Veteran Employment Outcomes (VEO)

New experimental Census Bureau statistics on employment and earnings for Army veterans in the decade after leaving service.

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Any opinions and conclusions expressed herein are those of the author and do not represent the views of the U.S. Census Bureau. All tables and figures use data that is publically available (VEO Disclosure Review Board Release Number CBDRB-FY20-088).

Veteran Employment Outcomes (VEO)

Today's briefing

- Provide background on VEO project
- Demonstrate VEO Explorer tool
- Walk through some specific use cases for the VEO data
- Discuss release date and future plans

Veteran Employment Outcomes (VEO)

Background and goals of project

VEO is a collaboration between the Census Bureau and the Army Office of Economic and Manpower Analysis (OEMA) to create statistics on labor market outcomes for veterans.

Anticipated use cases for VEO:

- *Military*: Talent retention and recruitment
- *Soldiers/Veterans*: Post-military career planning
- *Policymakers*: Help design targeted interventions for veterans transitioning into civilian labor market

Veteran Employment Outcomes (VEO)

What statistics are available? How are the data created?

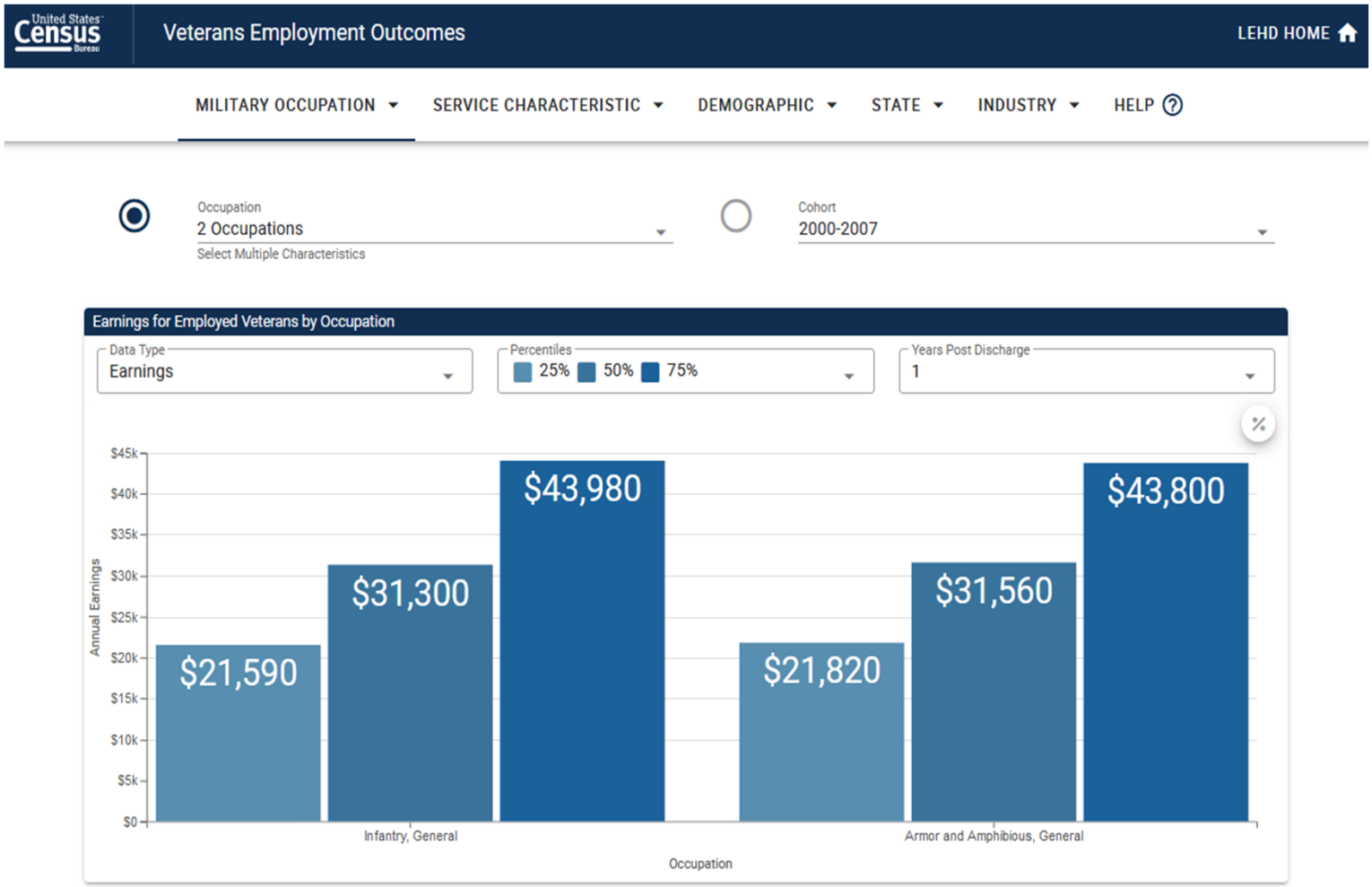
VEO provides data on Army veterans' post-service employment and earnings by:

- Military occupation (2-digit level (9 occupations) and 3-digit level (56 occupations))
- Civilian industry of employment
- Veterans' characteristics (sex, race, rank, years of military service, etc.)

The data are longitudinal, such that the employment and earnings outcomes are both immediate (1 year after exiting service) and longitudinal (5 and 10 years after).

VEO statistics are generated by matching OEMA veteran records to Census Bureau administrative data on jobs (over 650,000 veterans in data).

VEO Explorer is a web-based analysis tool for exploring the data



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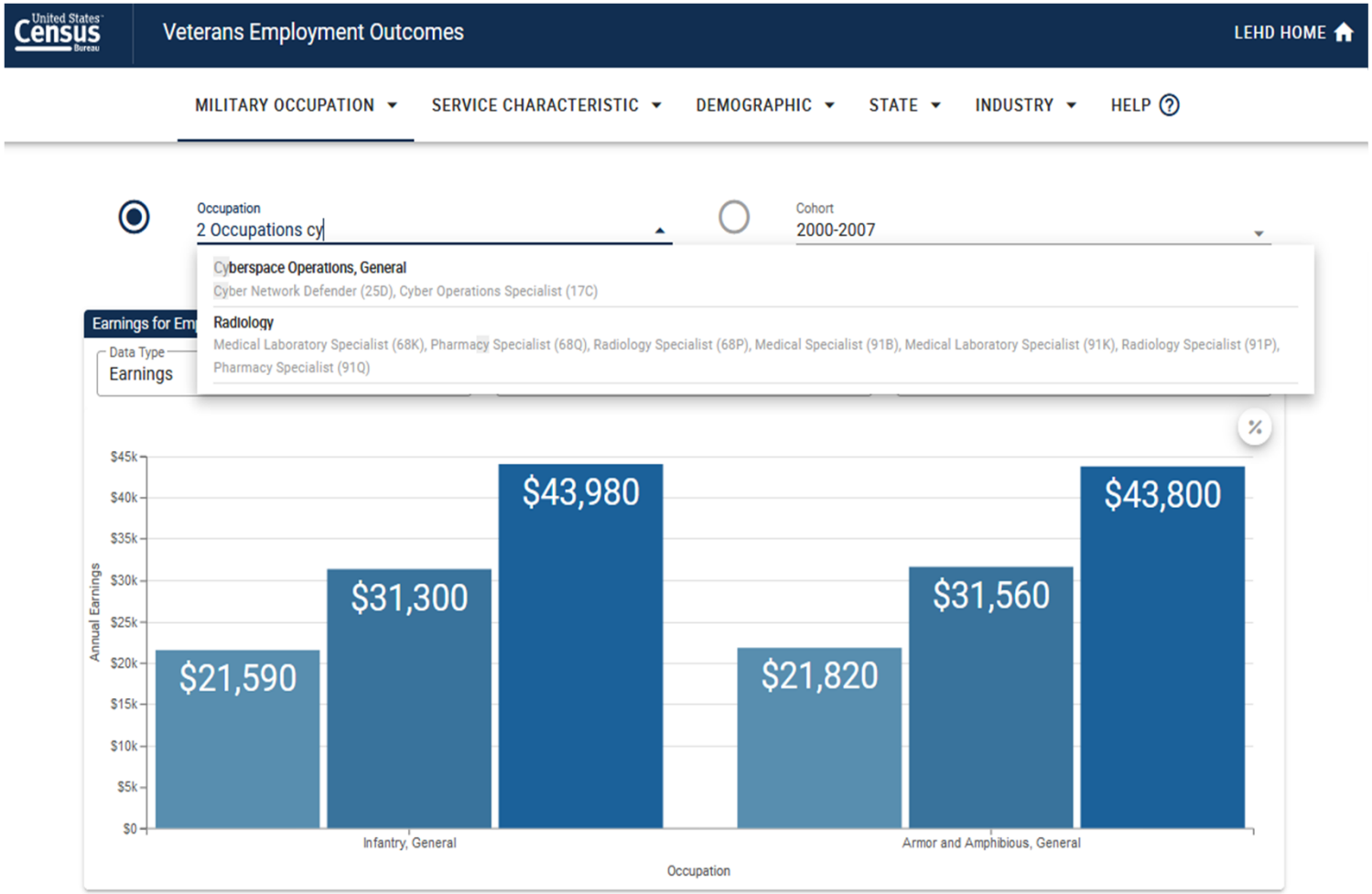
Next we walk through some specific use case examples

Three use cases:

- *Military*: what do military cyber personnel earn if they leave service for civilian jobs?
- *Soldier*: what types of civilian jobs would value my military experience if I left service?
- *Policymaker*: Which vets struggle to find good jobs initially? (Who should we be targeting post-military labor market transition interventions to?)

What are private sector salaries for vets who were recently cyber personnel?



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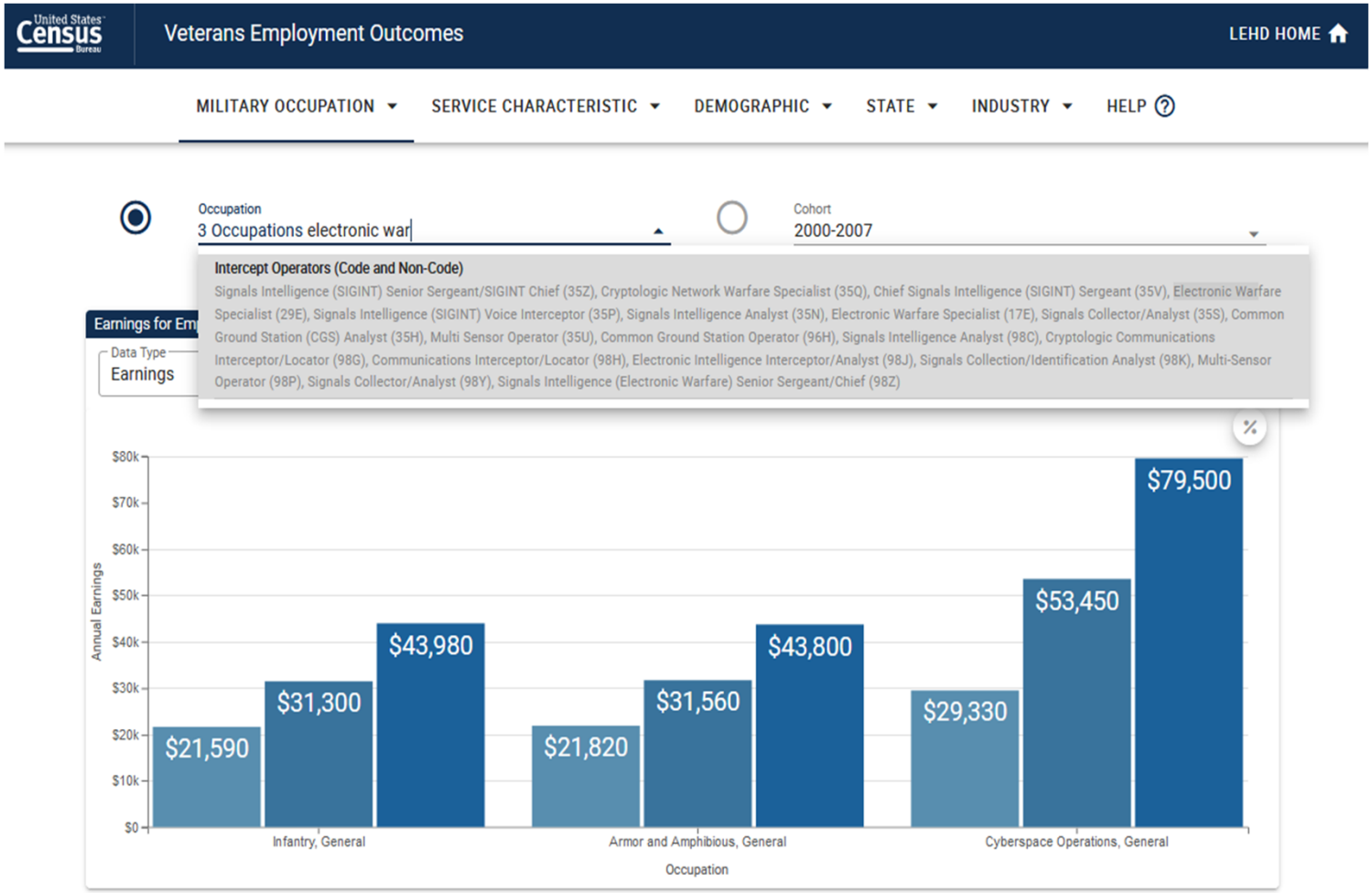

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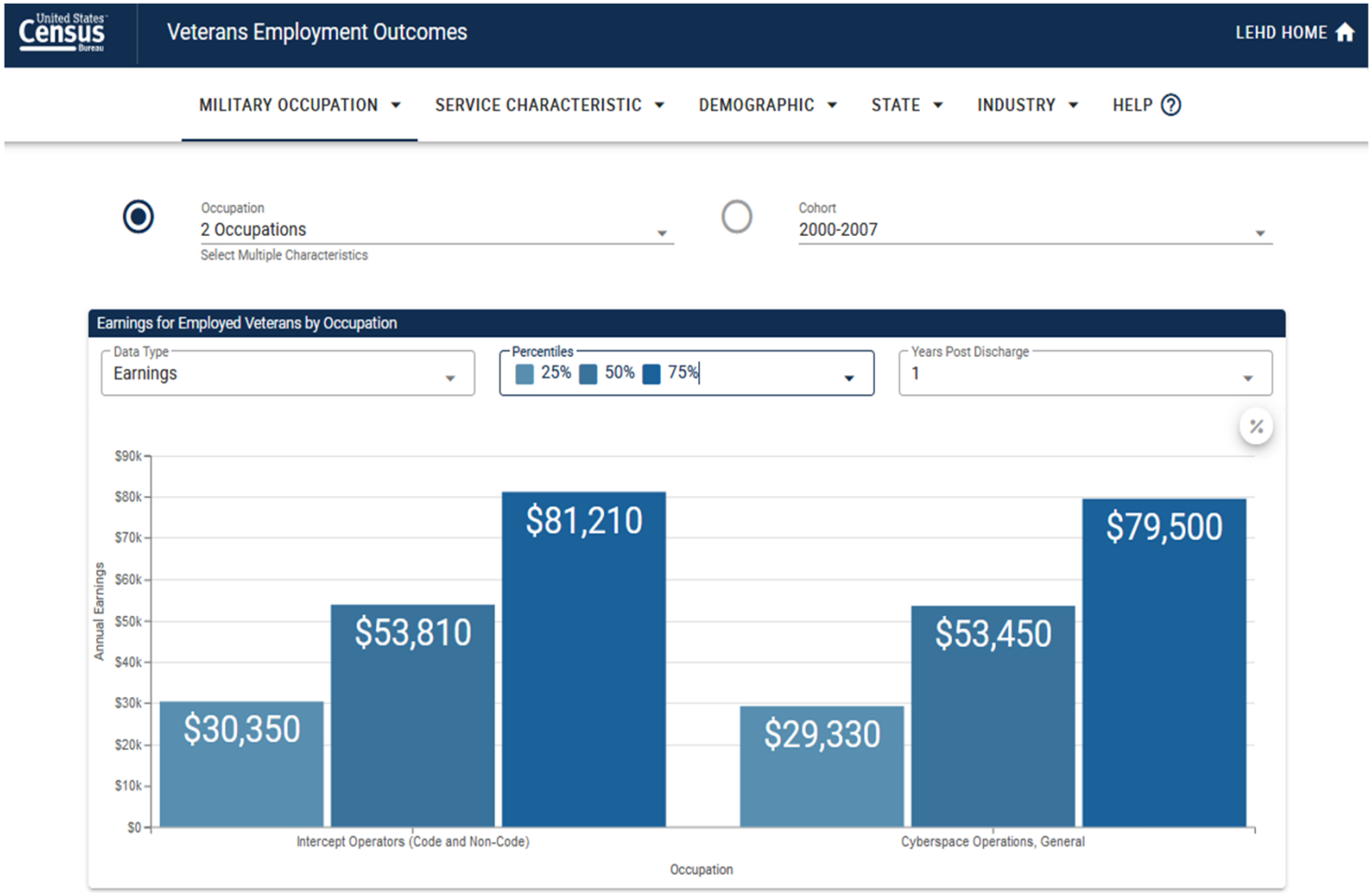
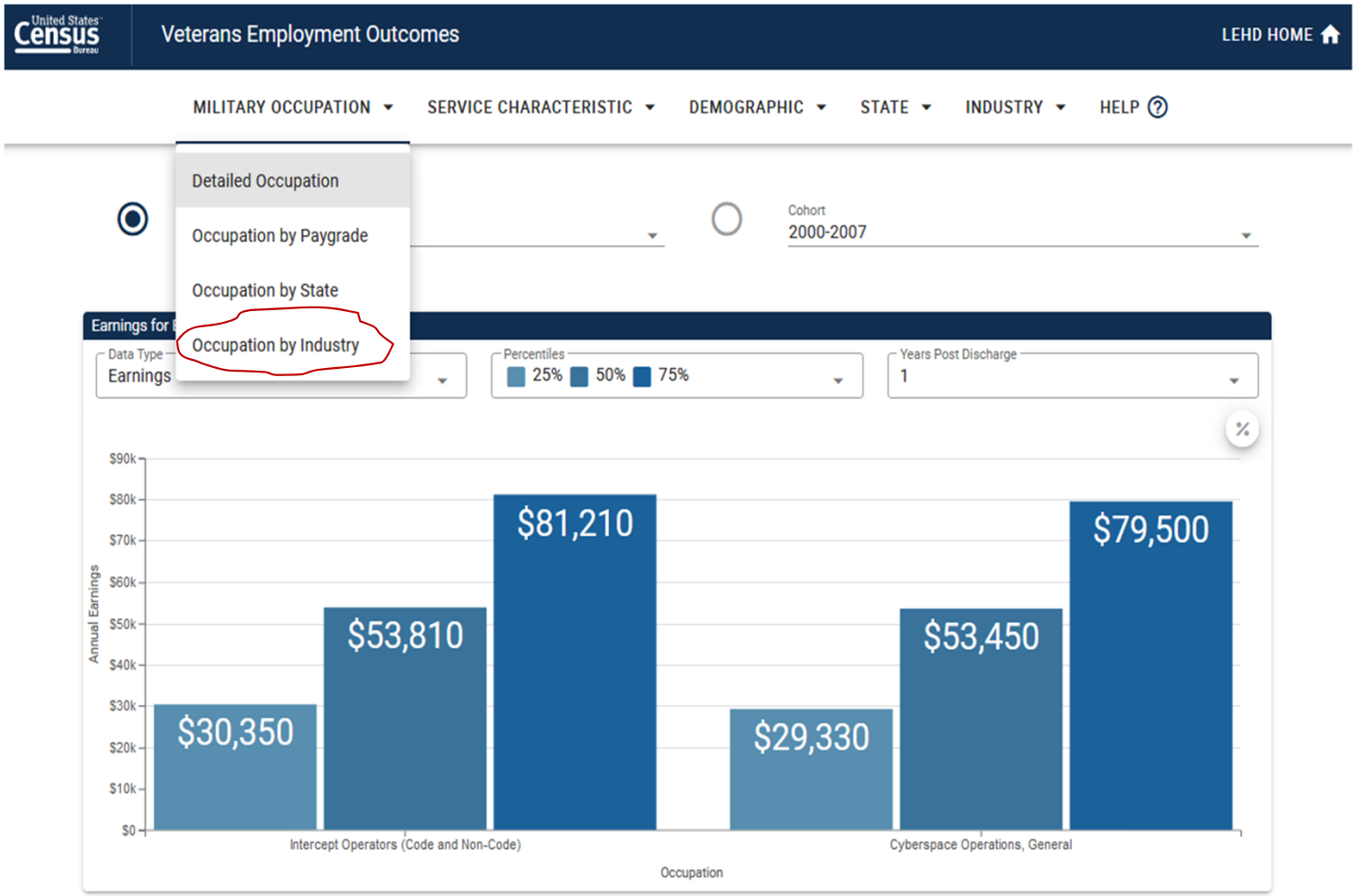


What industries should I be looking for jobs if I am former infantry?



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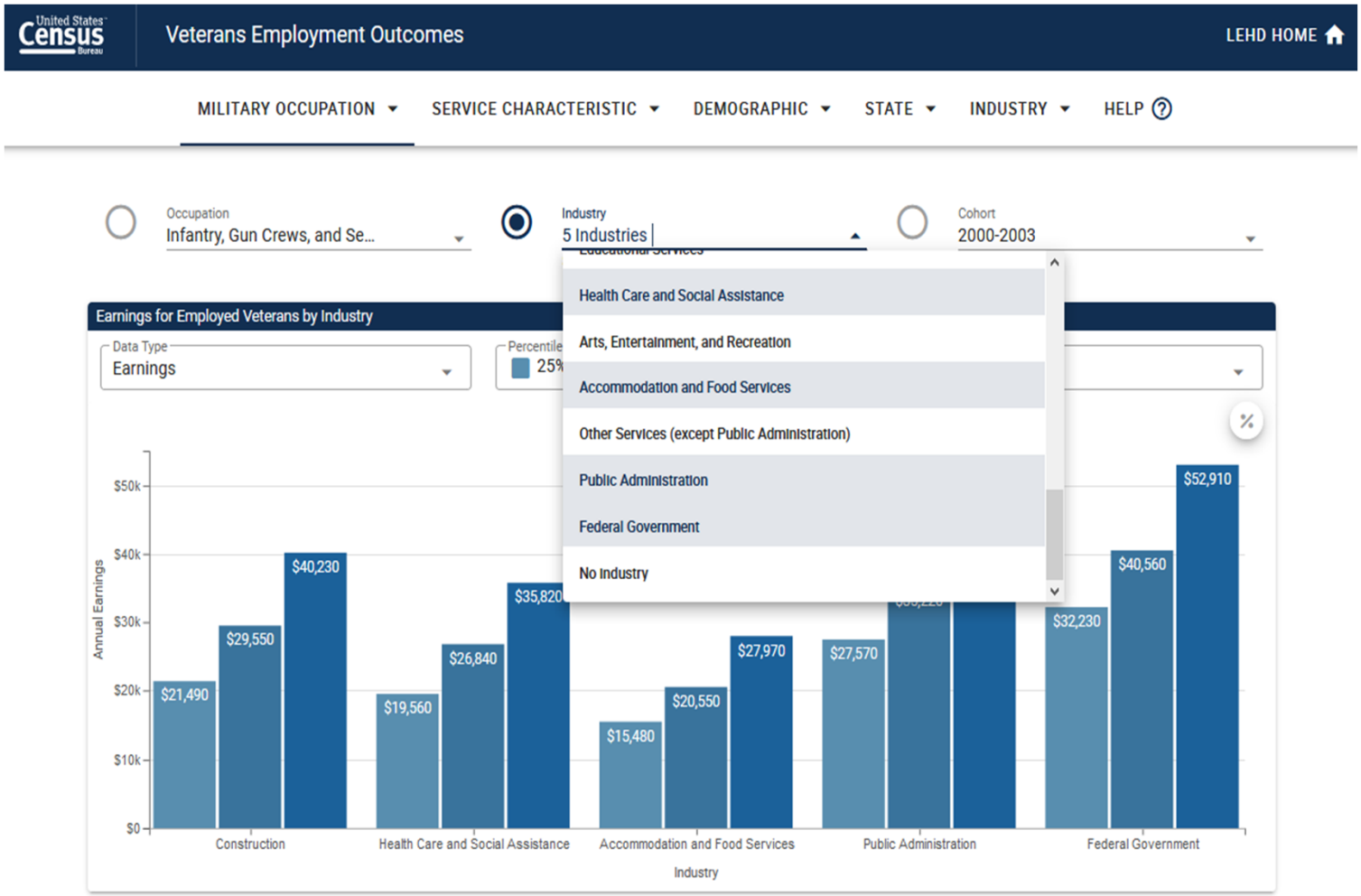

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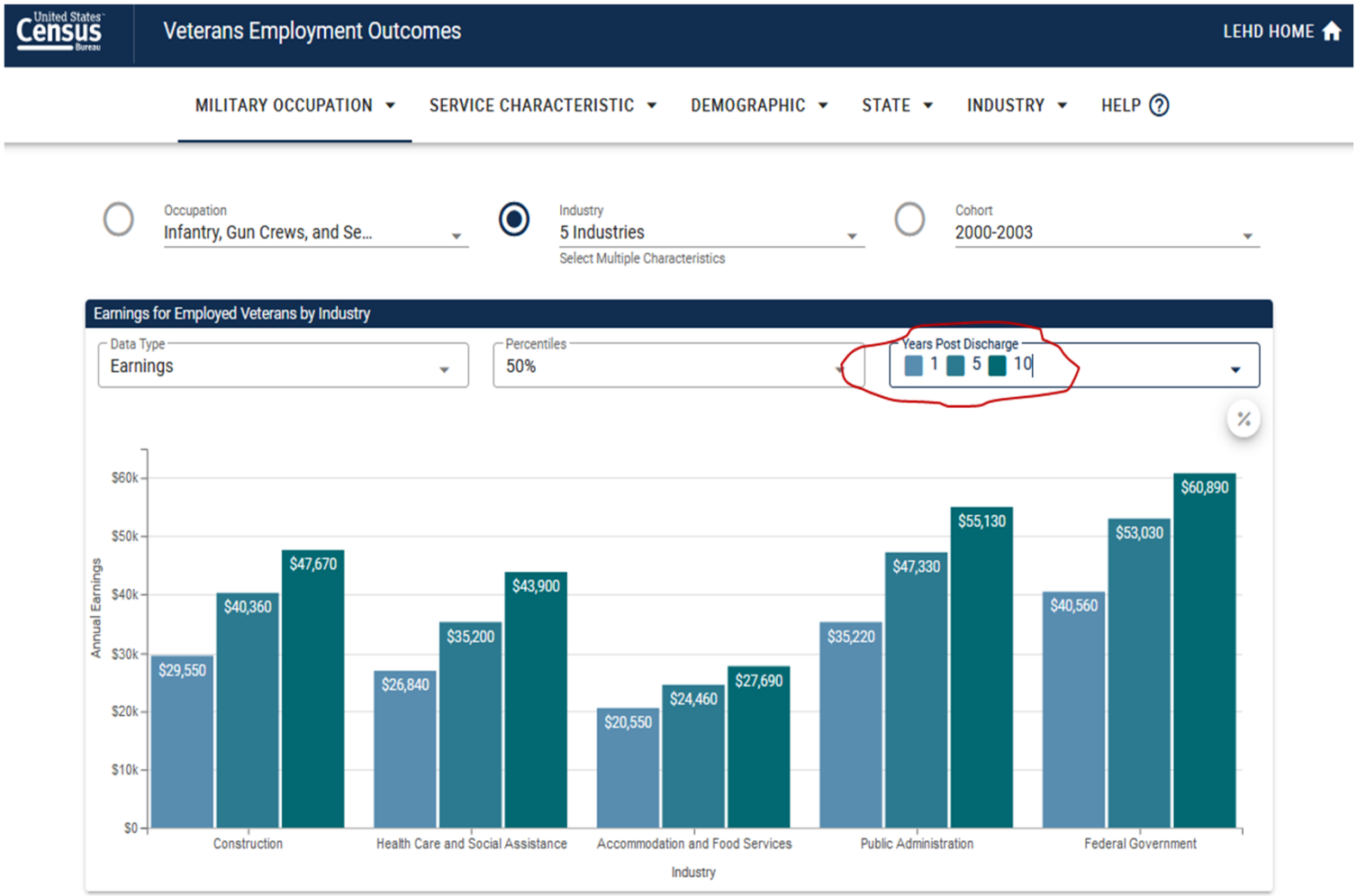
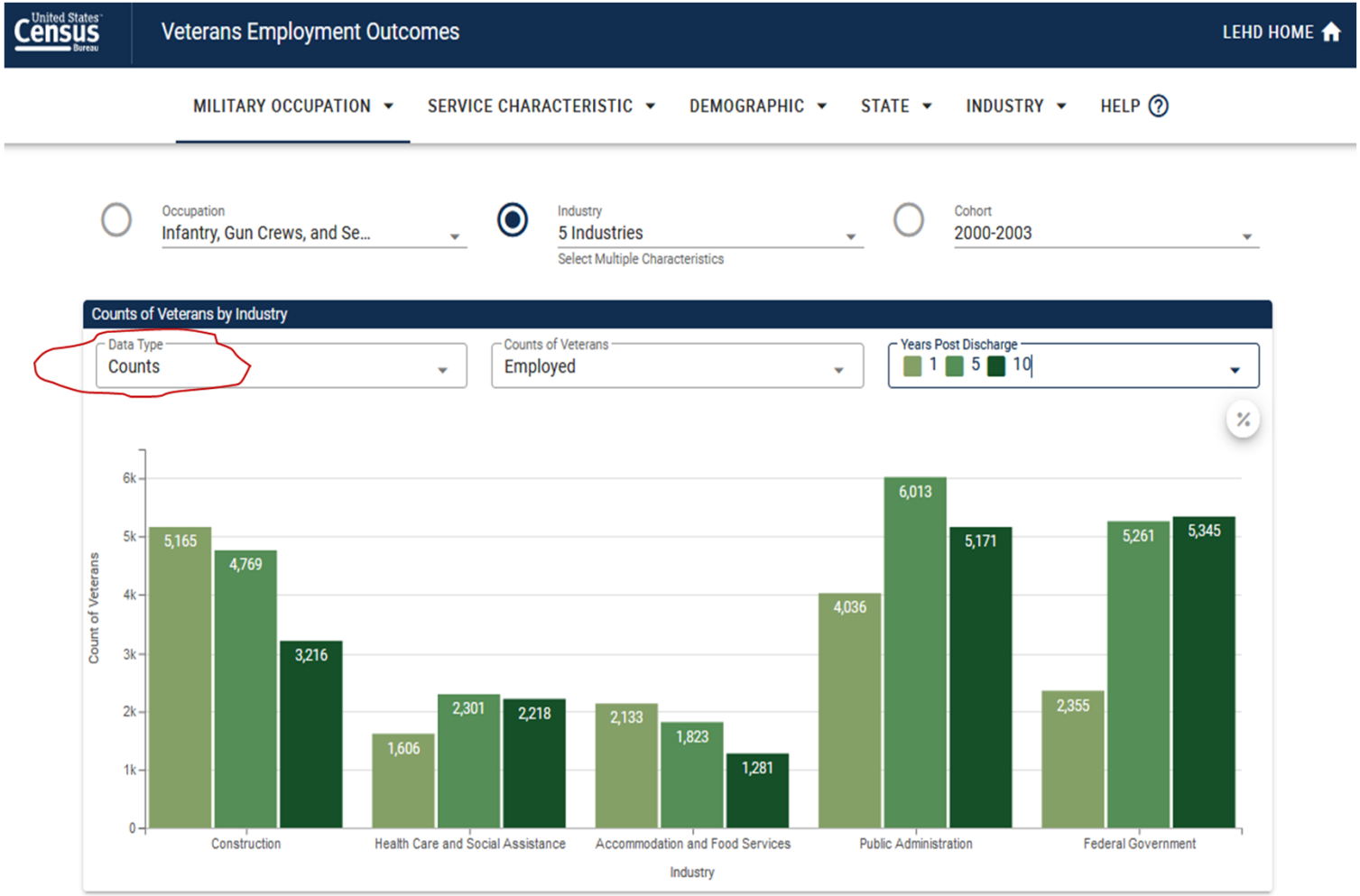
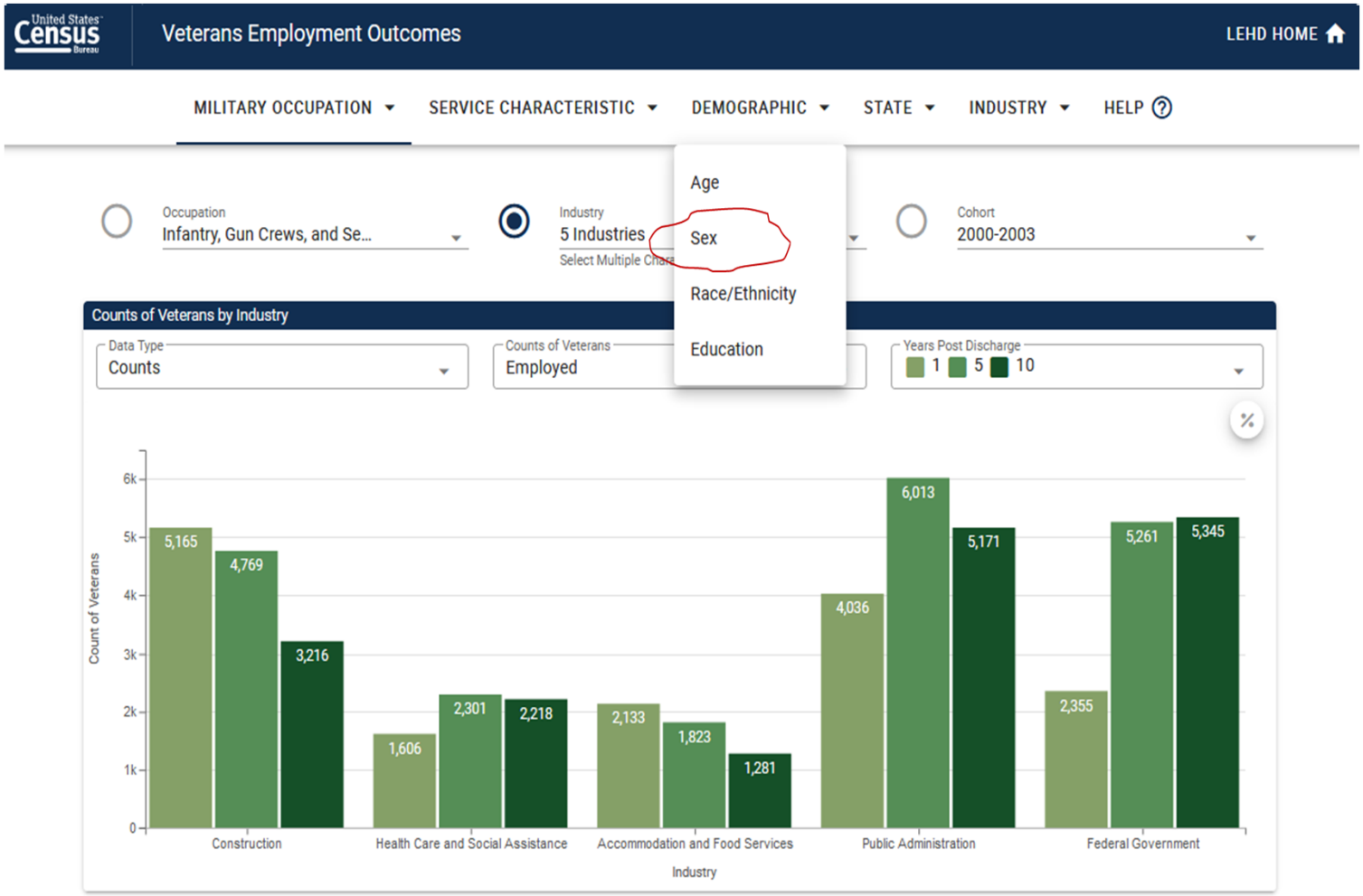


How many people like me (former infantry) do these industries hire?



Does my outcome depend on my sex, my race, etc?



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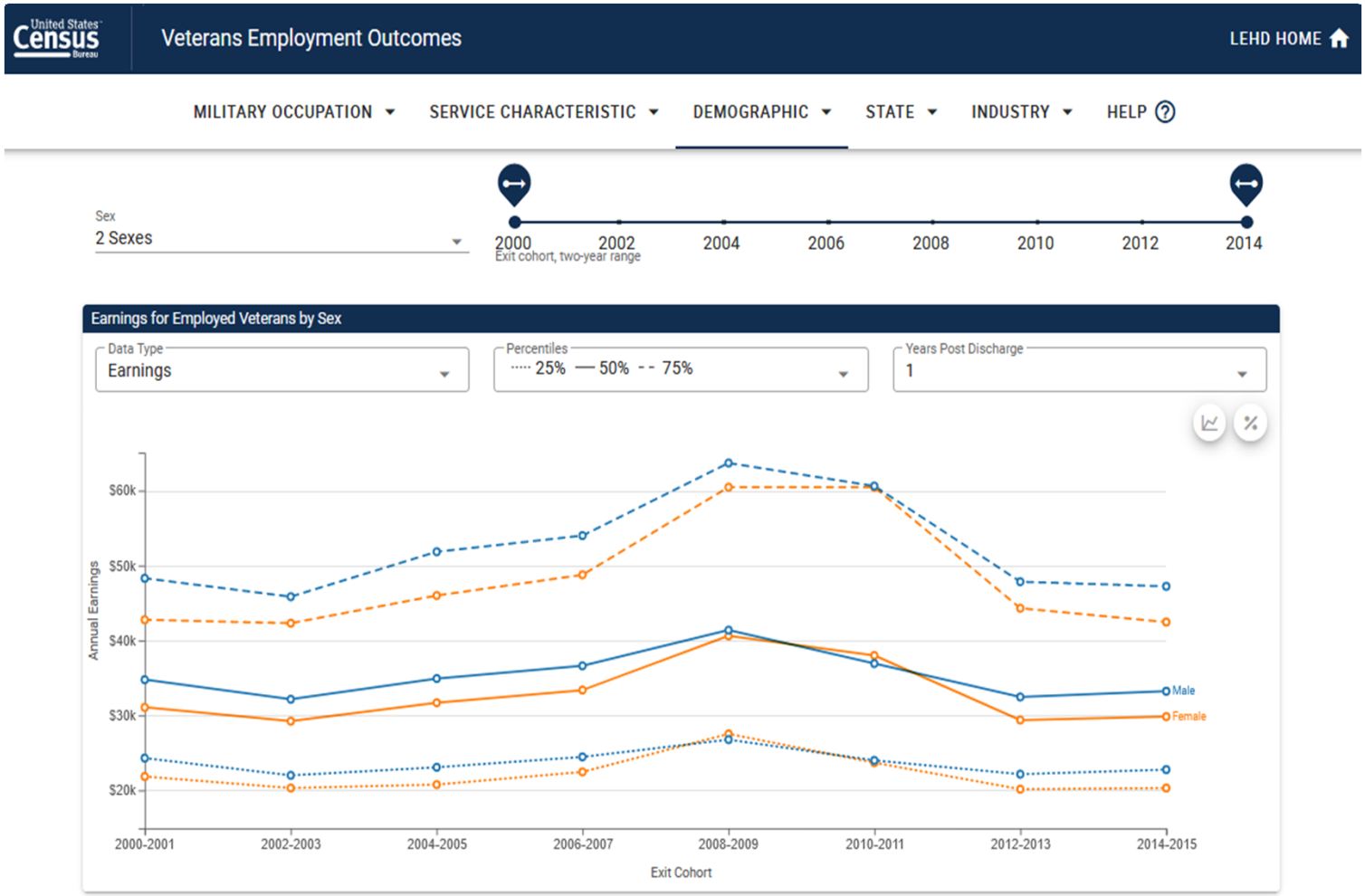


What share of veterans find stable civilian employment first year out?

Figure 1: Share of veterans employed at least three quarters of first year in civilian labor market

Notes: VEO data, all available cohorts, employed share is share of veterans who worked at least three quarters of the first year after exit from Army and whose earnings were at least those for a full-time minimum wage job.

How does military occupation impact initial civilian labor market outcomes?

Figure 2a: Difference in 1st year median earnings

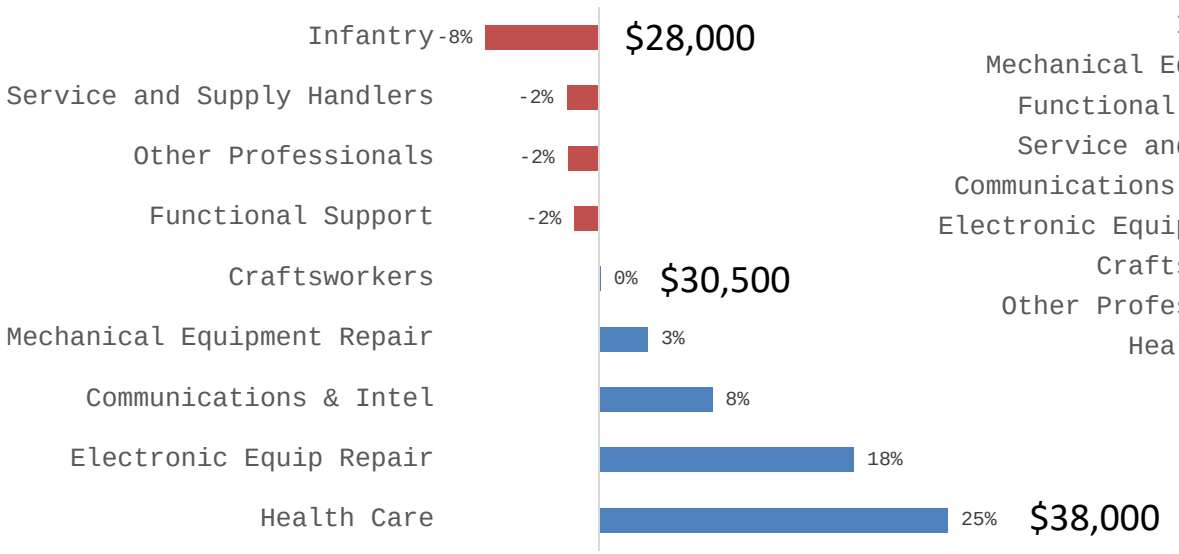
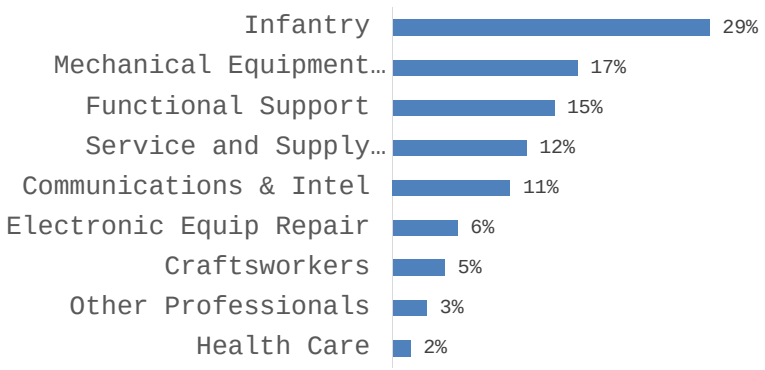


Figure 2b: Share of vets by military occupation



Notes: VEO data, 2000-2003 exit cohort, E1-E5 rank only. Median first year earnings for this cohort is approximately $30,500.

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Release and future plans

VEO released to the public on May 5th:

- VEO Explorer released at same time, inclusion in Census API will take longer

Will the data be updated?

- Potentially - MOU with Army could be renewed to provide updated data in the future

Could the data be expanded to cover other service branches?

- Potentially - VEO release could spark interest from other data partners to expand coverage

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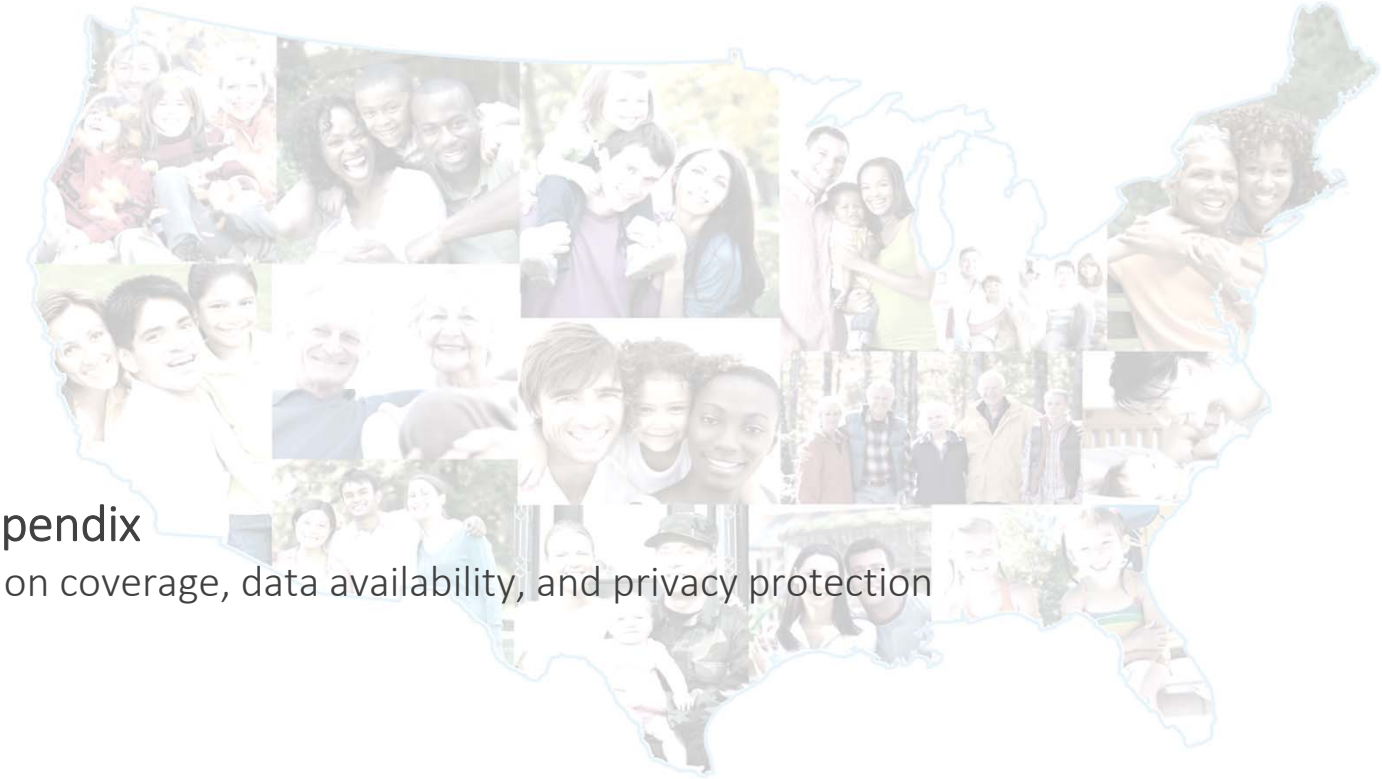
Next: live demonstration

Will show you how to find the VEO data

Live demo of VEO explorer with Q&A session

- What else do you want to know about recent veterans in the labor market?



Briefing Appendix

More details on coverage, data availability, and privacy protection

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More specifics on coverage

Coverage:

- Army veterans discharged from service between **2000-2015**
- Army rank E1-E9 at exit (commissioned officers and warrant officers excluded)
- Over **650,000 Army veterans**
- Employment coverage: most private and public sector wage and salary jobs, excludes self-employment earnings

Occupations:

- Military Occupation Specialty (MOS) codes aggregated to the **3-digit** (56 categories) and **2-digit** level (9 categories)

Veteran Employment Outcomes (VEO)

Full list of tables

Occupation and Industry Tables	Cohort	Available Data
3-digit DoD Occupation	8-year	1, 5, and 10 year earnings percentiles (25th, 50th, 75th). Counts of veterans with full-year employment (1, 5, and 10 years). Counts of veterans who are jobless or marginally attached to workforce.
2-digit DoD Occupation:		
- by civilian industry sector of employment	8-year	
- by pay-grade at exit	4-year	
- by state of employment	8-year	
State of employment	2-year	
Civilian industry sector of employment	2-year	

Veteran Employment Outcomes (VEO)

Full list of tables

Veteran Characteristics Tables	Cohort	Available Data
Sex of veteran	2-year	1, 5, and 10 year earnings percentiles (25th, 50th, 75th). Counts of veterans with full-year employment (1, 5 and 10 years). Counts of veterans who are jobless or marginally attached to workforce.
Education at enlistment	2-year	
Race x Ethnicity	2-year	
Pay Grade at Exit	2-year	
AFQT score at enlistment	2-year	
Age	2-year	
Years of service	2-year	

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Protecting veteran privacy

In the microdata:

Veteran record data is de-identified and PII data is destroyed; anonymous identifiers used to link graduates to jobs data.

Public use data disclosure avoidance:

- VEO tabulations are protected using state of the art **differential privacy** disclosure avoidance methods.
- Mathematically provable information/privacy trade-offs. Conceptually, makes any one individual in a database used for analysis indifferent between being in the database or not.
- Very similar to Census Post-Secondary Employment Outcomes (PSEO). Methodology for PSEO privacy protection described in Foote, Machanavajjhala, and McKinney (2019): https://doi.org/10.29012/jpc.722

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Comparison to Other Data

	Veteran Employment Outcomes (VEO)	Current Population Survey (CPS)	American Community Survey (ACS)
Veteran population	Army only, Gulf War II era, enlisted veterans exiting in 2000-2015	All service branches	All service branches
Veteran characteristics	Military occupation, rank at exit, sex, age, race/ethnicity, education at enlistment, AFQT score	Last service era, sex, age, race/ethnicity, education	Last service era, sex, age, race/ethnicity, education
Key employment statistics	Employment, earnings, and earnings dispersion by military occupation, rank, and civilian industry	Employment and unemployment rate	Employment, earnings, and occupation