Wrenches, Wages, and the call to Continue: An Empirical Examination of Aviation Maintenance Manpower Retention in the U.S. Marine Corps

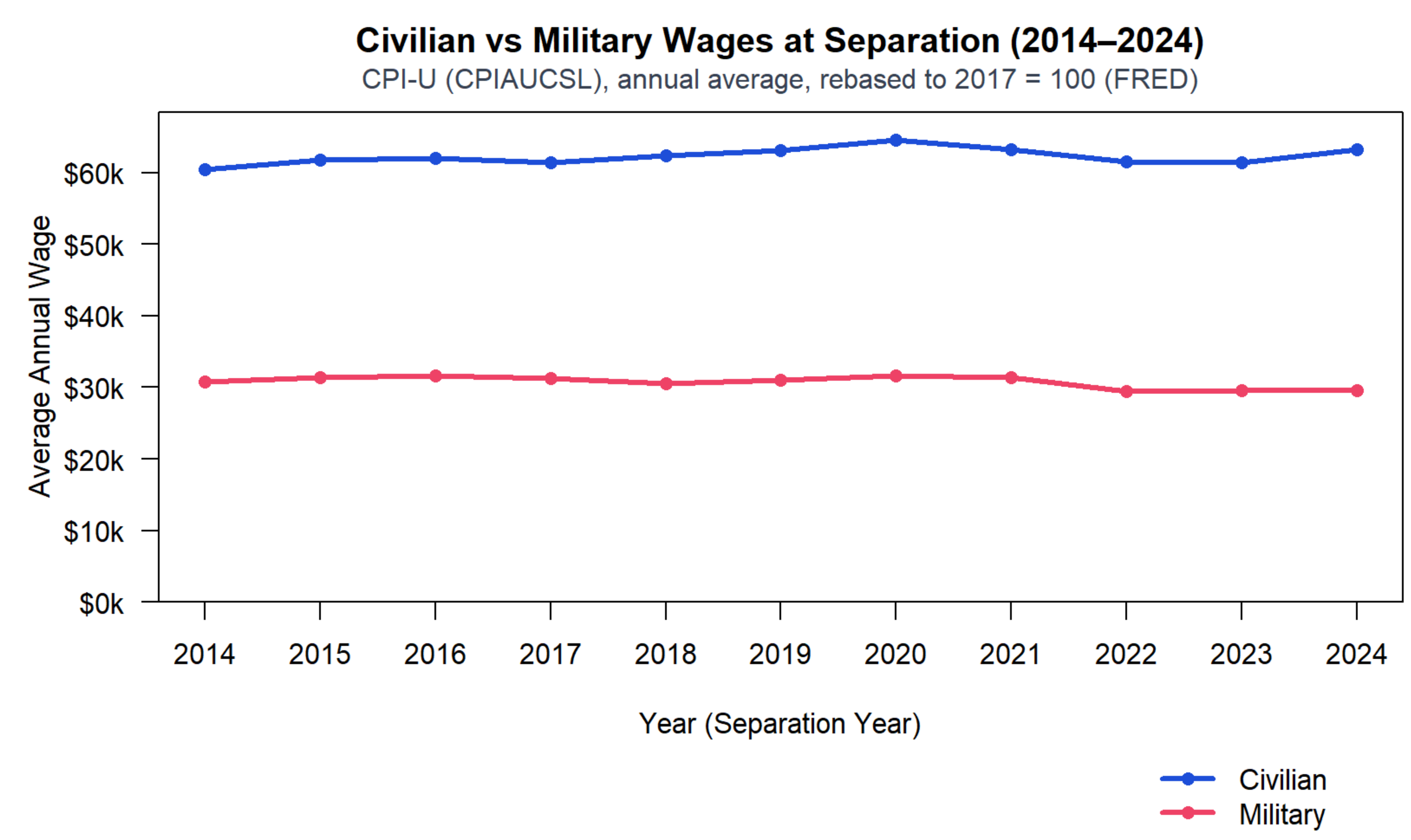
NAVAL POSTGRADUATE SCHOOL

Abstract

- The Marine Corps 2025 Aviation Plan prioritizes operational readiness, modernization, and interoperability, all of which depends on retaining experienced talent. The demand for talented pilots and aviation maintainers has only increased in the post-Covid civilian market. This suggests that civilian labor market conditions may affect the retention decision of Marine aviation maintainers. To evaluate this hypothesis, this research uses data on retention rates among Marine aviation maintainers and civilian-military wage gaps in the aviation maintenance occupation between 2014 and 2024. The multivariate regressions indicate that a $1000 increase in civilian-military wage gap is associated with 9.7% higher odds of separating at the 5-year mark.

Methods

- The separations of Marines in aviation maintenance were evaluated to see the trend by military occupational specialty.
- The wage gap was measured for the last 10 years as shown in the figure.
- 9 regressions were conducted to measure the impact of the wage gap on separation at the 5-, 6-, and 7-year marks.



Results & Impact

- The average wage gap has been consistently around 30k from 2014 to 2024 and has risen to a difference of 35k in 2024 alone.
- Accounting for the benefits of Basic Allowance for Housing and Basic Allowance for Sustenance in 2024, the difference closes to 25k in favor of the civilian labor market.
- The growing demand in the civilian labor market and the existing average wage gap could entice talented maintainers to seek employment outside of the military after contract expiration.

Future Research

- Measure the potential relationship between aviation maintenance Marines exiting the Marine Corps at the squadron level and readiness stability using data from Advanced Skills Management (ASM) and the Aviation Maintenance Supply Readiness Report (AMSRR).
- Conduct interviews and surveys with Marines that have departed the Marine Corps to find causal reasoning for the decision to separate.

Arin Dorrell, Capt, USMC
Advisors: Dr. Latika Hartmann
Dr. Chad Seagren