The Effects of Army Service in the All-Volunteer Era

Kyle Greenberg*

Adam Isen†

Richard Patterson*

Matthew Gudgeon*

Corbin Miller†

December 13, 2019

* United States Military Academy. † Office of Tax Analysis, U.S. Department of Treasury. All opinions expressed in this manuscript are those of the authors and do not represent the opinions of the United States Military Academy, Department of Defense, the United States Army, Department of Veterans Affairs, or the U.S. Department of Treasury.
Disclaimer

All opinions expressed in this manuscript are those of the authors and do not represent the opinions of the United States Military Academy, Department of Defense, the United States Army, Department of Veterans Affairs, or the U.S. Department of Treasury.

Findings are preliminary, please do not cite or circulate.
Why Should We Care About The Effects of Army Service?

Public Interest

▶ One in twelve adults in the United States has served in the Military (U.S. Census)
  ▶ U.S. Army is largest contributing service
  ▶ Department of Defense (DoD) is the largest employer in the United States
    ▶ Proposed 2020 defense budget is $240 billion for personnel and pay benefits (U.S. DoD)
    ▶ Veterans and service members receive over $22 billion in tax benefits and expenditures annually (Office of Tax Analysis)

Income and Social Mobility

▶ Income inequality is increasing
▶ In absolute terms, some are being left behind with poor opportunities
▶ Labor force non-participation of prime-age males has increased since the 1960s
  ▶ This increase has been concentrated among those with lower education
  ▶ From 1996 to 2016, the non-participation rate for prime-age men with only a high-school degree rose from 8.8 to 14.9 percent (KC Fed 2018)
Why Should We Care About The Effects of Army Service?

Could the Army Be a Vehicle For Mobility?

- *It could help:* Stable employment, geographic mobility, education and health benefits, programs for veterans
- *But it could also hurt:* Separation from home, exposure to violence, risk of injury/death, crowd out of more valuable job experience and education
“When I joined the Marine Corps, I did so in part because I wasn’t ready for adulthood. I didn’t know how to balance a checkbook, much less how to complete the financial aid forms for college. Now I knew exactly what I wanted out of my life and how to get there.”

– JD Vance ‘Hillbilly Elegy’

“I wish that there were other activities in our society and in our nation that were as open as the military is to upward mobility, to achievement, to allowing [minorities] in... I wish that corporate America, I wish the trade unions around the nation would show the same level of openness and opportunity to minorities that the military has.”

– Colin Powell
testifying before the House Armed Services Committee
(LA Times Feb 8 1991)
Slate: “Army Gets Heartbreaking Answers After Asking, How Has Serving Impacted You”

Should We End Military Recruiting in High Schools as a Matter of Child Protection (Hagopian and Barker, American Journal of Public Health (2001))

→ Contrasting anecdotes and potential mechanisms emphasize need for current, empirical evidence
Conscripted Military Service – Draft Lottery Designs

▶ **U.S. (Vietnam):** Decreased earnings by 15% in first 10 years after service (Angrist et al., 1990); no effects on earnings 20 years after conscription (Angrist and Chen, 2012)

▶ **Portugal:** no overall effects, positive earnings effects; positive effects for those with low education levels (Card and Cardoso, 2012)

▶ **Denmark:** Decreased earnings among high-ability men, no effects on low ability men (Bingley et al., 2019)
Why Should We Care About Volunteer Service in Particular?

Since July 1, 1973 all U.S. service members have been volunteers

What it means to serve in the military has changed
  ▶ Changes to benefits used to recruit and retain individuals

Volunteer service attracts potentially vulnerable populations
  ▶ Army service is more attractive to those with low opportunity costs
  ▶ Most servicemembers come from low-income households (Lutz, 2008; Kleykamp 2006)

All-Volunteer Service in U.S. – Correlational Studies
  ▶ Service may cause earnings to increase (Martorell et al., 2014; Kleykamp 2013), decrease (Teachman and Tedrow, 2007), or vary based on timing and race (Angrist, 1998)
  ▶ Service may increase college (Martorell et al., 2014), have no influence (Teachman, 2007), or have negative effects (Cohen, 1995)
The Effects of Voluntary Military Service

**Question:** How does Army service affect earnings, total income, employment, education, and marriage?

**Data:**
- Army applicant data (1989-2010)
- Army administrative and pay records (1989-2018)
- Federal tax records (1999-2018)

**Methodology:**
- Fuzzy Regression Discontinuity in first Armed Forces Qualifying Test (AFQT) score on record:
  - Lower Army eligibility cutoff (AFQT=31)
  - Higher bonus eligibility cutoff (AFQT=50)

**Preview of Results:**
- Large short-run earnings gains; longer-run positive but insignificant
  - Increases cumulative (0-15 years) earnings by $66k-$108k
- Positive short-run employment effects; negative effects at low cutoff
  - Increases cumulative (0-15 years) college attendance by 6-17 percentage points
  - Increases marriage by 8-11 percentage points
- Meaningful heterogeneity by race
The Effects of Voluntary Military Service

**Question:** How does Army service affect earnings, total income, employment, education, and marriage?

**Data:** Army applicant data (1989-2010), Army administrative and pay records (1989-2018), federal tax records (1999-2018)

**Methodology:** Fuzzy Regression Discontinuity in first Armed Forces Qualifying Test (AFQT) score on record:

- Lower Army eligibility cutoff (AFQT=31)
- Higher bonus eligibility cutoff (AFQT=50)

**Preview of Results:**

- Large short-run earnings gains; longer-run positive but insignificant
- Increases cumulative (0-15 years) earnings by $66k-$108k
- Positive short-run employment effects; negative effects at low cutoff
- Increases cumulative (0-15 years) college attendance by 6-17 percentage points, marriage by 8-11 percentage points
- Meaningful heterogeneity by race
The Effects of Voluntary Military Service

**Question:** How does Army service affect earnings, total income, employment, education, and marriage?

**Data:** Army applicant data (1989-2010), Army administrative and pay records (1989-2018), federal tax records (1999-2018)

**Methodology:** Fuzzy Regression Discontinuity in first Armed Forces Qualifying Test (AFQT) score on record:

- Lower Army eligibility cutoff (AFQT=31)
- Higher bonus eligibility cutoff (AFQT=50)

**Preview of Results:**
- Large short-run earnings gains; longer-run positive but insignificant
  - Increases cumulative (0-15 years) earnings by $66k-$108k
- Positive short-run employment effects; negative effects at low cutoff
- Increases cumulative (0-15 years) college attendance by 6-17 percentage points, marriage by 8-11 percentage points
- Meaningful heterogeneity by race
The Effects of Voluntary Military Service

**Question:** How does Army service affect earnings, total income, employment, education, and marriage?

**Data:** Army applicant data (1989-2010), Army administrative and pay records (1989-2018), federal tax records (1999-2018)

**Methodology:** Fuzzy Regression Discontinuity in first Armed Forces Qualifying Test (AFQT) score on record:

▶ Lower Army eligibility cutoff (AFQT=31)
▶ Higher bonus eligibility cutoff (AFQT=50)

**Preview of Results:**

▶ Large short-run earnings gains; longer-run positive but insignificant
  → Increases cumulative (0-15 years) earnings by $66k-$108k
▶ Positive short-run employment effects; negative effects at low cutoff
▶ Increases cumulative (0-15 years) college attendance by 6-17 percentage points, marriage by 8-11 percentage points
▶ Meaningful heterogeneity by race
Potential applicant visits recruiting office

Schedules a two-day appointment at a Military Entrance and Processing Station (MEPS) which includes:

- **Day 1: Armed Services Vocational Aptitude Battery (ASVAB)**
  - Four ASVAB components contribute to the AFQT score; AFQT scores represent percentile rank of a nationally representative sample of 18-23 year olds.
  - Limited number allowed to enlist with AFQT < 31
  - Most enlistment bonuses available to those with AFQT \( \geq 50 \)
  - ASVAB can be retaken after a one month waiting period; six month waiting period required after third attempt

- **Day 2: Fitness Test, Medical Exam, and Enlistment Counselor (discussion of enlistment bonus options)**
Data – Sample Construction

- Active Duty Army Applicants (1989-2011)
  - Applicants with first recorded score between 12-68
  - Drop prior service and those taking AFQT in high school class
  - Applicants match Social Security Administration Master File
<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Accessed</th>
<th>Not Accessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessed Military</td>
<td>0.465</td>
<td>1.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Years Served</td>
<td>2.243</td>
<td>4.826</td>
<td>0.000</td>
</tr>
<tr>
<td>Age</td>
<td>20.508</td>
<td>20.213</td>
<td>20.764</td>
</tr>
<tr>
<td>First AFQT Score</td>
<td>42.028</td>
<td>46.462</td>
<td>38.179</td>
</tr>
<tr>
<td>Male</td>
<td>0.760</td>
<td>0.809</td>
<td>0.717</td>
</tr>
<tr>
<td>White (Non-Hispanic)</td>
<td>0.548</td>
<td>0.580</td>
<td>0.521</td>
</tr>
<tr>
<td>Black (Non-Hispanic)</td>
<td>0.256</td>
<td>0.231</td>
<td>0.278</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.123</td>
<td>0.123</td>
<td>0.123</td>
</tr>
<tr>
<td>Low Education</td>
<td>0.166</td>
<td>0.149</td>
<td>0.180</td>
</tr>
<tr>
<td>High Education</td>
<td>0.573</td>
<td>0.604</td>
<td>0.545</td>
</tr>
<tr>
<td>Educ: In HS</td>
<td>0.262</td>
<td>0.247</td>
<td>0.274</td>
</tr>
<tr>
<td>N</td>
<td>1,775,108</td>
<td>824,897</td>
<td>950,211</td>
</tr>
</tbody>
</table>

The Effects of Army Service in the All-Volunteer Era
<table>
<thead>
<tr>
<th></th>
<th>Year Before</th>
<th>Year After</th>
<th>5 Years After</th>
<th>10 Years After</th>
<th>15 Years After</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wages</strong></td>
<td>8,159</td>
<td>15,045</td>
<td>22,383</td>
<td>27,465</td>
<td>31,966</td>
</tr>
<tr>
<td><strong>Any Wages</strong></td>
<td>0.792</td>
<td>0.929</td>
<td>0.882</td>
<td>0.833</td>
<td>0.801</td>
</tr>
<tr>
<td><strong>Any 1040</strong></td>
<td>0.820</td>
<td>0.864</td>
<td>0.844</td>
<td>0.817</td>
<td>0.802</td>
</tr>
<tr>
<td><strong>Any Form 1098-T</strong></td>
<td>0.158</td>
<td>0.156</td>
<td>0.180</td>
<td>0.152</td>
<td>0.123</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>879,986</td>
<td>1,056,722</td>
<td>1,398,250</td>
<td>1,581,304</td>
<td>1,246,225</td>
</tr>
</tbody>
</table>
Data - Outcomes

**Tax Return Data**

- Federal tax return data (1999-2018) + Army administrative pay data
- Link years -2,19 relative to application
- Primary earnings measure combines:
  - W2 Medicare wages
  - Housing and subsistence allowances (BAH, BAS)
  - Non-taxable deployment and assistance allowances (HFP, FSA)
  - Allowances imputed for other services
- Wages adjusted to 2018 levels (CPI-U) and winsorized at 99th percentile within each year after application
Data - Outcomes

**Tax Return Data**
- Federal tax return data (1999-2018) + Army administrative pay data
- Link years -2,19 relative to application
- Primary earnings measure combines:
  - W2 Medicare wages
  - Housing and subsistence allowances (BAH, BAS)
  - Non-taxable deployment and assistance allowances (HFP, FSA)
  - Allowances imputed for other services
- Wages adjusted to 2018 levels (CPI-U) and winsorized at 99th percentile within each year after application

**Other outcomes**
- College attendance data from 1098-T form
- Employment determined by positive W-2 Filing
- Marriage from 1040 form filing status
Fuzzy Regression Discontinuity Empirical Approach

Reduced Form- Lower AFQT Cutoff

\[ y_{ij} = f(AFQT_i) + \beta(AFQT_i \geq 31) + X_i'\gamma + \lambda_t + \epsilon_{ij} \] (1)

- \( y_{ij} \): Outcome for individual \( i, j \) years after application
- \( f(AFQT_i) \): function of first AFQT score
  - Baseline: local linear, triangular kernel, bandwidth=19
- \( AFQT_i \geq 31 \): Indicator for first AFQT above eligibility cutoff
- \( X_i \): Vector of pre-application individual characteristics
- \( \lambda_t \): Calendar and Fiscal Year fixed effects
- \( \epsilon_{ij} \): Idiosyncratic error term
Fuzzy Regression Discontinuity Empirical Approach

2SLS- Lower AFQT Cutoff

First Stage

\[ Enlist_i = f(AFQT_i) + \beta_1(AFQT_i \geq 31) + X_i'\gamma_1 + \lambda_t + \nu_i \] (2)

Second Stage

\[ y_{it} = f(AFQT_i) + \beta Enlist + X_i'\gamma_1 + \lambda_t + \epsilon_{it} \] (3)
First Stage: AFQT Score and Military Service

The Effects of Army Service in the All-Volunteer Era
The Effects of Army Service in the All-Volunteer Era
Validation: Density of Initial AFQT Scores, Pre 2004 AFQT Re-Normalization
Validation: Density of Initial AFQT Scores, Post 2004 AFQT Re-Normalization
Validation: Balance of Pre-Application Earnings

The Effects of Army Service in the All-Volunteer Era
The Effects of Army Service in the All-Volunteer Era
Validation: Balance of Pre-Application GED Attainment

The Effects of Army Service in the All-Volunteer Era
Effects of Army Service on Earnings, Employment, and Education

Baseline Results: we show the effects of Army service on
- Medicare W2 Earnings + housing and other allowances
- Employment (Any positive W2 from info returns)
- Post-Secondary Educational Attendance (Any 1098T filed)

For each outcome, we will show:
- Graphical reduced form, 1, 5, 10 years post application
- 2SLS estimates for years -2, -1, ..., 19 relative to application
- Cumulative effects of service, 0-15 years post application
  based on balanced sample of 99-03 cohorts

Sample Size by years out: 
Outcome Means by years out:
Earnings, 1 Year Post Application

The Effects of Army Service in the All-Volunteer Era
Earnings, 5 Year Post Application

The Effects of Army Service in the All-Volunteer Era
Earnings, 10 Year Post Application

The Effects of Army Service in the All-Volunteer Era
## Cumulative Effects on Earnings 0-15 Years After Application

<table>
<thead>
<tr>
<th></th>
<th>2SLS Estimates: Total Earnings</th>
<th>Sum of Estimated Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31 Cutoff</td>
<td>50 Cutoff</td>
</tr>
<tr>
<td>Enlist</td>
<td>$66,110*** (16,073)</td>
<td>$107,919*** (32,669)</td>
</tr>
<tr>
<td></td>
<td>$51,970</td>
<td>$76,817</td>
</tr>
<tr>
<td>Cohorts</td>
<td>99-03</td>
<td>99-03</td>
</tr>
<tr>
<td>Individuals</td>
<td>275469</td>
<td>329284</td>
</tr>
<tr>
<td>Dep. Var Mean</td>
<td>$343,742</td>
<td>$389,935</td>
</tr>
</tbody>
</table>
Employment (any positive W2), 1 Year Post Application

The Effects of Army Service in the All-Volunteer Era
Employment (any positive W2), 5 Year Post Application
Employment (any positive W2), 10 Year Post Application

The Effects of Army Service in the All-Volunteer Era
Employment (any positive W2): 2SLS Estimates by years since application

The Effects of Army Service in the All-Volunteer Era
### Cumulative Effects on Employment 0-15 Years After Application

<table>
<thead>
<tr>
<th></th>
<th>2SLS Estimates: Years of Employment</th>
<th>Sum of Estimated Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31 Cutoff</td>
<td>50 Cutoff</td>
</tr>
<tr>
<td><strong>Enlist</strong></td>
<td>-0.029</td>
<td>0.579</td>
</tr>
<tr>
<td></td>
<td>(0.229)</td>
<td>(0.416)</td>
</tr>
<tr>
<td><strong>Cohorts</strong></td>
<td>99-03</td>
<td>99-03</td>
</tr>
<tr>
<td><strong>Individuals</strong></td>
<td>275469</td>
<td>329284</td>
</tr>
<tr>
<td><strong>Dep. Var Mean</strong></td>
<td>13.384</td>
<td>13.590</td>
</tr>
</tbody>
</table>
Post-Secondary Educational Attendance (Any 1098T), 1 Year Post Application

The Effects of Army Service in the All-Volunteer Era
Post-Secondary Educational Attendance (Any 1098T), 5 Year Post Application

The Effects of Army Service in the All-Volunteer Era
Post-Secondary Educational Attendance (Any 1098T), 10 Year Post Application

The Effects of Army Service in the All-Volunteer Era
Any Post-Secondary Education (Any 1098T): 2SLS Estimates by years since application

The Effects of Army Service in the All-Volunteer Era
Cumulative Effects on Post-Secondary Attendance 0-15 years after application

The Effects of Army Service in the All-Volunteer Era

<table>
<thead>
<tr>
<th></th>
<th>31 Cutoff</th>
<th>50 Cutoff</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2SLS Estimates: Ever Any 1098T</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Enlist</strong></td>
<td>0.065**</td>
<td>0.170***</td>
</tr>
<tr>
<td></td>
<td>(0.031)</td>
<td>(0.057)</td>
</tr>
<tr>
<td><strong>Cohorts</strong></td>
<td>99-03</td>
<td>99-03</td>
</tr>
<tr>
<td><strong>Individuals</strong></td>
<td>275,469</td>
<td>329,284</td>
</tr>
<tr>
<td><strong>Dep. Var Mean</strong></td>
<td>0.627</td>
<td>0.695</td>
</tr>
</tbody>
</table>
Summary and Robustness

Baseline Results Summary:
▶ Sizable cumulative education effects (6-17 p.p increase in post-secondary attendance)
▶ Large initial employment and earnings gains → cumulative earnings gains of $66,000-$108,000 over 15 years
▶ No evidence of decreased earnings 0-19 years out
▶ Some neg. employment effects in later years at low cutoff

Baseline Earnings Results Robust To:
▶ inclusion of controls at time of application: Controls
▶ alternative functional forms: Specification
  ▶ Linear (no weighting)
  ▶ Quadratic (no weighting)
▶ smaller local windows: Window

The Effects of Army Service in the All-Volunteer Era
Additional Outcomes: Towards a More Comprehensive Picture of Well-being

- Income as opposed to Earnings (Coming Soon)

- Household Formation and Income
  - Files a 1040 (no effects)
  - Declared Married on 1040 (Large positive effects)
  - Household AGI (Coming Soon)

- Health and Disability Compensation
  - SSI and SSDI
  - Veterans Affairs Disability Compensation (VADC) (2018 snapshot for now)
  - Mortality (Coming Soon)
Married (on 1040): 2SLS Estimates by years since application

The Effects of Army Service in the All-Volunteer Era
The Effects of Army Service in the All-Volunteer Era
Heterogeneity: Where/Who Does the Army Help Most?

- Demographic Heterogeneity
  - Race
  - Gender


- Heterogeneity by Location (Coming Soon):
  - By home-of-record county income and poverty in 1990
  - By home-of-record unemployment and non-employment in 1990

- Heterogeneity by Parental Income (Coming Soon)
Earnings By Race: 31 AFQT Cutoff

The Effects of Army Service in the All-Volunteer Era
Employment By Race: 31 AFQT Cutoff

The Effects of Army Service in the All-Volunteer Era
Marriage By Race: 31 AFQT Cutoff

The Effects of Army Service in the All-Volunteer Era
The Effects of Army Service in the All-Volunteer Era
Employment By Race: 50 AFQT Cutoff

The Effects of Army Service in the All-Volunteer Era
Marriage By Race: 50 AFQT Cutoff

The Effects of Army Service in the All-Volunteer Era
The Effects of Army Service in the All-Volunteer Era
The Effects of Army Service in the All-Volunteer Era
Marriage By Gender: 31 AFQT Cutoff

The Effects of Army Service in the All-Volunteer Era
The Effects of Army Service in the All-Volunteer Era
The Effects of Army Service in the All-Volunteer Era
The Effects of Army Service in the All-Volunteer Era
Earnings By Cohort: 31 AFQT Cutoff

The Effects of Army Service in the All-Volunteer Era
Employment By Cohort: 31 AFQT Cutoff

The Effects of Army Service in the All-Volunteer Era
The Effects of Army Service in the All-Volunteer Era
Employment By Cohort: 50 AFQT Cutoff

The Effects of Army Service in the All-Volunteer Era
Preliminary Conclusions

- Army Service substantially increases earnings in the short-run without, in aggregate, decreasing longer-run earnings → substantial cumulative earnings gains of $66-108k
  
  Despite neg. long-run employment effects at lower cutoff (particularly among whites)

- More comprehensive measures of income including disability compensation will yield a more complete picture

- Service increases years of education and marriage

- Service increases long-run earnings for African Americans at both cutoffs

- Additional results will help see if service acts as a vehicle for intergenerational mobility and whether it helps people in places with high nonemployment rates most
Appendix
### Balance Checks

<table>
<thead>
<tr>
<th></th>
<th>Cutoff: AFQT=31</th>
<th></th>
<th>Cutoff: AFQT=50</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Linear</td>
<td>Quadratic</td>
<td>Linear</td>
<td>Quadratic</td>
</tr>
<tr>
<td>Age</td>
<td>0.021</td>
<td>0.004</td>
<td>-0.030**</td>
<td>-0.015</td>
</tr>
<tr>
<td></td>
<td>(0.013)</td>
<td>(0.018)</td>
<td>(0.012)</td>
<td>(0.017)</td>
</tr>
<tr>
<td>Male</td>
<td>0.001</td>
<td>-0.003</td>
<td>0.003+</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.002)</td>
<td>(0.002)</td>
<td>(0.002)</td>
</tr>
<tr>
<td>White</td>
<td>0.004**</td>
<td>-0.003</td>
<td>-0.002</td>
<td>-0.002</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.003)</td>
<td>(0.002)</td>
<td>(0.003)</td>
</tr>
<tr>
<td>Black</td>
<td>-0.007**</td>
<td>0.004</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.003)</td>
<td>(0.001)</td>
<td>(0.002)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.004**</td>
<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.002)</td>
<td>(0.001)</td>
<td>(0.002)</td>
</tr>
<tr>
<td>Low Education (LTHS,GED)</td>
<td>0.006**</td>
<td>-0.001</td>
<td>-0.003**</td>
<td>-0.001</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.002)</td>
<td>(0.001)</td>
<td>(0.002)</td>
</tr>
<tr>
<td>High Education (HSDIP or more)</td>
<td>-0.007**</td>
<td>0.003</td>
<td>0.002</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.003)</td>
<td>(0.002)</td>
<td>(0.003)</td>
</tr>
<tr>
<td>Education: In HS</td>
<td>0.001</td>
<td>0.003</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.002)</td>
<td>(0.002)</td>
<td>(0.002)</td>
</tr>
<tr>
<td>Wages</td>
<td>2.167</td>
<td>51.711</td>
<td>-10.997</td>
<td>-22.194</td>
</tr>
<tr>
<td></td>
<td>(57.112)</td>
<td>(79.344)</td>
<td>(54.573)</td>
<td>(76.019)</td>
</tr>
<tr>
<td>Any Wages</td>
<td>-0.001</td>
<td>0.001</td>
<td>0.000</td>
<td>-0.001</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.003)</td>
<td>(0.002)</td>
<td>(0.003)</td>
</tr>
<tr>
<td>Any 1040</td>
<td>-0.005*</td>
<td>-0.001</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.003)</td>
<td>(0.002)</td>
<td>(0.003)</td>
</tr>
<tr>
<td>Any 1098T</td>
<td>-0.000</td>
<td>0.000</td>
<td>-0.000</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.003)</td>
<td>(0.002)</td>
<td>(0.003)</td>
</tr>
<tr>
<td>Married</td>
<td>0.001</td>
<td>0.002</td>
<td>-0.002</td>
<td>-0.002</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.002)</td>
<td>(0.001)</td>
<td>(0.002)</td>
</tr>
</tbody>
</table>
Most Recent AFQT on File (Pre-Renorming)
Most Recent AFQT on File (Post-Renorming)

The Effects of Army Service in the All-Volunteer Era
Sample Size by Years Since Application

The Effects of Army Service in the All-Volunteer Era
Mean Earnings

The Effects of Army Service in the All-Volunteer Era
The Effects of Army Service in the All-Volunteer Era

![Mean Employment Graph](image-url)
The Effects of Army Service in the All-Volunteer Era
W2 Medicare Earnings: 2SLS Estimates by years since application

The Effects of Army Service in the All-Volunteer Era
Robustness of Earnings Estimates to the Inclusion of Controls

31 AFQT Cutoff

50 AFQT Cutoff

The Effects of Army Service in the All-Volunteer Era
Robustness of Earnings Estimates to Alternative Specifications

31 AFQT Cutoff

50 AFQT Cutoff

The Effects of Army Service in the All-Volunteer Era
Robustness of Earnings Estimates to Smaller Windows

The Effects of Army Service in the All-Volunteer Era
VADC Annual Amount, 2SLS Estimates by years since application

The Effects of Army Service in the All-Volunteer Era