



CONGRESSIONAL BUDGET OFFICE
U.S. Congress
Washington, DC 20515

Douglas W. Elmendorf, Director

January 20, 2011

Honorable Steny H. Hoyer
Democratic Whip
U.S. House of Representatives
Washington, DC 20515

Dear Congressman:

At your request, the Congressional Budget Office has prepared the attached analysis that compares federal civilian and military compensation packages.

I hope that this information is helpful to you. If you have any questions, please contact me or CBO staff. The primary staff contact for this analysis is Carla Tighe Murray.

Sincerely,

A handwritten signature in black ink that reads "Douglas W. Elmendorf".

Douglas W. Elmendorf

Attachment

cc: Honorable Eric Cantor
Majority Leader

Honorable Paul Ryan
Chairman
House Committee on the Budget

Honorable Chris Van Hollen
Ranking Member

Honorable Kent Conrad
Chairman
Senate Committee on the Budget

Honorable Steny H. Hoyer
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Honorable Jeff Sessions
Ranking Member

Honorable Darrell Issa
Chairman
House Committee on Oversight and Government Reform

Honorable Elijah Cummings
Ranking Member

Honorable Joseph I. Lieberman
Chairman
Senate Committee on Homeland Security and Governmental Affairs

Honorable Susan M. Collins
Ranking Member

Honorable Howard P. McKeon
Chairman
House Committee on Armed Services

Honorable Adam Smith
Ranking Member

Honorable Carl Levin
Chairman
Senate Committee on Armed Services

Honorable John McCain
Ranking Member

Honorable Harold Rogers
Chairman
House Committee on Appropriations

Honorable Norman D. Dicks
Ranking Member

Honorable Daniel K. Inouye
Chairman
Senate Committee on Appropriations

Honorable Thad Cochran
Ranking Member

CONGRESSIONAL BUDGET OFFICE

Analysis of Federal Civilian and Military Compensation

January 20, 2011

To attract and retain the personnel it needs, the federal government must offer competitive compensation packages. For the military to recruit and retain qualified personnel, its compensation system must adequately reward service members for their training and skills as well as for the rigors of military life, particularly the prospect of wartime deployment. Federal agencies must also offer civilian employees a compensation package that will attract talented people to federal service and encourage the most highly skilled to remain, in the face of competing opportunities in the private sector.

Policymakers may be concerned about the ability of both the military and other federal agencies to recruit and retain high-quality personnel and about equity between those two compensation systems. The best barometer of the effectiveness of any compensation package may be how well the employer attracts and retains high-quality personnel. However, the relationship between specific changes in pay rates and benefits and the effect on recruiting and retention is not clear, and changes in hiring and retention may be too gradual or too ambiguous to guide all decisions about compensation. A variety of factors—including economic conditions—may significantly affect an employer's ability to attract and retain personnel during a given period. Therefore, determining the appropriate compensation solely on the basis of recent patterns of hiring and retention is difficult at best. Because of those shortcomings, employers often try to peg the cash compensation of their employees to that of some external benchmark group.

The Congressional Budget Office (CBO) was asked to compare federal civilian and military compensation. Total compensation can be divided into three components: cash compensation (including pay, cash allowances, and bonuses); noncash benefits (such as subsidized health insurance and child care); and deferred benefits (such as pensions and veterans' benefits.) Because of the difficulties of estimating the relative size of noncash and deferred compensation, for this analysis CBO focused on cash compensation, addressing how salaries earned by federal civilian workers compare with cash compensation for military personnel. According to CBO's analysis, median cash compensation for military personnel—including the tax-free cash allowances for food and housing—exceeds the salaries of most federal civilians of comparable educa-

tion and work experience.¹ In addition, according to prior studies, noncash and deferred benefits are also higher for military personnel than for federal civilian workers.

That simple comparison is limited, however, because it cannot entirely account for differences in the mix of occupations between military personnel and civilians. It also cannot accurately quantify differences in the intangible elements of a job or a compensation package. For example, military personnel may be separated from their families for extended periods of time or work longer hours or in more hazardous conditions than civilians do. Incorporating those differences between federal civilian and military jobs is extremely difficult.

Cash Compensation

Cash compensation may include wages, salaries, allowances, bonuses, and other forms of cash. For civilian employees, that measure is relatively straightforward. In this analysis, federal cash compensation was measured as total salary, which includes overtime pay but does not include cash performance awards.²

Military cash compensation includes more elements. In this analysis, CBO relied on a measure of cash compensation called regular military compensation (RMC), which the Department of Defense (DoD) has used as a fundamental measure of military pay since at least 1962.³ RMC consists of basic pay plus service members' allowances for housing and food, as well as the tax advantage that arises because those allowances are

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1. Researchers often use the median, instead of the more common mean, or average, when working with earnings data. If earnings are ranked from lowest to highest, the median (or 50th percentile) divides the distribution in half. Unlike the mean, the median is not influenced by extremely high or low values.
 2. The Office of Personnel Management reports that, on average, cash performance awards are small, accounting for between 1.0 percent and 1.3 percent of total compensation. See "Use of Cash Awards Governmentwide Fiscal Years 2001–2007," available at www.opm.gov/perform/CashAwd2007/UseOfCashAwards.asp.
 3. See Department of Defense, *Report of the 9th Quadrennial Review of Military Compensation*, vol. 1 (March 2002), p. 29.

not subject to federal income taxes.⁴ All active-duty personnel (including guard and reserve personnel serving on active duty) are entitled to receive RMC.⁵

RMC does not include various types of special pay, bonuses, and other allowances that service members may receive. Special and incentive pay is usually awarded for particular skills or for hazardous duty, including deployment and combat. Members may also earn bonuses when they reenlist for several more years, especially if they have occupational skills that are in short supply. There are more than 50 types of special pay and bonuses, but an individual member might receive only a few over the course of his or her career.⁶ Because all of those types of compensation are either earned by relatively few specialists or are earned irregularly, they are not generally included in the RMC measure.

Comparing Cash Compensation

The Department of Defense (DoD) provided data on RMC for all enlisted personnel and commissioned officers serving on active duty in 2010.⁷ The Office of Personnel Management (OPM) provided data on the cash compensation of almost all full-time male federal civilians in 2008.⁸ CBO inflated the amounts provided by OPM to 2010

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4. RMC does not include tax advantages that arise if pay and allowances are not taxed by individual state governments, nor does it include other tax benefits that service members may receive. For example, a soldier who reenlists while serving in a combat zone need not pay federal tax on any reenlistment bonus received. Veterans' benefits are not taxable either. The magnitude of those tax advantages has not been estimated for this analysis.
 5. Single enlisted members in their first few years of service may live in barracks and not receive a housing allowance. In earlier work, CBO estimated an imputed value for barracks housing, which was slightly higher than the housing allowance for junior personnel. Substituting that value for the allowance would increase the cash compensation for junior enlisted members, but the increase would be small. See Congressional Budget Office, *Evaluating Military Compensation* (June 2007), p. 13.
 6. For example, in 2010, personnel earned \$150 to \$225 per month for performing hazardous jobs or serving in dangerous areas; relatively few people serve on hazardous duty for 12 consecutive months. The maximum enlistment bonuses ranged from \$15,000 to \$40,000, depending on the branch of military service. The maximum selective reenlistment bonuses ranged from \$40,000 to \$90,000; higher bonuses were possible for some members with special skills. Each military service decides whether to award the maximum bonus or a smaller amount or any bonus at all. Bonuses are generally paid in annual installments over the enlistment or reenlistment period. In total, the Department of Defense expected to pay about \$6 billion in special pay and bonuses in 2010—about 5 percent of DoD's total spending on military compensation and benefits (not including accrual costs for health care and retirement benefits) of almost \$120 billion for that year.
 7. CBO excluded warrant officers, who usually begin their service as enlisted personnel and become warrant officers later.
 8. OPM provided data for 97 percent of the 1.9 million workers employed in most federal agencies. The data do not include the approximately 750,000 employees of the Postal Service or workers in the legislative and judicial branches of government. For more information on the OPM data, see Congressional Budget Office, *Characteristics and Pay of Federal Civilian Employees* (March 2007).

dollars using the across-the-board increases provided to most civilian employees (totaling 5.9 percent for those two years), and matched the data for workers in the two systems who had similar educational background and years of work experience. CBO limited the comparison to civilian men because their pattern of employment more closely mirrors military service than does the pattern for civilian women.⁹

In examining military compensation, CBO distinguished between enlisted personnel and officers. Enlisted personnel are generally recruited straight from high school and represent about 85 percent of all military personnel, although about three-quarters of enlisted personnel receive some college credit during their service.¹⁰ Officers generally have completed a four-year college degree.

CBO compared the cash compensation of active-duty enlisted personnel with that of federal civilians who had a high school degree and perhaps some college education (but not a four-year college degree) and comparable work experience. According to that analysis, the median RMC for enlisted personnel in 2010 exceeded cash compensation for most federal civilian employees with a high school degree and perhaps some college education (see Figure 1). For any given number of years of work experience, median cash compensation for enlisted personnel was at least as high as the 75th percentile of earnings for federal workers with comparable work experience.¹¹ In other words, the typical enlisted person receives more cash compensation than three-quarters of comparable federal civilians.

CBO also compared the cash compensation of military officers with that of more-educated federal civilians (those with a four-year college degree). The median RMC for commissioned officers with two years of experience or more exceeds the 75th percentile of cash compensation of federal workers with four-year college degrees (see Figure 2).¹² That disparity between officers' and civilian employees' cash compensation grows with increasing years of experience, and the disparity for officers exceeds the disparity for enlisted personnel.

9. In the civilian sector, women are more likely than men to take extended absences from paid employment during their adult lives, perhaps to care for young children or elderly relatives. Military personnel—whether males or females—are much less likely to leave active duty for several years and return later. Including women in the data for federal civilians would lower average salaries for that group.

10. Congressional Budget Office, *Evaluating Military Compensation*.

11. The 75th percentile separates the top 25 percent of earnings from the bottom 75 percent. CBO's analysis indicates, for example, that the median compensation for enlisted personnel with 10 years of work experience was about \$64,000; the 75th percentile of earnings for federal civilian employees was \$58,000. The median compensation for such federal civilian employees was \$48,000.

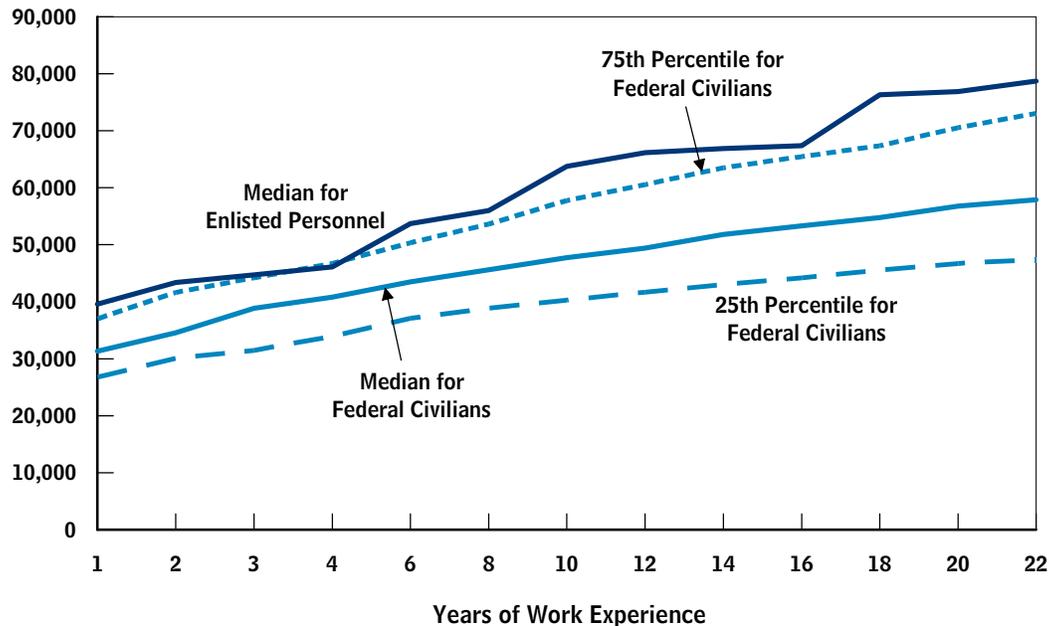
CBO has shown only the median for military compensation because RMC for a given number of years of service does not vary as much as the salaries of civilians do. Cash pay for military personnel is predominantly determined by their rank (for example, sergeant or colonel), and at any given tenure, almost all individuals fall within a few ranks.

12. Senior federal executives were included in the comparison with officers (although excluded from the comparison with enlisted personnel).

Figure 1.

Annual Cash Compensation of Enlisted Personnel and Federal Civilian Employees with Comparable Education and Work Experience

(2010 dollars)



Source: Congressional Budget Office based on data from the Department of Defense and the Office of Personnel Management.

Notes: Military cash compensation includes basic pay plus the allowances for housing and food received by all active-duty personnel and the federal tax advantage that occurs because those allowances are not taxed. Military data are for active-duty personnel in 2010. Data on cash compensation for civilians include 2008 earnings for male full-time workers with a high school degree and perhaps some college education (but not a four-year college degree), by age, inflated to values in 2010 using the across-the-board increases that have been provided to most civilian employees. CBO estimated the years of experience for civilian personnel. Data include workers in the wage grade, general schedule, and related pay plans.

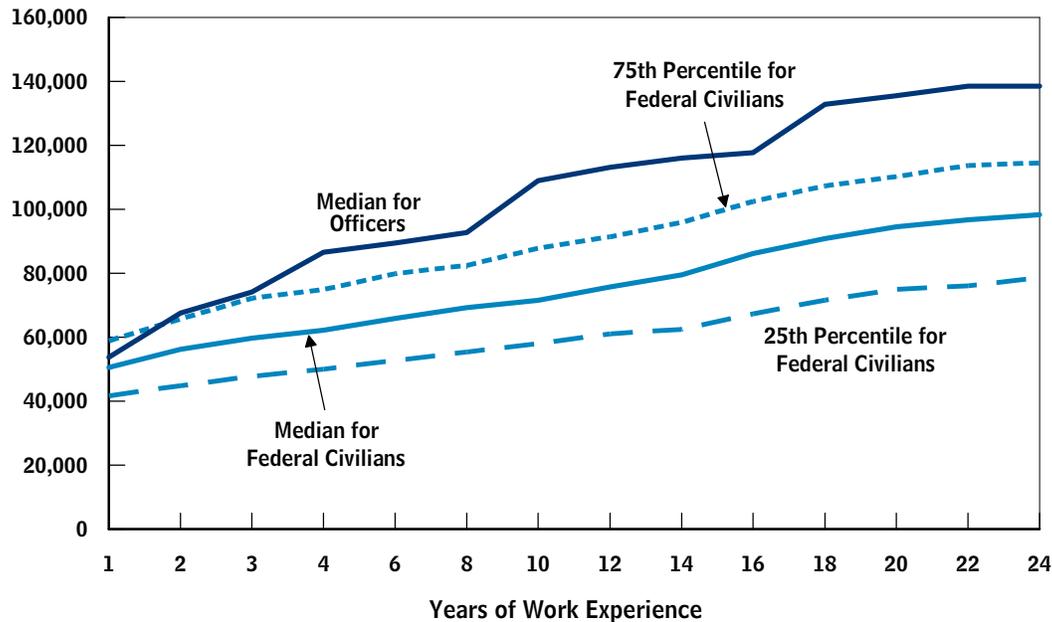
Data on civilians exclude employees of the Postal Service; several smaller agencies, including intelligence and national security agencies; and the legislative and judicial branches of government.

If earnings are ranked from lowest to highest, 25 percent of cash compensation falls below the 25th percentile. Similarly, the median divides the distribution of cash compensation in half and represents the middle of the distribution. The 75th percentile separates the top 25 percent of earnings from the bottom 75 percent.

Figure 2.

Annual Cash Compensation of Commissioned Officers and Federal Civilian Employees with Comparable Education and Work Experience

(2010 dollars)



Source: Congressional Budget Office based on data from the Department of Defense and the Office of Personnel Management.

Notes: Military cash compensation includes basic pay plus the allowances for housing and food received by all active-duty personnel and the federal tax advantage that occurs because those allowances are not taxed. Military data are for active-duty personnel (excluding warrant officers) in 2010. Data on cash compensation for civilians include 2008 earnings for male full-time workers with a four-year college degree, by age, inflated to values in 2010 using the across-the-board increases that have been provided to most civilian employees. CBO estimated the years of experience for civilian personnel. Data include workers in the executive schedule, general schedule, and related pay plans.

Data on civilians exclude employees of the Postal Service; several smaller agencies, including intelligence and national security agencies; and the legislative and judicial branches of government.

If earnings are ranked from lowest to highest, 25 percent of cash compensation falls below the 25th percentile. Similarly, the median divides the distribution of cash compensation in half and represents the middle of the distribution. The 75th percentile separates the top 25 percent of earnings from the bottom 75 percent.

Noncash and Deferred Benefits

In both the armed forces and civilian jobs, noncash and deferred benefits can be sizable and can influence decisions about employment, including whether to enlist or reenlist in the military or whether to embark on or remain in a career in civil service. Noncash and deferred benefits are more challenging to measure than cash compensation, however, and different researchers take different approaches.

In earlier work on military pay, CBO estimated that the combination of noncash and deferred benefits is about equal to regular military compensation.¹³ DoD has reached the same conclusion.¹⁴ In other words, the value of noncash and deferred benefits adds 100 percent to cash compensation.

CBO estimates that about 40 percent of noncash and deferred benefits for the military consists of subsidized goods and services that can be used immediately—such as medical care, groceries, the use of recreational centers, and child care. The other 60 percent is the accrued cost of retirement pensions and other benefits that service members receive after they leave active duty—including health care for retirees and veterans’ benefits. The military’s traditional use of noncash and deferred benefits reflects, in part, a belief that such benefits encourage service members to stay for an entire career and that they reduce the costs that military families incur in searching for new schools, stores, and housing as they move among installations.

The noncash compensation of the government’s civilian employees is generally less generous than that of service members. All federal civilians can participate in federal health insurance and retirement plans, although they generally pay more for health insurance than military personnel do.¹⁵ Also, for people who stay for a full career, the military retirement system is more generous than the federal civilian system, in that military members can receive an annuity immediately upon retiring after serving 20 years. Because most military members enter the service between the ages of 18 and 24, they may begin receiving their retirement annuities in their 40s. In addition, noncash benefits like subsidized housing and groceries are not available to most federal civilian workers.

Sources vary on the size of noncash and deferred benefits for federal civilians, however. The Office of Management and Budget publishes cost factors to add to the cash pay of federal civilians in estimating the total costs of government performance.¹⁶ Those factors suggest that noncash and deferred benefits add about 55 percent to the value of cash pay, or about half as much as military personnel receive. Survey data collected by the Department of Commerce’s Bureau of Economic Analysis (BEA) in the

13. Congressional Budget Office, *Evaluating Military Compensation*.

14. See the Department of Defense, *Report of the 10th Quadrennial Review of Military Compensation*, vol. 2 (February 2008), p. xi.

15. Congressional Budget Office, *Evaluating Military Compensation*, p. 17.

16. Office of Management and Budget, *Performance of Commercial Activities*, OMB Circular A-76, Attachment C.

national income and product accounts suggest that noncash and deferred benefits add about 75 percent to the cash pay of military personnel and about 50 percent to the cash pay of federal civilians. Although BEA's estimate of noncash and deferred benefits for military personnel is lower than CBO's and DoD's, it too suggests that such compensation provides a larger increase to military pay than to that of federal civilians.

Factors That Make Comparisons Difficult

Comparisons of military and federal civilian compensation have several important limitations. First, broad comparisons between two types of employees cannot control for the different mix of occupations. Federal civilian workers are more likely to work in white-collar jobs than are enlisted personnel, for example.

Second, intangible job characteristics such as working conditions can differ markedly between military and federal civilian jobs, even if their type of occupation is the same. For example, military personnel are generally expected to change locations every few years—in addition to deploying for specific operations—whereas most federal civilians can choose to remain in the same geographical area throughout their career. Military members may work in more hazardous conditions or longer hours (and are considered to be on duty at all times). Members of the armed forces are subject to military discipline and are unable to resign or change jobs at will.

At the same time, military life includes features that people may find more attractive than comparable civilian government jobs. Some military personnel receive greater responsibility earlier in their career than civilians do. Group solidarity can be greater for military personnel than for civilians as well. Quantifying those intangible elements among military and federal civilians is extremely difficult.

Third, pay comparisons may ignore the value of training and education that are provided on the job. The military services generally try to enlist capable young people with high school diplomas and then train them for military life and for their occupational specialty. Federal civilian agencies, by contrast, generally hire people who have already been trained, often at their own expense (although many agencies offer work-related education assistance). In addition, federal agencies are more likely to hire civilians who have more experience. Adding in the value of government-provided training and education would generally make the noncash share of total military compensation even greater relative to that share of total civilian compensation.

Fourth, differences between military and civilian career patterns complicate pay comparisons. Because the military “promotes from within,” pay may need to be higher for new enlistees than for civilians of similar ages and education levels, as military departments try to compete for the best pool of applicants from which to select the best career personnel. Also, data on federal civilian pay include the earnings of people who are regularly promoted to higher levels of responsibility during their career as well as those who are not. In contrast, the military’s “up-or-out” promotion system means that only people who are most successful may reach the most senior levels.