Deferments and the Relative Cost of Conscription

Timothy J. Perri
ASU

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Economists played a major role in ending conscription in the U.S. in 1973 (Gates Commission).
The main economic objection to conscription:

the implicit tax on draftees as some with reservation wages in excess of the military wage are compelled to serve.
Friedman (1967): conscription might involve lower social cost than a volunteer military if a large % of the relevant population was required for military svc.
This is due to the deadweight cost of taxation required to finance a military.
This idea was developed by Johnson (1990), Lee & McKenzie (1992), & Ross (1994).
Other costs of conscription:

1) too large K/L

2) excessive turnover

3) lower productivity of draftees

4) evasion costs
Mulligan (2008):

*commutation* is allowed---a fee to avoid svc.
However, since the CW, there has been no commutation or substitution.
Deferments have existed for medical, occupational, & educational reasons.
Some deferments are costless, but others are not.

People expend resources to obtain deferments.

They can “dodge up” (Kuziemko, 2008) or “dodge down.”
Dodge up: Invest in human capital when it’s not otherwise worthwhile to do so.

Dodge down: become unfit medically, or commit serious enough crimes.
Costly deferments are the same as commutation (and substitution):

high reservation wage individuals avoid service.
Costly deferments are different than commutation: the former involve social cost.
A model with deferments

Selective deferments

- $N$ individuals subject to conscription.
- The military’s demand for labor is fixed at $\eta$, $\eta < N$.
- $w_R$ equals an individual’s reservation wage.
• To get $\eta$ to volunteer, pay $w^*$. 
• $O_\eta$ is the opportunity cost of the $\eta$ lowest reservation wage individuals.
• Figure One: $O_\eta$ is area under labor supply out to $\eta$. 
Wage \( (w) \) \( \equiv w^* - X \)
• \( X = \) cost of a deferment.

• Set \( w_M = w^* - X \) in order to attract \( \eta-L_1 \) who volunteer & \( \eta-L_1 \) who are drafted.
• If govt. can defer those with highest $w_R$, conscription is cheaper: deadweight cost of taxation ↓ because payroll ↓.
• It is highly unlikely govt. can identify & costlessly defer those with the highest $w_{RS}$

• Ostensibly, this was the objective during WWI.
• However....

1) Discretion by local draft boards; &

2) Some with high $w_R$s had low earnings ($w_R$s reflected non-pecuniary factors).
Costly deferments
• $C_V = \text{social cost with volunteer military}$

• $C_C = \text{social cost with conscription}$

• $C_V = O_{\eta} + t\eta w^*$

• $C_C = O_{\eta} + t\eta(w^*-X)$
  $+ (N-\eta)X$
• $t = \text{DWL per } \$$

• When is $C_C < C_V$?

\[
t > \frac{N - \eta}{\eta} \equiv t^*, \text{ or }
\]

\[
\frac{1}{1 + t} \equiv \left( \frac{\eta}{N} \right)^* < \frac{\eta}{N}
\]

• See Figure Two.
$C_Y = O_\eta + t_\eta w^*$

$C_C = O_\eta + t_\eta (w^* - X) + (N - \eta)X$

$t^* = (N - \eta) / \eta$

Figure Two
• $X$ has no effect on $t^*$; as $X \uparrow$, $w_M = w_I \downarrow$
as does DWL; the # who defer, $N-\eta$, is unchanged.

• The reduction in DWL per unit change in $X$ equals $t\eta$, so, if $t\eta > N-\eta$, $C_C < C_V$. 
• When might $\eta/N$ be large enough for $C_C < C_V$?

• Table One.
<table>
<thead>
<tr>
<th>War</th>
<th>% of the pop. in the military</th>
<th>Column 2 ÷ by the # for WWII</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil War</td>
<td>10.4</td>
<td>.92</td>
</tr>
<tr>
<td>WWI</td>
<td>4.5</td>
<td>.4</td>
</tr>
<tr>
<td>WWII</td>
<td>11.3</td>
<td>1.0</td>
</tr>
<tr>
<td>Korea</td>
<td>3.5</td>
<td>.31</td>
</tr>
<tr>
<td>Vietnam</td>
<td>4.1</td>
<td>.36</td>
</tr>
</tbody>
</table>
• Feldstein (1999) found DWL of .32 (existing tax rates) & .78 (10% increase in all MTRs) for 1994.

• Using DWL of .78:

\[
\Rightarrow \frac{1}{1+t} \equiv \left( \frac{\eta}{N} \right)^* = .56.
\]
• Fraction of those eligible for military (based on age, health, and mental aptitude) who served in WW2 (Segal & Segal 2004):

笑脸 0.56 笑脸
MTRs

• DWL is a positive function of marginal tax rates (MTRs) & $\xi^{Supply}$, $\xi^{Labor}$.

• Table Two.
Table Two.

<table>
<thead>
<tr>
<th>Year</th>
<th>Ave. MTR (Seater and Stephenson)</th>
<th>Ave. MTR (Barro and Sahasakul)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1942</td>
<td>14.2</td>
<td>13.4</td>
</tr>
<tr>
<td>1943</td>
<td>16.8</td>
<td>14.8</td>
</tr>
<tr>
<td>1944</td>
<td>14.8</td>
<td>18.3</td>
</tr>
<tr>
<td>1945</td>
<td>15.0</td>
<td>18.6</td>
</tr>
<tr>
<td>1994</td>
<td>17.4</td>
<td>21.5</td>
</tr>
</tbody>
</table>
• Maybe WW2 was near \( \left( \frac{\eta}{N} \right)^* \).

• I would like to have estimates of \( \xi_{Supp}^{\text{Supply}} \) for \( \xi_{Lab}^{\text{Labor}} \) for the 1940s & 1990s.
Positive (social) benefits from deferments

• Benefits = $B < X$.

• When $B \uparrow$, $C_C \downarrow$ (direct effect).

• $B \uparrow$, $C_C \uparrow$ (indirect effect) because $w_M \uparrow$. 
Figure Three

\[ C_V = \eta + t\eta w^* \]

\[ C_C = \eta + t\eta (w^* + B - X) + (N - \eta)(X - B) \]

\[ \hat{C}_C \]

\[ O_\eta + (N - \eta)(X - B) \]

B increases

\[ t^* = (N - \eta)/\eta \]
• For $t < t^*$, should not have conscription.

If we do, should try to raise $B$ because $C_C \downarrow$.

• Govt. likely wants $B \downarrow$ (lower $w_M$).
• For $t > t^*$, should have conscription.

If we do, should try to lower $B$ because $C_C \downarrow$, & govt. likely wants to do this.
Costless deferments are widely available

- $C_C \downarrow$: fewer spend $X$.

- $C_C \uparrow$: some of the "wrong" people are inducted.

- $C_C \uparrow$: $w_M \uparrow$ to get $\eta$. 
- $\lambda$ is the faction of the pop. with costless deferments.

- $C_C < C_V$ if:

\[
\frac{\lambda X}{2\eta} + \frac{N - \eta - \lambda X}{\eta} < t.
\]
\[
\frac{\lambda X}{2\eta} + \frac{N - \eta - \lambda X}{\eta} \equiv t^{**}
\]

- \( t^{**} \) is not appreciably affected by \( \lambda \).
Early deferments

• One can get a deferment before being drafted at a cost of $Z < X$.

• Prob. of being drafted is $p$. 
Figure Four

$p \geq Z/X$

Volunteer

Do not volunteer or defer

Defer early

0  $w_M$  $w_M + Z$  $w_R$
• No one will choose late deferment (@ a cost of $X$).

• Then optimally set $w_M = w^* - Z$ (& $p = 1$).

• Since $Z < X$, $w_M \uparrow$. 
Figure Five

$p < Z/X$

Volunteer  \hspace{1cm} \text{Do not volunteer or defer} \hspace{1cm} \text{Defer late if called}

0 \hspace{2cm} w_M \hspace{2cm} w_M + X \hspace{2cm} w_R
• No one will choose early deferment.

\[ p < \frac{Z}{X} \Rightarrow w_{M} > w^{*} - Z. \]

• Would govt. set \( p < \frac{Z}{X} ? \)

Yes, if bgt. = payroll + turnover cost.
😊 I am done!! 😊