The Effects of Compulsory Military Service Exemption on Education and Labor Market Outcomes by Tumen and Torun

Discussion by Bilge Erten

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Key Findings of the Paper

- The paper studies the effect of a paid-exemption from the compulsory military service (CMS) in Turkey on education and labor market outcomes.

- It finds that the paid exemption reduces the educational attainment for the eligible men, implying that the exemption from CMS reduced the incentives to stay in school.

- There is also suggestive evidence of a negative effect on labor earnings of eligible men, which the authors attribute to the decline in educational attainment.
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- What proportion of men were at school at the age of 27 in 1999?
- The average age of university completion is 22-24. They could be doing a Masters or PhD.
- The timing of the law is exogenous, but there is selection into the eligible group. In particular, the characteristics of men who are 27 and still in undergraduate or graduate studies will matter.
Comments on Identification

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- An advantage of previous studies is that they have information on being still at school (Maurin and Xenogian 2007), or having completed high school at the age of 18 and being in the transition to university (Di Pietro 2013).
Comments on Specification

- Pooling LFS data from 2004–2013, the paper uses three specifications: OLS, Double Differences, Triple Differences. The OLS specification takes the form:

\[
y_{i,r,t,m,s} = \alpha + \delta B_i + \theta'X_i + g(t) + f_r + f_s + f_m + \epsilon_{i,r,t,s,m} \tag{1}
\]

where \(i, r, t, m,\) and \(s\) index individuals, regions, years of birth, months of birth, and survey years, \(y\) is the labor market outcome of interest, \(B\) is a dummy variable taking 1 if the individual is born on or before Dec 31, 1972, \(X\) is individual characteristics (age dummies and an urban/rural dummy), \(g(t)\) is a cubic polynomial defining the time trend variable with respect to the year of birth, \(f_r\) denotes region FE, \(f_s\) denotes survey-year FE, \(f_m\) denotes month-of-birth FE.
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Double Differences takes the form:

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where the dummy variable \( T_i \) takes the value of 1 if the year-of-birth period is 1972-1973 and 0 if it is 1973-1974; \( B_i \) is a dummy variable taking 1 if the individual is born on or before Dec 31, 1972. This is estimated in 8, 12, and 10 month intervals.
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- For a DID specification, one needs two sources of variation. But here there is only one: time of birth. Even if you did not use \( B_i \), \( T_i \) would assign the value of 1 to months before Dec 31, 1972. So this is still an OLS that assigns treatment the value of 1. Therefore, it still captures cohort-specific effects.

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- In this case, there is no data available prior to the reform’s implementation. There is also no other source of variation, which prevents the use of a DIDID strategy.
The Effects of Compulsory Military Service Exemption on Education and Labor Market Outcomes by Tumen and Torun

Comments on Specification

The paper avoids using a regression discontinuity (RD) design because education and labor income is correlated with season of birth due to:

1. the potential interactions between season of birth and compulsory schooling laws (Angrist and Krueger 1991)
2. children born toward the end of the year are much more likely to have wealthier and better-educated parents than children born early in the year (Buckles and Hungerman 2013, Torun and Tumen 2015).

Regarding (1), this should not be a problem as long as there is no CSL implemented at the cutoff point of the paid-exemption.

Regarding (2), if the specification includes month of birth fixed effects, and as long as seasonality is the same across years of birth (as you assume in your DID), an RD design would work.

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Covariates and the Treatment on the Treated Effect

- It may be important to include other factors that affect college enrollment (e.g. individual’s academic ability, school-related variables such as types of school, family background, etc.), which previous studies have shown to significantly affect university enrollment (Di Pieto 2013).

- If you have an estimate of number of people taking advantage of the paid exemption, you can estimate the Treatment on the Treated Effect:

\[
TOT = \frac{ITT}{E(D|Z=1)}
\]

TOT - Treatment on the Treated
ITT - Intention to Treat
E(D|Z=1) - Treatment receipt rate