Current Topics in Empirical Analysis
Summer Term 2023

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General Information

Instructor's email: mobrizan@kse.org.ua

Lectures: Over Zoom 4 pm to 6 pm on Wednesdays from April 5th until June 21st

Organizational questions: Sergej Bechtoldt

Main Texts

Applied Health Economics. 2012. Andrew M. Jones, Nigel Rice, Teresa Bago d'Uva and Silvia Balia. Second edition.

Students are **required** to read Textbook chapters listed below as well as additional articles (to be assigned during lectures).

Course description

In this empirical course we will review a toolbox of various methods in applied health economic research. We will start from reviewing various sources of health data, learn to describe the data, apply various techniques of modeling categorical data, duration data, panel data, count data. In addition, we will briefly review Bayesian approach and BI instruments capable of getting quick insights from large datasets in health. The course will be 'lab-style' - each topic will be supplemented by empirical exercises in Stata. In addition to lecture notes students will get working codes and datasets to practice.

Evaluation

Course project based on the methods covered in the course and applied to health data. Specific requirements will be provided in a separate document.

List of Lecture Topics

Lecture 1

Examples of health survey data: BHPS, MEPS and SHARE

Describing the dynamics of health

Readings: Chapters 1 and 2

Jones, A.M., 2017. Data visualization and health econometrics. Foundations and Trends in Econometrics, 9(1), pp.1-78.

Lecture 2

Modeling health care costs

Readings: Chapter 3

Biener, A.I., Cawley, J. and Meyerhoefer, C., 2020. The medical care costs of obesity and severe obesity in youth: An instrumental variables approach. Health Economics, 29(5), pp.624-639.

Lecture 3

Heterogeneity in self-reported health

Ordered probit model

Readings: Chapter 4

Obrizan, M., 2020. Transition welfare gaps: One closed, another to follow? Economics of Transition and Institutional Change, 28(4), pp.621-635.

Lecture 4

Multivariate probit model

Application to smoking and mortality

Readings: Chapter 5

Clark, A.E. and Etilé, F., 2006. Don't give up on me baby: Spousal correlation in smoking behaviour. Journal of health economics, 25(5), pp.958-978.

Lecture 5

Introduction to Bayesian methods

Readings: Mason, A.J., Gomes, M., Grieve, R. and Carpenter, J.R., 2018. A Bayesian framework for health economic evaluation in studies with missing data. Health economics, 27(11), pp.1670-1683.

Obrizan, M., 2011. A Bayesian Model of Sample Selection with a Discrete Outcome Variable: Detecting Depression in Older Adults (No. 41).

Lectures 6-7

Duration data

Continuous duration models

Smoking and mortality

Discrete duration models

Health and retirement

Readings: Chapters 6-7

Pongiglione, B. and Torbica, A., 2022. How real can we get in generating real world evidence? Exploring the opportunities of routinely collected administrative data for evaluation of medical devices. Health Economics.

Lecture 8
Random and fixed effects models
Mincerian wage equation wiht self-rated health
Readings: Chapter 8
Urwin, S., Lau, Y.S. and Mason, T., 2019. Investigating the relationship between formal and informal care: an application using panel data for people living together. Health Economics, 28(8), pp.984-997.

Lecture 9
Modeling the dynamics of health for binary variables Static and dynamic specifications
Readings: Chapter 9
Fujii, T., 2019. Regional prevalence of health worker absenteeism in Tanzania. Health Economics, 28(2), pp.311-316.

Lecture 10
Non-response and attrition bias
Readings: Chapter 10
Cheng, T.C. and Trivedi, P.K., 2015. Attrition bias in panel data: a sheep in wolf's clothing? A case study based on the mabel survey. Health economics, 24(9), pp.1101-1117.

Lecture 11
Count data models
Readings: Chapter 11
Walsh, B., Lyons, S., Smith, S., Wren, M.A., Eighan, J. and Morgenroth, E., 2020. Does formal home care reduce inpatient length of stay?. Health Economics, 29(12), pp.1620-1636.

Lecture 12
Student presentations of project proposals
Introduction to Power BI for health data (if time permits)