



INSTITUTE FOR DEFENSE ANALYSES

**Analyzing the Implications of a
Single Salary System
(Conference Briefing)**

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Executive Summary

The Congress and the president asked the 13th Quadrennial Review of Military Compensation to study the implications of moving from the current system of military compensation, involving pay and tax-free allowances, to a salary system that eliminates the allowances. This presentation outlines an initial analysis of what adoption of a salary system could mean for Service member take-home pay, cost to the Department of Defense (DoD), and cost to the federal government.

IDA will estimate the tax increase that would affect Service members who now receive the Basic Allowance for Housing under a salary system. We will then estimate how much basic pay would have to rise to compensate for this added tax burden, followed by a calculation of the implications of this basic pay increase for the cost of military compensation to DoD and to the government. In particular, we will consider the possible impact of higher basic pay on the compensation of personnel now living in government-owned housing and on the level of retired pay.

IDA will also use statistical techniques to estimate the effects of various possible single salary systems on retention. This work will be supplemented by field work to assess the attitudes of Service members.

Analyzing the Implications of a Single Salary System

Jerome Bracken and Stanley A. Horowitz

2019 Western Economic Association International Conference

A salary system, replacing tax-free allowances with taxable base pay, has been studied before

1st QRMC, 1967: The same salary should be paid to all personnel of the same grade and years of service w/o regard to dependency status or quarters occupancy status.

Defense Manpower Commission, 1976: Regular military compensation should become fully taxable with no area differentials. Australia, Canada, and New Zealand had converted to salary systems.

3rd QRMC, 1975-76: Keep the current system and do not go to a fully taxable salary system that combines basic pay, BAQ (now BAH), and BAS.

7th QRMC, 1992: Presents arguments both ways.

Arguments for a salary system

The current system:

Is unduly complex and members don't understand the true value of the compensation package

Doesn't represent equal pay for equal work

Tax advantage depends on income bracket and dependency status (BAH is higher for those with dependents)

Recruits and retains the wrong kind of people

Incentivizes recruiting and keeping more married members

Masks costs: cost to DoD \neq cost to federal government

Favors those in higher tax brackets – especially those with dependents

Arguments against a salary system

Would be difficult to administer

We would have to compute charges for quarters

High-ranking officers could find their pay capped

Complications because many elements of compensation are tied to basic pay

e.g., retired pay, continuation pay, death gratuity, accrued leave upon separation, severance pay, readjustment pay, pay of cadets and midshipmen

Would require an increase in DoD's budget

Increased tax burden would fall more heavily on junior personnel because allowances are more of their income

Increased Social Security liability would affect members differently based on grade, years of service

Our analysis will quantify the implications of potential salary systems for a range of outcomes

Service member take-home pay for both those receiving BAH and those in government-owned housing

Cost to DoD

Cost to the federal government

Treatment of members with and without dependents

Geographic equity

Retention

Some issues in analyzing take-home pay

For BAH recipients

Basic pay

Dependent status

Possible spousal earnings



Affect tax rate

Extent to which basic pay would have to be increased to offset tax losses

For non-BAH recipients (there are 425,000 of them)

Extent to which rent is imposed to offset possible increases in basic pay

Estimating impact on take-home pay for selected groups of BAH recipients

Officer, warrant officer, enlisted

With and without dependents

With and without spousal earnings – e.g., assume working spouse's earnings equal basic pay

Locations with a range of BAH levels

Various levels of state taxes

The Military Compensation Green Book, put out by the Directorate of Compensation in OUSD P&R, provides detailed information on BAH recipients

Some issues in estimating costs to DoD and to the federal government

Extent to which basic pay is increased to offset tax losses
And remember basic pay increases will be taxed

Amount of additional state taxes paid by Service members
Complicated by ability to choose state of domicile

Treatment of non-BAH recipients

Treatment of retired pay

Estimate cost to DoD and federal government under assumption that losses to BAH recipients will be offset

Start with BAH received by six categories: officer, warrant, enlisted/with and without dependents: from Green Book

Estimate increase in tax liability if half spouses work

Calculate increase in basic pay needed to cover this liability in aggregate – there would be winners and losers

Calculate cost to DoD: driven by increased tax liability

Calculate cost to the federal government: driven by increased state tax liability

Increased basic pay potentially drives other compensation elements; e.g., retired pay

Legal or policy changes could offset ancillary effects of increase in basic pay to compensate BAH recipients

Options include:

Charge rent to those in government-owned housing

Modify retirement multiples

We are estimating effects of a salary system on the distribution of benefits and on recruiting /retention

Consider a range of possible salary systems

Maintenance of value of compensation vs. cost to government

Treatment of cost-of-living differences

Estimate effects on various populations

BAH/non-BAH recipients

High vs. low cost-of-living areas

With and without dependents

Officer/warrant/enlisted

We have a plan to estimate effects on retention

IDA has a retention prediction model (RPM), which uses machine learning to predict career duration

The model is predictive, not causal

We want to know the causal effects of changing pre- and post-tax compensation on career duration

One way is to instrument with an exogenous variable that affects career duration only through compensation

Instrument could be a legal or policy change or random assignment

Instrumental variables principles extend to machine learning

First stage: estimate effect of instrument on compensation

Second stage: estimate effect of instrumented compensation on career duration

If first stage is linear, we can estimate the second stage by inserting predictions from first stage

If first stage is non-linear, we can estimate the two stages jointly – see Hartford et al. (2017)*

*Jason Hartford, Greg Lewis, Kevin Leyton-Brown, and Matt Taddy, "Deep IV: A Flexible Approach for Counterfactual Prediction," <http://proceedings.mlr.press/v70/hartford17a/hartford17a.pdf>.

**We also plan field work to assess attitudes of
Service members**

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