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Seminar SS 2014:
Empirical Methods in Applied Microeconomics

Lecturer: Prof. Dr. Peter Haan and Songül Tolan

Content:

The aim of this seminar is to deepen the knowledge about microeconometric methods by conducting an empirical project. The first task will be to develop an interesting economic research question that can be analyzed empirically using micro-data. We suggest possible topics (see the list below) and datasets but students may propose alternative research questions. The center of the seminar is the empirical project. The project consists of a research plan, a seminar paper (Grading: 80%) and the presentation of results + discussion (Grading: 20%). The paper should not be longer than 15 pages. The paper should include both descriptive analyses as well as econometric estimations. It is not necessary to apply highly sophisticated empirical methods, however, it is very important to present a thorough discussion of assumptions and limitations of the applied methods. Moreover the interpretation of estimation results in particular with respect to the economic research question, is crucial. It is possible to work in groups of up to two students.
For the empirical analysis we recommend the software Stata, on which we will give an introductory course, however students are allowed to use other software packages as well. Furthermore, we provide students with relevant data (SOEP, PAIRFAM, DAFNE, SAVE…) and provide guidance to find a good research question.

The prerequisite for the seminar is good knowledge in econometrics – students should have taken a Master level course in econometrics and should be familiar with standard micro econometric methods such as panel data estimators or instrumental variable estimator; some experience with statistical software and micro-data is an advantage. The maximum number of students is 15. The seminar is in particular targeted at students at the end of their Master studies.

Resources:

- Wooldridge, Jeffrey M. (2003): Introductory Econometrics – A modern approach. Second edition. The book provides a very useful exhibition of applied microeconometric methods. Furthermore, chapter 19 gives a good introduction on the necessary steps for carrying out an empirical project.
- Resources for using Stata: e.g. http://stata.com/links/resources-for-learning-stata/

Organization:

Important dates:

What	When	Description	Where
First meeting	**25-04-2014** **16:00-17:00**	**Introduction and discussion of open questions; Choice of topics (final choice has to be made within 14 days)**	**DIW (R 5.2.010, Eleanor-Dulles-Raum)**
Stata introduction	**25-04-2014** **17:05-18:35**	**Introduction to Stata**	**DIW (R 5.2.010, Eleanor-Dulles-Raum)**
	9-05-2014	**Definitive choice of topic**	
Mid-term meeting/short presentation	**23-05-2014** **16:00 – 18:00**	**Short presentation of progress; discussion of open questions**	**DIW (R 5.2.010, Eleanor-Dulles-Raum)**
Paper submission	**23-06-2014**		
Presentation	**27-06 and 28-06**	**Final Presentation**	**DIW (R 2.2.008, Ferdinand-Friedensburg-Raum)**

Data:

- Soep (http://www.diw.de/de/soep)
- SAVE (http://mea.mpisoc.mpg.de/)
- SHARE (http://mea.mpisoc.mpg.de/)
- Pairfam (http://www.pairfam.de/)
- GRV (http://forschung.deutsche-rentenversicherung.de/FdzPortalWeb/)
- …

List of research questions (this is still preliminary and optional):

1. **Cohort effects and the returns to education.** Do returns to education differ by cohort? Building on Boockmann and Steiner (2006) a wage function should be estimated with current data (SOEP). The central identification problem of estimating linear cohort, age and period effects is their linear dependency: Age = Year - Cohort. Their solution is to use actual experience instead of potential experience in their regression. Possible extensions: update the study with more recent data; use gross wages instead of net wages; estimate the model for East Germany as well. Methods: OLS (possible extension: Random Effects Estimation).
2. **Labour supply after retirement.** Eschelbach (2011): "In Germany, economists expect a pension gap for future retiree cohorts as public pensions will decrease and private old age provision is low. In this paper we ask, whether this pension gap might lead to the rise of a fourth pillar of retirement income: labor earnings." Method: OLS, Logit/Probit.
3. **The link between height and wages** (Hübler 2009). Many examples suggest that tall people are more successful than others. The aim is to test whether height is an economic category, whether in Germany taller workers earn more money than other employees or whether there exists a nonlinear relationship. Method: OLS (possible extensions: Random effects model; Heckman selection model; Hausman Taylor).
4. **Labour supply and caring for the elderly**. How does home care impact the labour supply of women and men? A starting point would be Meng (2013). Method: Logit/Probit/Tobit (possible extension: IV estimator).

5. **What are the determinants of moonlighting in Germany?** From the abstract from (as a starting point) Heineck (2009): Secondary jobholding is a persistent phenomenon in both Germany and the UK. Using panel data from the BHPS and the SOEP, reduced form participation equations are estimated for male and female workers separately. Whereas the results vary across gender and countries, there is support for both main theoretical strands, i.e. for the 'hours-constraints' motive and, though less clear, for the 'heterogeneous-jobs' motive.
6. **Estimating wage-gaps** between natives and immigrants, between men and women or between East and West Germany (Aldashev, Gernandt, and Thomsen 2012; Maier 2007; Blau and Kahn 2003) – and comparison over time. Method: OLS + Oaxaca decomposition (Oaxaca 1973) (possible extensions: decomposition with selection correction).
7. **Why do women take over long-term care responsibilities?** There is a tiny model estimated in Unger und Rothgang (2013) with SOEP data (disregard the model for the register data) which could be extended and improved. SOEP
8. **Future old age poverty.** Kumpmann, Guehne and Buscher (2012) suggest to run a regression on relative income positions from 2007 on data from 1992 for people aged 50 to 55. In a second step they use data from 2007 and predict poverty rates for the year 2023. Replicate their study; update the model and test the robustness of results. Method: OLS (possible extension: Random effects model). SOEP.
9. **Long-term effects of unemployment on old age income.** Wunder (2005) regresses pensions from West German men on previous unemployment and labour market experience. He uses his results to decompose the direct effect of unemployment on

pensions and the effect through the depreciation of human capital. Replication of his study; update the model. Estimate the model for women; East Germany (many more variations possible). Method: OLS and detailed simulations (possible extension: Random effects model). SOEP.

10. **Unemployment at different stages of the career and pensions.** Potrafke (2011) suggests that the timing of unemployment is important because lifecycle earnings profiles are affected differently by periods of unemployment in different career stages. He also investigates to what extent the prevailing social security policy compensated for earning losses. Replication using SOEP. Extend the model to women. West Germany. Method: OLS (possible extension: Random effects model).
11. **Unemployment at different stages of the career and private wealth.** Similar to the previous topic one can ask for the effects of unemployment on private wealth. It may be possible to relate periods of unemployment to the interest rate in that period. SOEP. Method: OLS. (possible extensions: properly account for multiple imputations).
12. **Long-term care insurance and financial security.** Zuchandke et al. (2010) analyse the effects of the introduction of long-term care insurance in 1995. They regress a measure of self-assessed financial security in case of need for long-term care on data from 1992 and 1997 (and 2002) to check whether the reform had an impact on financial security. Replication; several improvements possible. Method: OLS is ok but Ordered Probit or binary Probit would be possible.
13. **Long-term care insurance and savings.** If it is true that the introduction of the long-term care insurance increased perceived financial security (and increased deductions from gross wages), had it an impact on savings? Since the introduction of the insurance affected every individual (privately as well as publicly insured), there is no natural comparison group for a difference in difference approach. However, one could think of groups that are more likely to be dependent on formal care than others. Idea (could be extended): Compare women aged 45 to 65 with and without children (or partner) before and after the reform. Method: OLS, diff-in-diff. (Experimental). SOEP
14. **Informal elderly care and caregivers' subjective well-being.** Bauer and Sousa-Poza (2013) analyze the effects of informal care provision on caregivers' subjective well-being. Method: OLS. (Possible extension: Fixed effects model).
15. **Unpaid overtime and wages.** Anger (2005) analyzes future consequences of unpaid work with respect to a worker's career advancement, such as higher future wages and probabilities of promotion or job retention, which might help to explain why an increasing fraction of employees are working extra hours for free. Idea: replicate/update her study with respect to wages. Method: OLS (possible extensions: selection model, Random effects, fixed effects). SOEP.
16. **Does drinking wine make you richer?** Ziebarth and Grabka (2009)**: "**The positive association between moderate alcohol consumption and wages is well documented in the economic literature. Positive health effects as well as networking mechanisms serve as explanations for the "alcohol-income puzzle." Using individual-based microdata from the GSOEP for 2006, we confirm that this relationship exists for Germany as well." Replicate their study and use two more waves (2008, 2010) and test their results. Method: OLS. (possible extensions: Random/Fixed effects models, selection models).
17. **Precautionary savings.** Fuchs-Schündeln and Schündeln (2005) exploit the German reunification as a natural experiment to deal with potential selection problems in models that test the precautionary motive. Replicate their approach using a different dependent variable from the SOEP wealth questionnaire of 2002 and 2007. Method: OLS (possible extensions: IV, taking properly care of multiple imputation).

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