SCHOOL OF
ECONOMICS AND
MANAGEMENT

Means Testing in BAföG

The Impact of Income Eligibility Thresholds on Student Labor Supply

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Abstract

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Keywords: 3 – 5 key words
JEL codes: Find appropriate codes at https://www.aeaweb.org/econlit/jelCodes.php?view=jel

1 Introduction

test XKCD (2024)

2 Literature

3 Data

4 Method

4.1 Individual Students' Monthly Requirement

The monthly requirement the student is eligible for is contingent on the financial support the student is currently receiving from his or her family. Firstly, the student receives a constant requirement of EUR 475, which is not contingent on the students' financial circumstances. To this basic amount the student receives requirements for **accommodation** (A), **health insurance** (HI), **long term care insurance** (LTCI) and an additional amount per the **number of children** (C) the student has. The requirement received for health insurance, long-term care insurance and accommodation is contingent on whether the parents are already providing these benefits. The total requirement the student will receive is therefore

$$\mathrm{R} = 475 + \mathrm{A} + \mathrm{HI} + \mathrm{LTCI} + \mathrm{C} \tag{4.1}$$

where

Variable	Provided by parents	Not provided by parents
A	59	380
HI	0	102
LTCI	0	35

Table 1: Benefits contingent on parental provision (values in EUR).

4.2 Deductions from Requirement

Parental and Student Income.

$$PR = \text{Parental Reduction} = \begin{cases} 0 & \text{if } E_5 \text{ or } (T_3 \text{ and } E_3) \\ 0 & \text{if } \text{Age}_{30} \\ 0.5 \times (\text{Parental Income} - \text{Exemption}) & \text{otherwise} \end{cases} \tag{4.2}$$

- E_5: Employed for 5 years after age 18
- T_3: Completed 3 years of vocational training

- E_3: Employed for 3 years after vocational training
- Age_{30}: Older than 30 at the start of training

Household Type	Exemption
Parents living together	2,540
Parents live separately	1,690
Spouse or Cohabiting Partner	1,690

Table 2: Tax-free amount contingent on household type (values in EUR).

Let

$$SR = \text{Student Reduction} = \begin{cases} 0.5 \times ((\text{Income} - 556) + \max(0, \text{Assets} - 15,000)) & \text{if } \text{Age}_{30} \\ 0.5 \times ((\text{Income} - 556) + \max(0, \text{Assets} - 45,000)) & \text{else} \end{cases}$$

$$\text{BAföG}_i^{\text{final}} = \max(0, R - (PR + SR))$$

Define a loss function out of the requirements and the deductions

$$L(R, PR, SR) = R - (PR + SR) \tag{4.3}$$

4.3 Construction of Fuzzy RD

Dummy variable for whether student loses any of his or her BAföG requirement

$$D_i = \begin{cases} 1, & \text{if } L(R, PR, SR) > 0 \quad \text{(Some BAföG deduction occur)} \\ 0, & \text{if } L(R, PR, SR) = 0 \quad \text{(No deductions, full requirement)} \end{cases} \tag{4.4}$$

REVISE THIS ENTIRELY! Use a logit/probit for the first step then use these fitted values as regressor for second stage! Look into assumptions of both models and determine according to the characteristics of our data.

First Stage (REVISE! Make into Logit/Probit)

$$\text{BAFÖG}_i = \alpha + \beta D_i + \gamma X_i + \varepsilon_i$$

Second Stage

$$\text{LabourSupply}_i = \delta + \lambda \widehat{\text{BAföG}}_i + \mu X_i + \nu_i$$

λ coefficient for whether BAföG receipt reduces labour supply

References

XKCD (2024). Physicists. https://xkcd.com/793/. Accessed 2024-05-22.

Appendix A: Tables

Appendix B: Figures