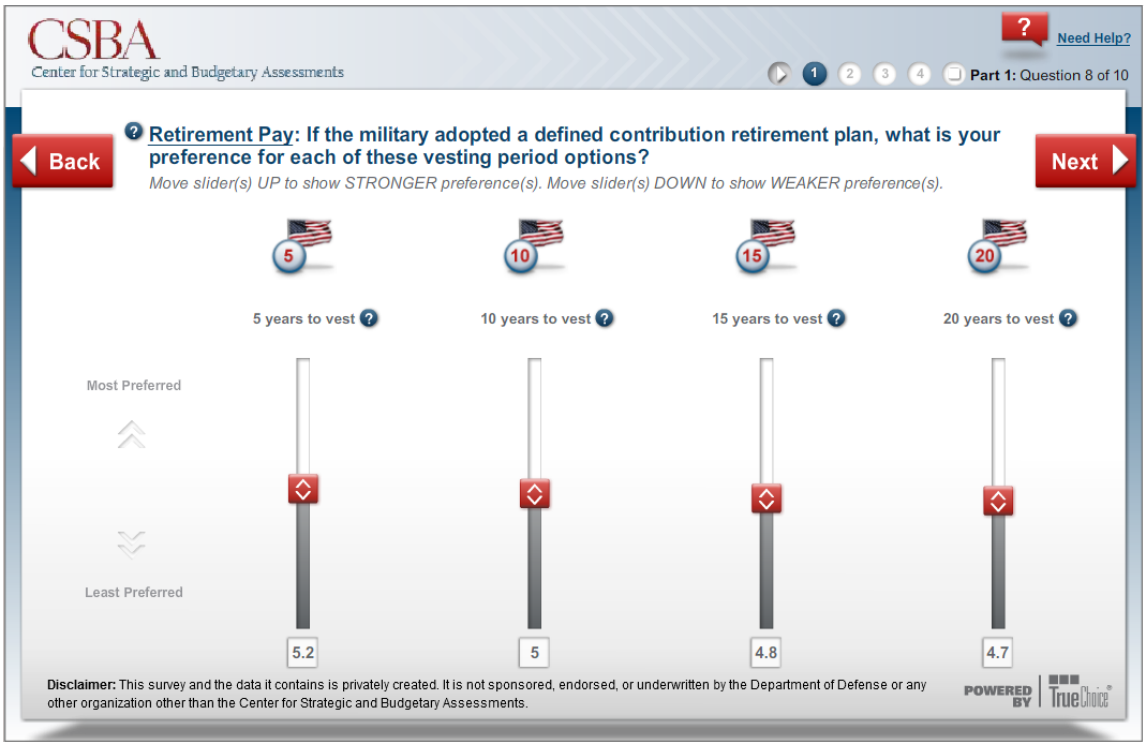
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Back
Next
Retirement Pay: If the military adopted a defined contribution retirement plan, what is your preference for each of these vesting period options?
Move slider(s) UP to show STRONGER preference(s). Move slider(s) DOWN to show WEAKER preference(s).
5
10
15
20
5 years to vest
10 years to vest
15 years to vest
20 years to vest
Most Preferred
Least Preferred
5.2
5
4.8
4.7
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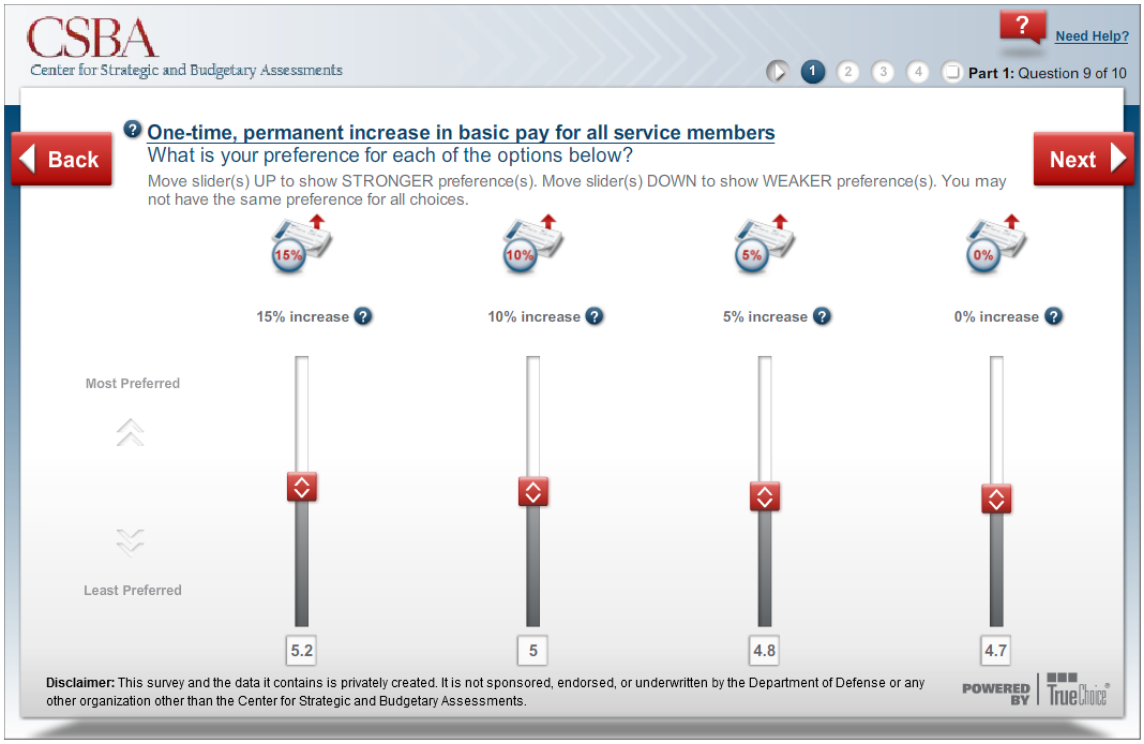
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1 2 3 4 Part 1: Question 9 of 10
Back
Next
One-time, permanent increase in basic pay for all service members
What is your preference for each of the options below?
Move slider(s) UP to show STRONGER preference(s). Move slider(s) DOWN to show WEAKER preference(s). You may not have the same preference for all choices.
15%
10%
5%
0%
15% increase
10% increase
5% increase
0% increase
Most Preferred
Least Preferred
5.2
5
4.8
4.7
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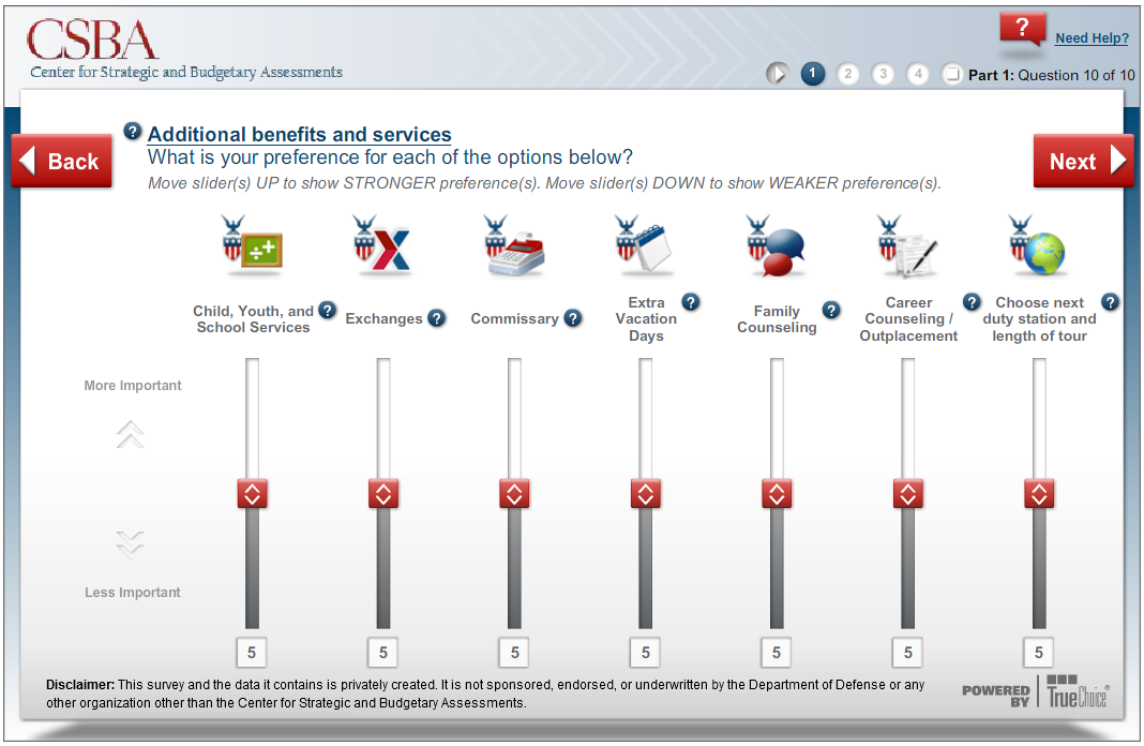
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1 2 3 4 Part 1: Question 10 of 10
Back
Next
Additional benefits and services
What is your preference for each of the options below?
Move slider(s) UP to show STRONGER preference(s). Move slider(s) DOWN to show WEAKER preference(s).
Child, Youth, and School Services
Exchanges
Commissary
Extra Vacation Days
Family Counseling
Career Counseling / Outplacement
Choose next duty station and length of tour
More Important
Less Important
5
5
5
5
5
5
5
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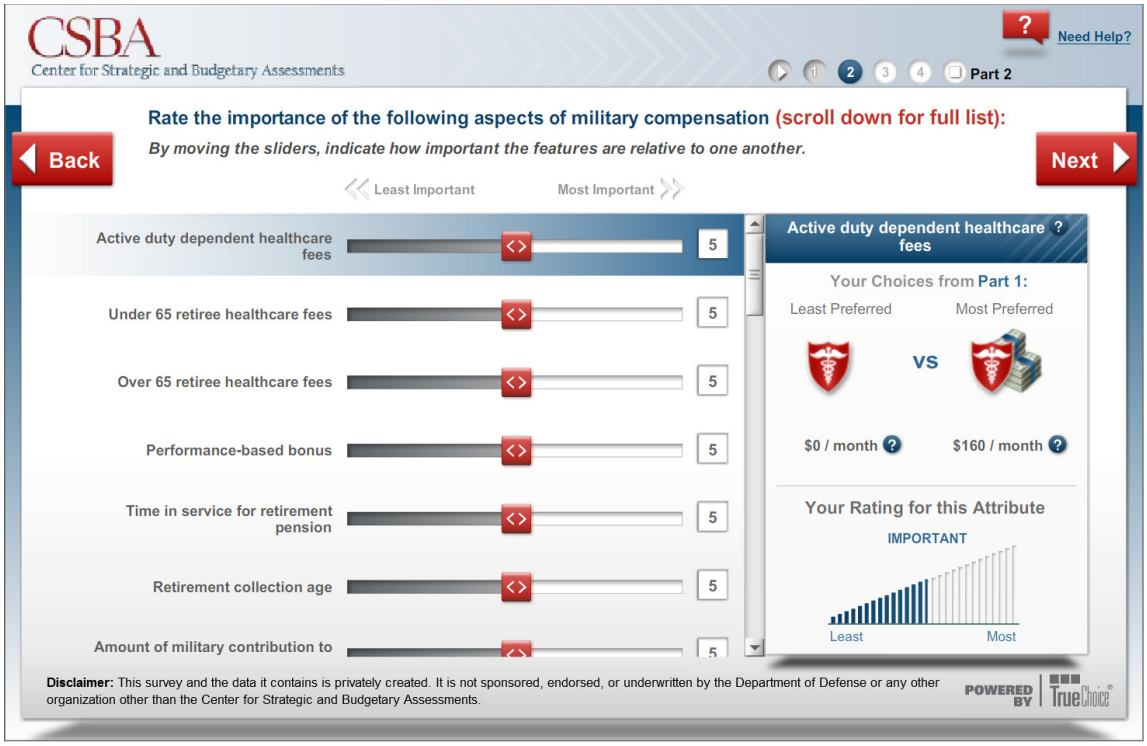
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1 2 3 4 Part 2
Back
Next
Rate the importance of the following aspects of military compensation (scroll down for full list):
By moving the sliders, indicate how important the features are relative to one another.
Least Important
Most Important
Active duty dependent healthcare fees
Under 65 retiree healthcare fees
Over 65 retiree healthcare fees
Performance-based bonus
Time in service for retirement pension
Retirement collection age
Amount of military contribution to
5
Active duty dependent healthcare fees
Your Choices from Part 1:
Least Preferred
Most Preferred
VS
$0 / month
$160 / month
Your Rating for this Attribute
IMPORTANT
Least
Most
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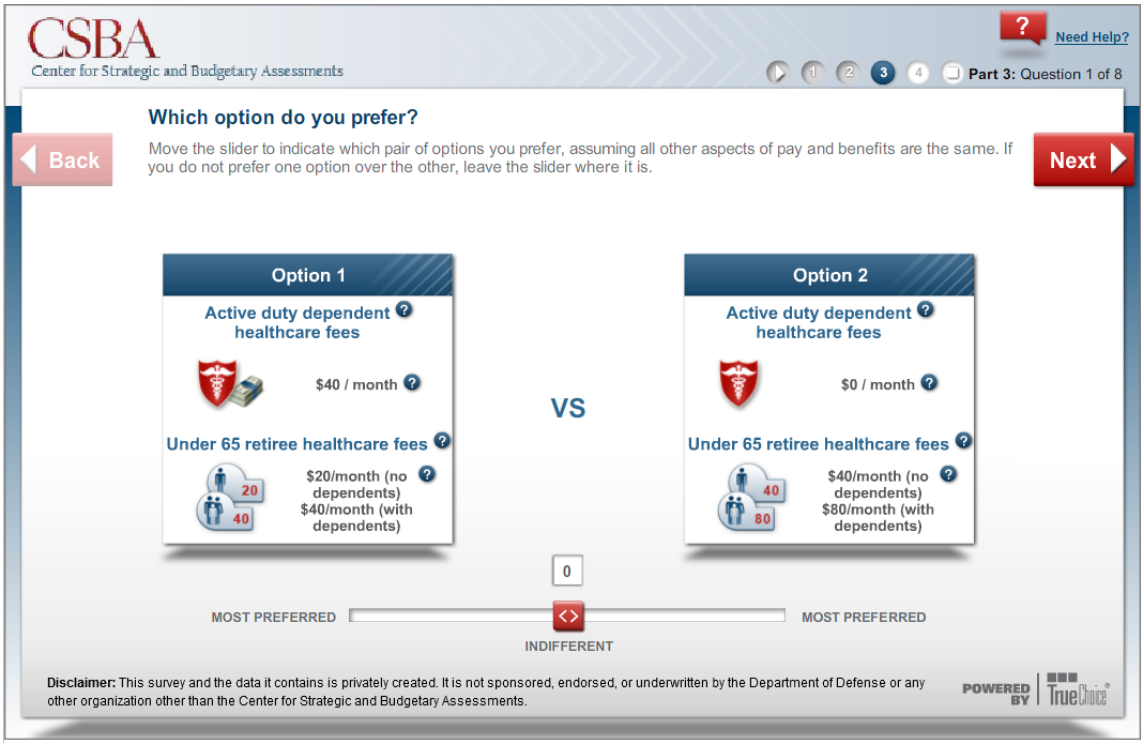
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1 2 3 4 Part 3: Question 1 of 8
Back
Next
Which option do you prefer?
Move the slider to indicate which pair of options you prefer, assuming all other aspects of pay and benefits are the same. If you do not prefer one option over the other, leave the slider where it is.
Option 1
Active duty dependent healthcare fees
$40 / month
Under 65 retiree healthcare fees
20
40
$20/month (no dependents)
$40/month (with dependents)
VS
Option 2
Active duty dependent healthcare fees
$0 / month
Under 65 retiree healthcare fees
40
80
$40/month (no dependents)
$80/month (with dependents)
0
MOST PREFERRED
MOST PREFERRED
INDIFFERENT
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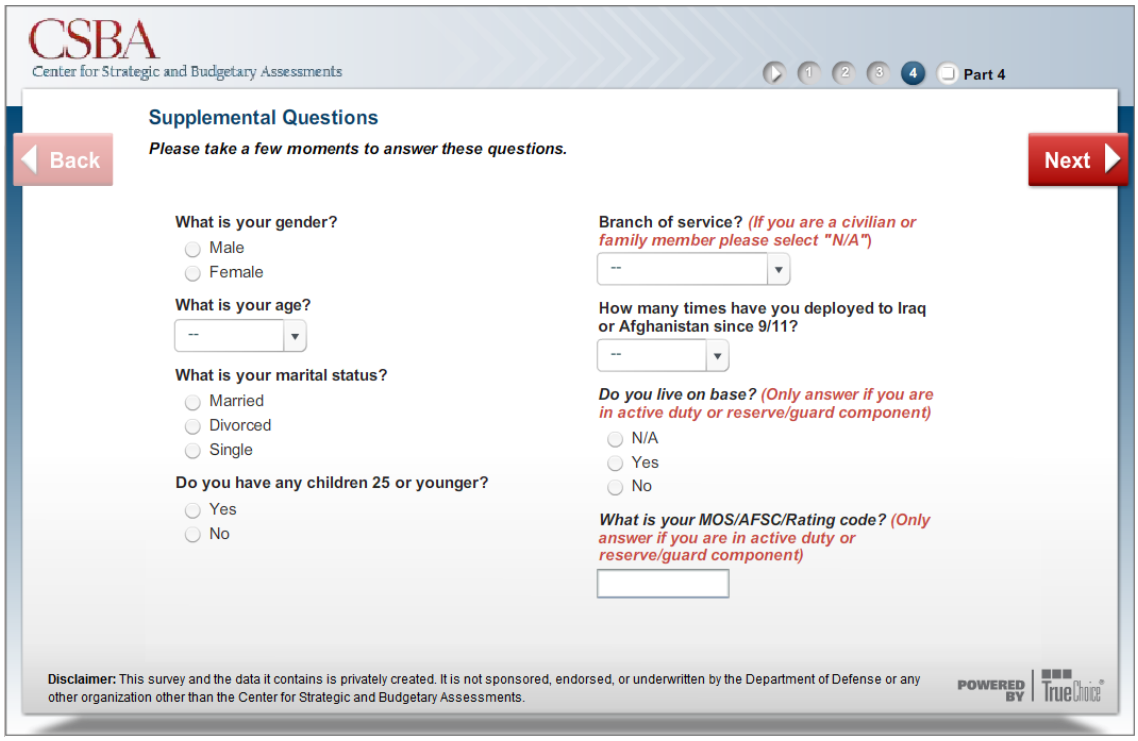
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1 2 3 4 Part 4
Supplemental Questions
Please take a few moments to answer these questions.
Back
Next
What is your gender?
Male
Female
What is your age?
--
What is your marital status?
Married
Divorced
Single
Do you have any children 25 or younger?
Yes
No
Branch of service? (If you are a civilian or family member please select "N/A")
--
How many times have you deployed to Iraq or Afghanistan since 9/11?
--
Do you live on base? (Only answer if you are in active duty or reserve/guard component)
N/A
Yes
No
What is your MOS/AFSC/Rating code? (Only answer if you are in active duty or reserve/guard component)
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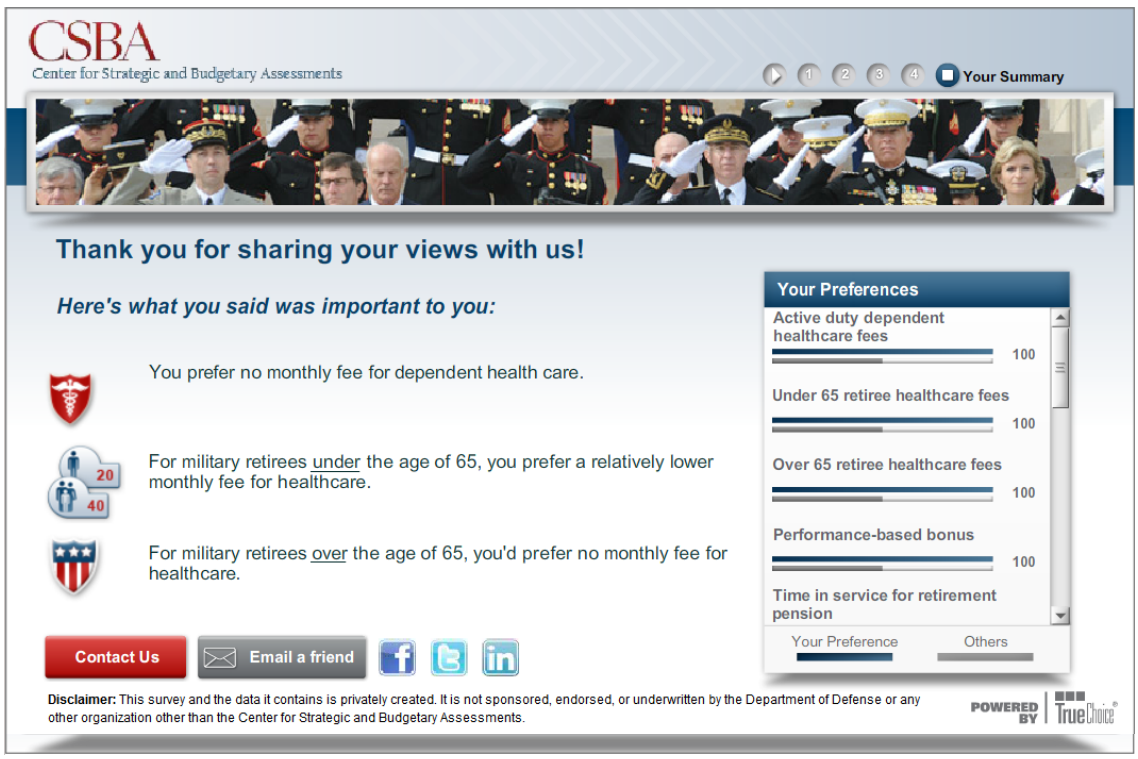
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1 2 3 4 Your Summary
Thank you for sharing your views with us!
Here's what you said was important to you:
You prefer no monthly fee for dependent health care.
For military retirees under the age of 65, you prefer a relatively lower monthly fee for healthcare.
For military retirees over the age of 65, you'd prefer no monthly fee for healthcare.
Your Preferences
Active duty dependent healthcare fees
100
Under 65 retiree healthcare fees
100
Over 65 retiree healthcare fees
100
Performance-based bonus
100
Time in service for retirement pension
Your Preference
Others
Contact Us
Email a friend
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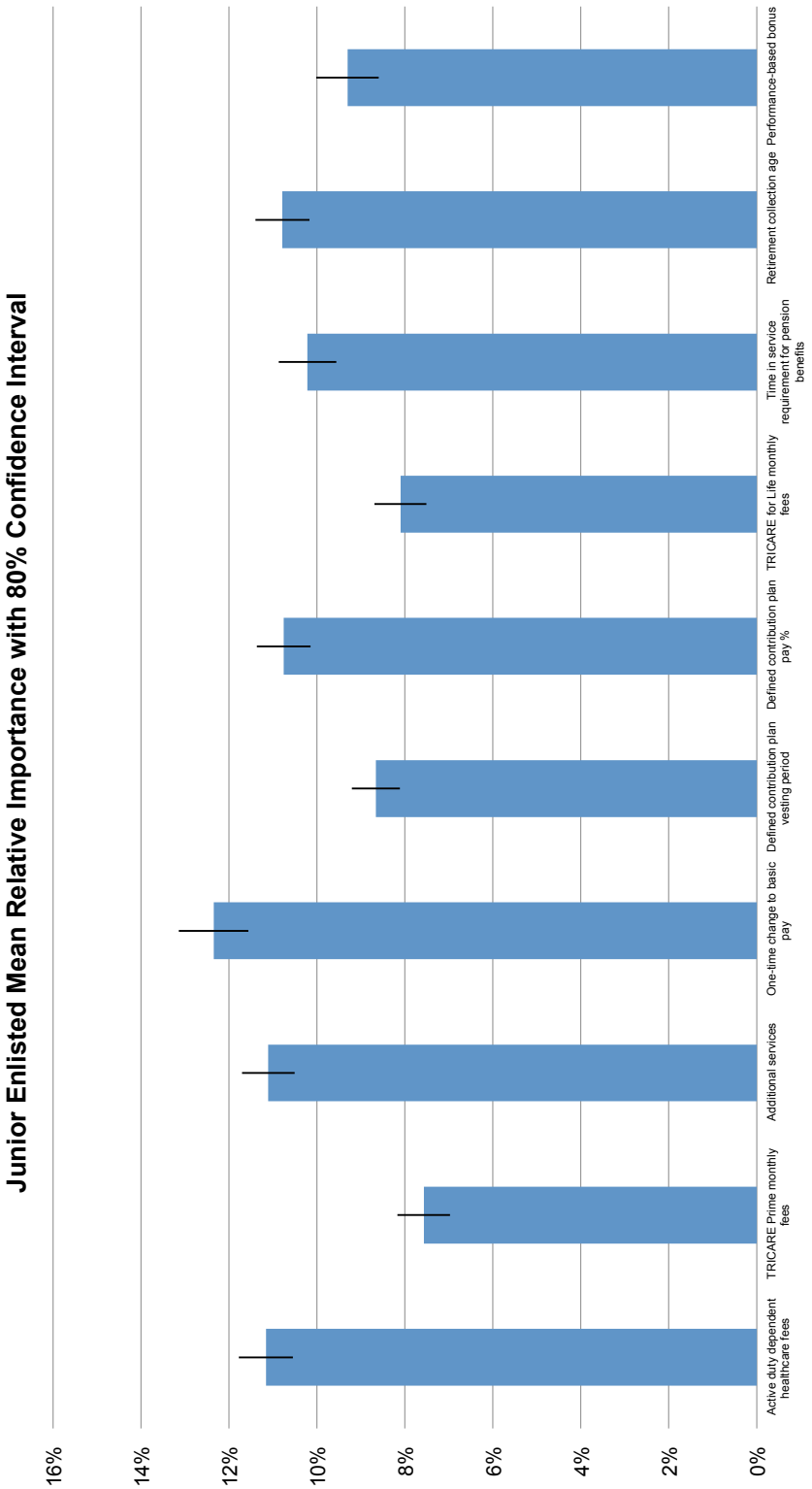
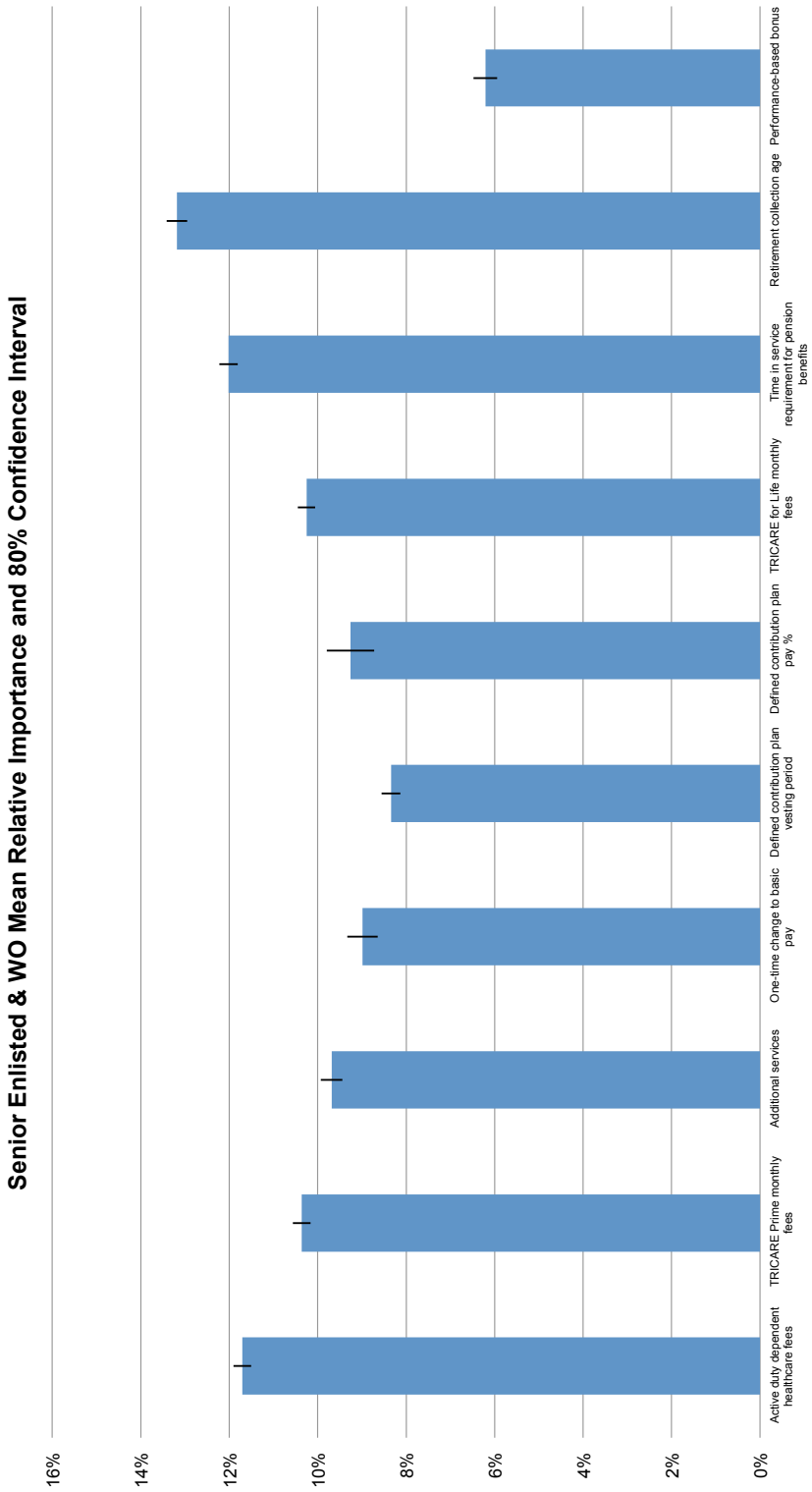
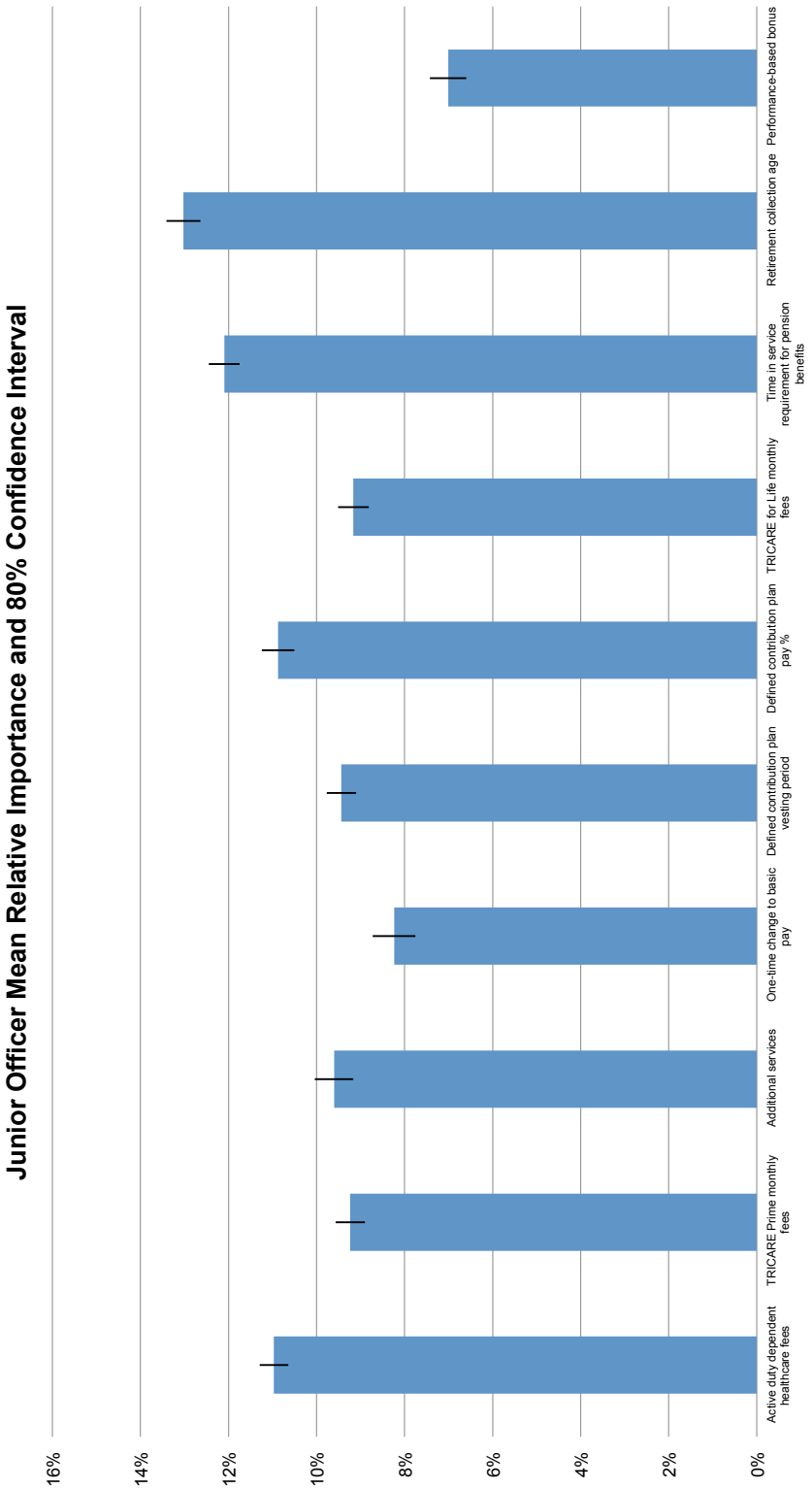
POWERED BY TrueChoice

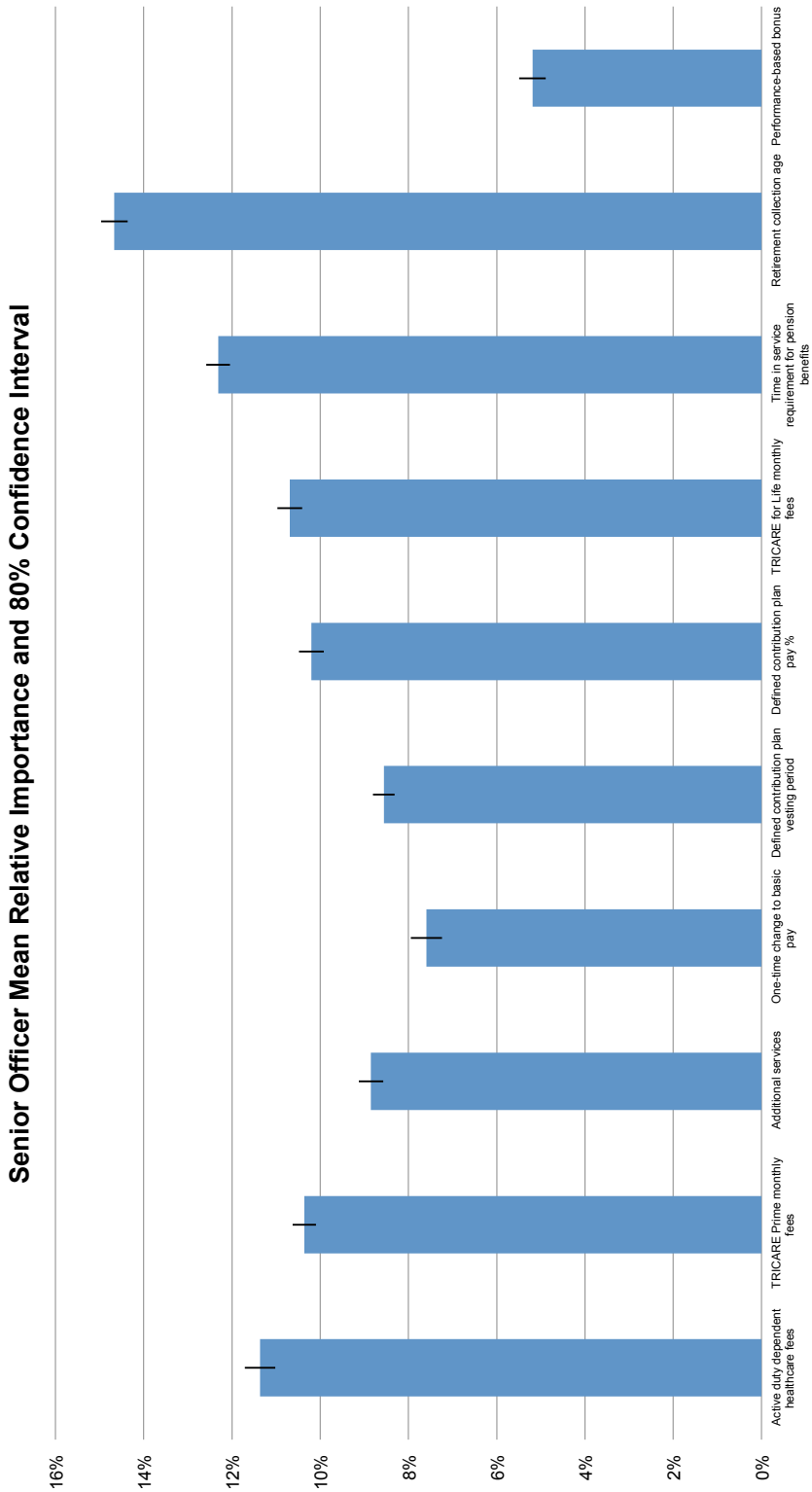
APPENDIX 2 > **CONFIDENCE INTERVALS**

A confidence interval is a statistical measure for the reliability of an estimate. It is the range within which the actual value is expected to fall with a probability determined by the confidence level. The charts below show an 80 percent confidence interval for each preference measured in the study by rank group. This means there is an 80 percent chance the actual value falls within the confidence interval, represented by the vertical line at the top of each bar. The size of the confidence interval is a function of the standard deviation of the underlying data and the sample size of the group. The size of the rank groups varies from 70 respondents in the junior enlisted group to 583 respondents in the senior enlisted group.


Junior Enlisted Mean Relative Importance with 80% Confidence Interval
16%
14%
12%
10%
8%
6%
4%
2%
0%
Active duty dependent healthcare fees
TRICARE Prime monthly fees
Additional services
One-time change to basic pay
Defined contribution plan vesting period
Defined contribution plan pay %
TRICARE for Life monthly fees
Time in service requirement for pension benefits
Retirement collection age
Performance-based bonus


Senior Enlisted & WO Mean Relative Importance and 80% Confidence Interval
16%
14%
12%
10%
8%
6%
4%
2%
0%
Active duty dependent healthcare fees
TRICARE Prime monthly fees
Additional services
One-time change to basic pay
Defined contribution plan vesting period
Defined contribution plan pay %
TRICARE for Life monthly fees
Time in service requirement for pension benefits
Retirement collection age
Performance-based bonus


Junior Officer Mean Relative Importance and 80% Confidence Interval
16%
14%
12%
10%
8%
6%
4%
2%
0%
Active duty dependent healthcare fees
TRICARE Prime monthly fees
Additional services
One-time change to basic pay
Defined contribution plan vesting period
Defined contribution plan pay %
TRICARE for Life monthly fees
Time in service requirement for pension benefits
Retirement collection age
Performance-based bonus


Senior Officer Mean Relative Importance and 80% Confidence Interval
16%
14%
12%
10%
8%
6%
4%
2%
0%
Active duty dependent healthcare fees
TRICARE Prime monthly fees
Additional services
One-time change to basic pay
Defined contribution plan vesting period
Defined contribution plan pay %
TRICARE for Life monthly fees
Time in service requirement for pension benefits
Retirement collection age
Performance-based bonus

APPENDIX 3 > **COST ASSUMPTIONS FOR OPTIMIZATION ANALYSIS**

The optimization analysis presented in chapter four relies on the cost assumptions shown below. The analysis can be re-run using different cost assumptions but using the same underlying preferences data obtained from the study. The cost assumptions below are shown as the average change in annual cost per person relative to the status quo. Savings are shown as positive numbers, costs as negative.

BASIC PAY:

The cost of increasing basic pay varies by rank group based on an assumed average basic pay for those within each group.

	5% INCREASE	10% INCREASE	15% INCREASE
Junior Enlisted	-$1,174	-$2,349	-$3,523
Senior Enlisted / Warrant Officers	-$2,162	-$4,325	-$6,487
Junior Officers	-$2,825	-$5,649	-$8,474
Senior Officers	-$4,377	-$8,754	-$13,131

PERFORMANCE-BASED BONUS:

The cost of the performance-based bonus varies by rank group based on differences in basic pay. While there are many ways a performance-based bonus program could be structured, it is assumed in this analysis to be awarded to the top 25 percent of personnel. The average amount of the award is assumed to be 50 percent of the maximum.

	UP TO 5% BONUS	UP TO 10% BONUS	UP TO 15% BONUS	UP TO 20% BONUS
Junior Enlisted	-$147	-$294	-$440	-$587
Senior Enlisted / Warrant Officers	-$270	-$541	-$811	-$1,081
Junior Officers	-$353	-$706	-$1,059	-$1,412
Senior Officers	-$547	-$1,094	-$1,641	-$2,189

TRICARE PRIME FEE PAID BY RETIREES UNDER 65:

The savings from raising the fee paid for TRICARE for retirees under the age of 65 is assumed to come from the increase in fee only. This is perhaps an overly conservative assumption because some retirees and their dependents would elect to use other healthcare options outside the military, especially if the fee is substantially increased. Thus the military would save the full cost of insuring retirees who leave the military healthcare system. Roughly 1.2 million military retirees currently qualify for the under 65 healthcare option. Assuming 80 percent of these pay the family rate and 20 percent pay the without dependents rate, each dollar increase in the fee for family coverage is assumed to save the department approximately $13 million annually, or $8.64 per active-duty service member. The savings for each of the plans used in the optimization analysis are calculated using this constant ($8.64 savings per person for each $1 increase in cost of TRICARE Prime family coverage), as shown in the table below.

$40 / $80 PER MONTH	$60 / $120 PER MONTH	$80 / $160 PER MONTH	$100 / $200 PER MONTH
$691	$1,037	$1,382	$1,728

TRICARE FOR LIFE FEE PAID BY RETIREES 65 AND OLDER:

Currently military retirees pay nothing for TRICARE for Life coverage once they turn 65. Because it is funded on an accrual basis, raising the fee future retirees pay would have an immediate budget impact. The FY 2013 budget request assumes a reduction of $1,224 per person in accrual payments based on the tiered fee structure it proposes. The formula below shows increase in annual fee weighted according to the three fee tiers and the percent of retirees that fall into each tier. The conversion factor, K, used in this equation represents the savings in annual accrual payments per unit increase in monthly fee.

((47%×$13)+(39%×$26)+(14%×$40))×K=-$1,224 *per person*

Solving for K, this shows that for each dollar increase in the monthly fee, the accrual payments are assumed to decrease by $56 per person. Using this conversion factor, the savings for each of the TRICARE for Life fees used in the study are estimated below.

$16.50 / MONTH	$30 / MONTH	$40 / MONTH
$925	$1,680	$2,240

ACTIVE-DUTY DEPENDENT HEALTHCARE FEE:

The savings from raising the fee for active-duty dependent healthcare are assumed to only include the additional fee collected from those with dependents. This is perhaps an overly conservative assumption because some dependents would elect to use other healthcare options outside the military, especially if the fee is substantially increased. The savings vary by rank group because the fraction of the active-duty force with dependents differs significantly by rank, as shown in the table below. For example, raising the fee to $40 per month is assumed to generate $197 savings per person for junior enlisted compared to $427 per person for senior officers.

	PERCENTAGE WITH DEPENDENTS	$40 / MONTH	$80 / MONTH	$120 / MONTH	$160 / MONTH	$200 / MONTH
Junior Enlisted	41%	$197	$394	$590	$787	$984
Senior Enlisted / Warrant Officers	80%	$384	$768	$1,152	$1,536	$1,920
Junior Officers	56%	$269	$538	$806	$1,075	$1,344
Senior Officers	89%	$427	$854	$1,282	$1,709	$2,136

CHILDCARE, YOUTH, AND SCHOOL SERVICES:

DoD spends some $3.7 billion annually on childcare, youth programs, and DoD K-12 schools.[77] Divided equally among all 1.5 million active-duty troops, the cost per person is roughly $2,500.

COMMISSARIES:

The commissaries cost $1.4 billion in the DoD budget.[78] Divided equally among the 2.3 million in the active and reserve components that qualify for commissary privileges, the per person cost is roughly $600. Military retirees also receive commissary privileges, but in this analysis the primary beneficiaries are considered

[77] Office of the Undersecretary of Defense (Comptroller), *Overview: FY 2013 Defense Budget,* p. 5-6.

[78] Ibid., p. 5-6.

to be active-duty, guard, and reserve personnel. The status quo compensation package includes the existing commissary benefit. Eliminating the commissaries would therefore save $600 per person.

MILITARY EXCHANGES:

DoD subsidizes the military exchanges at a cost of roughly $250 million annually.[79] Divided equally among the 2.3 million in the active and reserve components that qualify for exchange privileges, the per person cost is roughly $110. The status quo compensation package includes the existing exchange benefit. Eliminating the military exchanges would therefore save $110 per person.

CHOICE OF DUTY STATION AND LENGTH OF TOUR:

Giving service members greater choice in duty station and length of tour is assumed to have a negligible cost.

ADDITIONAL VACATION DAYS:

Currently service members earn 30 days of paid leave each year. According to DoD, personnel use an average of 22.2 days per year. Personnel are allowed to accumulate unused leave up to a maximum of 60 days, and any unused leave up to that amount is paid out at separation. Service members lose an average of 0.6 days of leave each year due to the 60 day cap.[80] Giving service members additional vacation days without increasing the cap of 60 days accrued leave would likely result in more days being lost at the end of each year. The cost of this change, in terms of the amount of unused leave paid out upon separation and the cost of replacement personnel to backfill critical jobs, is therefore assumed to be negligible.

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[79] Congressional Budget Office, *Budget Options: Volume 2,* p. 28.

[80] Undersecretary of Defense for Personnel and Readiness, *Military Compensation Background Papers* (Washington, DC: Department of Defense, November 2012), p. 703.

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