

NEKN61: Advanced Health Economics

Autumn 2018

Course organizer: Jan Bietenbeck

Office: Alfa 1 building, room 4084

Office hours: Wednesdays from 15:00-16:00 (starting from September 12)

Email (always include 'NEKN61' in the subject!): jan.bietenbeck@nek.lu.se

Lecturers: Jan Bietenbeck and Ulf Gerdtham

Teaching assistant: Thomas Hofmarcher

Course information

This course provides a graduate-level overview of current issues in theoretical and empirical health economics. It focuses on topics that are directly relevant to health care policy, including determinants of demand for health care, causes and consequences of health care spending growth, cost-effectiveness analysis in health care, and measurement of health inequalities. These topics will be discussed in lectures and seminars on the basis of academic articles. Students will learn to analyze and evaluate existing research independently, and to conduct and present their own research in the form of an academic paper.

Course requirements (prerequisites)

Usually, we require students to have passed NEKN33 “Applied Microeconometrics” before taking this course. This year, due to the re-organization of the master’s program, most students were not able to take this course before the autumn term of 2018. We therefore have decided to include a crash course in microeconometrics in the program (for further information on this “boot camp,” see below). Thus, the only requirement for taking this course is a basic master’s course in econometrics like NEKN31 “Advanced Econometrics.”

Course literature

The course literature consists of the academic articles listed on pages 5ff. For each lecture, boot camp, and the student seminar, the list identifies some articles that constitute the required readings for the topic. Further optional readings, which are listed under a separate heading, are meant to give more background information on, or additional examples of, the topic covered. All articles will be posted on Live@Lund and can also be accessed online via the LU Libraries. Note: advance reading of the articles before the lectures is strongly recommended!

‘Metrics boot camps

Health economics is an empirical science which heavily relies on the standard tools of micro-econometrics (in particular: randomized controlled trials, difference-in-differences, regression discontinuity, and instrumental variables). In the ‘metrics boot camps, we will teach you these important techniques. The focus will be on the intuition behind each technique rather than technical details and mathematical derivations, with the aim of ensuring that you have the necessary knowledge to understand the academic articles which you are required to read. We highly recommend the book “Mastering ‘Metrics” by Joshua D. Angrist and Jörn-Steffen Pischke as useful background reading for the boot camps. The LU libraries hold several copies of this book, and the relevant chapters are indicated in the literature list below.

Examination and grading

Your final grade for the course is composed of partial grades for

1. two in-class examinations (E1 and E2, at most 35 points);
2. a student seminar (S1, at most 15 points); and
3. a paper that you have to write and present in a seminar (S2, at most 50 points).

The maximum amount of points that you can obtain is 100, i.e. each point is worth exactly 1% of the final grade. Please note that any partial grades are valid only for the academic year 2018/19! In the following, each of the examination elements is described in more detail.

In-class examinations E1 and E2

The in-class examinations test your knowledge of the required readings and the material covered in the lectures, the ‘metrics boot camps, and the student seminar. E1 covers lectures

1-4 and the two ‘metrics boot camps. E2 covers lectures 5-10 and student seminar S1. In each examination, you can obtain a maximum of 17.5 points (35 points in total for E1 and E2). Examples of potential questions on these examinations will be given during the lectures. Please note that in order to pass the course, you have to get at least 8.75 points on each in-class examination. Re-taking E1 or E2 is possible only if the result on the first examination was F (fail).

Student seminar S1

In this seminar, students present and discuss academic articles on a particular topic in health economics. To promote lively discussions, students will be distributed into two sub-groups which meet on different dates. In each sub-group, each student will present an academic paper that is assigned to her/him (depending on the number of participants, students may be asked to pair up). After every presentation, there will be a discussion among all attending students, with the student who presented the paper acting as discussion leader. Your grade for this part of the course depends both on the quality of your presentation and on the level and quality of your participation in the discussions. You can obtain a maximum of 15 points for the seminar. If you miss the seminar for whatever reason you will get 0 points for it. Further information regarding the presentation schedule, sub-groups, presentation format, etc. will be given during the second week of the course.

Paper and seminar S2

Your final grade also depends on an academic paper that you have to write on a topic in health economics. This paper has to be written individually and needs to include an empirical analysis. You can freely choose your topic as long as it relates to the content of the course. You also have to present your paper in a seminar (S2) during the final week of the course. For the paper and the presentation combined, you can get at most 50 points. Please note: you need to get at least 25 points in order to pass the course.

For some of you, this might be the first time that you conduct your own empirical analysis and write a paper based on the results. In order to help you get started, we will provide you with early feedback on your chosen topic, data, and empirical method. Moreover, during the later weeks of the course, we will run a paper writing help desk. The details regarding the format and content of this help desk are to be determined and will be

communicated during the first few weeks of the course. The same holds for presentation schedules for S2, formatting requirements of the paper, etc.

Course page on Live@Lund

The course page on Live@Lund is going to be updated regularly with lecture slides, information on group assignments, potential changes to the schedule or the syllabus, etc. Therefore, please make sure to check the course page regularly.

Schedule

The final page of this syllabus contains a preliminary schedule for the course.

Course literature

Note: there might be some changes to the literature list during the course. Please check the course page on [Live@Lund](#) for updates.

Lecture 1: Introduction

Required readings:

Arrow, K. J. (1963). Uncertainty and the welfare economics of medical care. *The American Economic Review*, 53(5), 941–973.

Further optional readings:

Chapters 2 and 3 in Bhattacharya, J., Hyde, T., and P. Tu (2014). *Health Economics*. Palgrave Macmillan.¹

OECD. (2008). *The Looming Crisis in the Health Workforce. How Can OECD Countries Respond?* Geneva: OECD.

OECD. (2017). *Health at a Glance 2017*. Geneva: OECD.

‘Metrics Boot Camp #1: RCTs and Diff-in-Diffs

Required readings:

lecture slides (as always)

Further optional readings:

Chapters 1, 2, and 5 (you can skip the appendices) in Angrist, Joshua D., and Jörn-Steffen Pischke (2015). *Mastering ‘Metrics. The Path from Cause to Effect*. Princeton University Press.

Berniell, I., and Jan Bietenbeck (2018). *The Effect of Working Hours on Health*. Working Paper.

Lecture 2: Demand for Health Care and Health

Required readings:

Aron-Dine, A., Einav, L., and A. Finkelstein, (2013). The Rand Health Insurance Experiment: Three Decades Later. *Journal of Economic Perspectives*, 27(1), 197–222.

pp.75-89 in Zweifel, P., Breyer, F., and M. Kifmann, (2009). *Health Economics*. Springer.

Further optional readings:

Chapters 2 and 3 in Bhattacharya, J., Hyde, T., and P. Tu, (2014). *Health Economics*. Palgrave

¹ Unfortunately, this book is not available in the LU libraries. But do not despair: Jan has a spare copy which he is willing to lend to you upon request.

Macmillan.

Finkelstein, A., Taubman, S., Wright, B., Bernstein, M., Gruber, J., Newhouse, J. P., Allen, H., Baicker, K., and Oregon Health Study Group, (2012). The Oregon Health Insurance Experiment: Evidence from the First Year. *The Quarterly Journal of Economics*, 127(3), 1057–1106.

Grossman, M., (1972). On the Concept of Health Capital and the Demand for Health. *Journal of Political Economy*, 80(2), 223–225.

Levine, D., Polimeni, R., & Ramage, I. (2016). Insuring health or insuring wealth? An experimental evaluation of health insurance in rural Cambodia. *Journal of Development Economics*, 119, 1–15.

Lecture 3: Physician-Induced Demand

Required readings:

Gruber, J., and M. Owings (1996). Physician financial incentives and cesarean section delivery. *The Rand Journal of Economics*, 27(1), 99–123.

Gruber, J., Kim, J., & Mayzlin, D. (1999). Physician fees and procedure intensity: The case of cesarean delivery. *Journal of Health Economics*, 18, 473–490.

Johnson, E. M., & Rehavi, M. M. (2016). Physicians Treating Physicians: Information and Incentives in Childbirth. *American Economic Journal: Economic Policy*, 8(1), 115-141.

Further optional readings:

Grant, D. (2009). Physician financial incentives and cesarean delivery: new conclusions from the healthcare cost and utilization project. *Journal of Health Economics*, 28(1), 244-250.

Johnson, E.M. (2014). Physician-Induced Demand. In *Encyclopedia of Health Economics*, Elsevier (Vol.3 pp.77-82).

Lecture 4: The Persistence of Early Childhood Investments

Required readings:

pp.1322-1328 in Almond, D., and Currie, J. (2011). Human Capital Development before Age Five. In *Handbook of Labor Economics* (Vol. 4, pp. 1315–1486).

Almond, D. (2006). Is the 1918 Influenza pandemic over? Long-term effects of in utero Influenza exposure in the post-1940 US population. *Journal of Political Economy*, 114(4), 672–712.

Hoynes, H. W., Schanzenbach, D. W., and D. Almond (2016). Long Run Impacts of Childhood Access to the Safety Net. *American Economic Review*, 106(4), 903-934.

Further optional readings:

Almond, D., and Currie, J. (2011). Human Capital Development before Age Five. In *Handbook of Labor Economics* (Vol. 4, pp. 1315–1486).

Almond, D., & Currie, J. (2011). Killing Me Softly: The Fetal Origins Hypothesis. *Journal of Economic Perspectives*, 25(3), 153–172.

Heckman, J. J. (2007). The economics, technology, and neuroscience of human capability formation. *Proceedings of the National Academy of Sciences*, 104(33), 13250–13255.

‘Metrics Boot Camp #2: IVs and RDDs and Health Technology Assessment

Required readings:

lecture slides (as always)

Further optional readings:

Chapters 3 and 4 (you can skip the appendices) in Angrist, Joshua D., and Jörn-Steffen Pischke (2015). *Mastering ‘Metrics. The Path from Cause to Effect*. Princeton University Press.

Chapter 14 in Bhattacharya, J., Hyde, T., and P. Tu, (2014). *Health Economics*. Palgrave Macmillan.

Dolan, P. (2000). The measurement of health-related quality of life for use in resource allocation decisions in health care. *Handbook of Health Economics*, 1723-1760.

Lecture 5: The Economics of Life Style

Required readings:

Cawley, J. (2004). The Impact of Obesity on Wages. *Journal of Human Resources*, 39, 451-474.

Gerdtham, U.-G., Lundborg, P., Lyttkens, C. H., and P. Nystedt (2016). Do Education and Income Really Explain Inequalities in Health? Applying a Twin Design. *The Scandinavian Journal of Economics*, 118(1), 25-48.

Lecture 6: Measuring Inequality in Health

Required readings:

Erreygers, G. Correcting the Concentration Index, *Journal of Health Economics* 2009; 28: 504–515

Heckley, G., Gerdtham, U. G., & Kjellsson, G. (2016). A general method for decomposing the causes of socioeconomic inequality in health. *Journal of Health Economics*, 48, 89-106.

Further optional readings:

- Kjellsson, G., & Gerdtham, U. G. (2013). On correcting the concentration index for binary variables. *Journal of health economics*, 32(3), 659-670.
- Petrie, D., Allanson, P., & Gerdtham, U. G. (2011). Accounting for the dead in the longitudinal analysis of income-related health inequalities. *Journal of Health Economics*, 30(5), 1113-1123.
- Kjellsson, G., & Gerdtham, U. G. (2014). "Measuring Health Inequalities Using the Concentration Index Approach." In: Anthony J. Culyer (ed.), *Encyclopedia of Health Economics*, Vol 2. San Diego: Elsevier; 2014. pp. 240-246.

Lectures 7 & 8: Causes and Consequences of Rising Health Care Expenditures

Required readings: *Note: papers are listed in the order in which we'll discuss them in the lectures. We'll probably cover the first three papers during the first lecture, and the next three papers during the second lecture.*

- Newhouse, J. P. (1992). Medical care costs: how much welfare loss? *The Journal of Economic Perspectives*, 6(3), 3–21.
- Cutler, D. M., McClellan, M., Newhouse, J. P., & Remler, D. (1998). Are Medical Prices Declining? Evidence from Heart Attack Treatments. *The Quarterly Journal of Economics*, 113(August), 991–1024.
- Cutler, D. M., & McClellan, M. (2001). Is Technological Change In Medicine Worth It? *Health Affairs*, 20(5), 11–29.
- Skinner, J. S., Staiger, D. O., & Fisher, E. S. (2006). Is Technological Change In Medicine Always Worth It? The Case Of Acute Myocardial Infarction. *Health Affairs*, 25(2), w34–w47.
- Almond, D., Jr, J. D., Kowalski, A., & Williams, H. (2010). Estimating marginal returns to medical care: Evidence from at-risk newborns. *The Quarterly Journal of Economics*, 125(2), 591–634.
- Doyle, J., Graves, J., Gruber, J., & Kleiner, S. (2015). Measuring returns to hospital care Evidence from ambulance referral patterns. *The Journal of Political Economy*, 123(1), 170-214.

Further optional readings:

- Bharadwaj, P., Løken, K. V., & Neilson, C. (2013). Early life health interventions and academic achievement. *The American Economic Review*, 103(5), 1862-1891.
- Chernew, M. E., & Newhouse, J. P. (2012). *Health Care Spending Growth. Handbook of Health Economics Volume 2* (Vol. 2). Elsevier B.V.
- Molitor, D. (2018). The Evolution of Physician Practice Styles: Evidence from Cardiologist Migration. *American Economic Journal: Economic Policy*, 10(1), 326-356.

Student seminar S1: Health Fluctuations over the Business Cycle

Required readings:

Ruhm, C. Are Recessions Good for Your Health? *The Quarterly Journal of Economics* 115: 2 (May, 2000), pp. 617-650.

Gerdtham, U-G, Ruhm, CJ. Deaths Rise in Good Economic Times: Evidence from the OECD. *Economics and Human Biology* 2006; 4: 298-316

Van den Berg, G. J., Gerdtham, U. G., von Hinke, S., Lindeboom, M., Lissdaniels, J., Sundquist, J., & Sundquist, K. (2017). Mortality and the business cycle: Evidence from individual and aggregated data. *Journal of Health Economics*, 56, 61-70.

Lecture 9: Health and Economic Development

Required readings:

Acemoglu, D., & Johnson, S. (2007). Disease and development: the effect of life expectancy on economic growth. *Journal of Political Economy*, 115(6), 925–985.

Baranov, Victoria, and Hans-Peter Kohler. 2018. "The Impact of AIDS Treatment on Savings and Human Capital Investment in Malawi." *American Economic Journal: Applied Economics*, 10(1): 266-306.

Fortson, J. G. (2011). Mortality risk and human capital investment: the impact of hiv/aids in sub-saharan africa. *The Review of Economics and Statistics*, 93(1), 1–15.

Further optional readings:

Jayachandran, S., & Lleras-Muney, A. (2009). Life Expectancy and Human Capital Investments: Evidence from Maternal Mortality Declines. *The Quarterly Journal of Economics*, 124(1), 349–397.

Juhn, C., Kalemli-Ozcan, S., & Turan, B. (2013). HIV and fertility in Africa: First evidence from population-based surveys. *Journal of Population Economics*, 26(3), 835–853.

Schedule

Jan Bietenbeck (JB), Ulf Gerdtham (UG), Thomas Hofmarcher (TH)

Week	Date	Time	Room	Content
36	Mon 9/3	10:00 – 12:00	EC1:135	Lecture 1 (JB)
36	Thu 9/6	10:00 – 12:00	EC1:135	'Metrics boot camp #1 (JB)
37	Mon 9/10	14:00 – 16:00	EC1:135	Lecture 2 (JB)
37	Wed 9/12	08:00 – 10:00	EC1:135	Lecture 3 (JB)
38	Mon 9/17	12:00 – 14:00	EC1:135	Lecture 4 (JB)
38	Wed 9/19	10:00 – 12:00	EC1:135	'Metrics boot camp #2 (JB)
38	Fri 9/21	14:00 – 16:00	EC3:211	In-class exam E1
39	Wed 9/26	08:00 – 10:00	EC1:135	Lecture 5 (UG)
39	Fri 9/28	12:00 – 14:00	EC1:135	Lecture 6 (UG)
40	Tue 10/2	14:00 – 16:00	EC1:135	Lecture 7 (JB)
40	Thu 10/4	08:00 – 10:00	EC1:135	Lecture 8 (JB)
40	Sun 10/7	Midnight		Deadline for handing in paper topic
41	Tue 10/9	14:00 – 16:00	EC1:135	Seminar S1 – group 1 (UG, TH)
41	Wed 10/10	08:00 – 10:00	EC1:135	Seminar S1 – group 2 (UG, TH)
42	Mon 10/15	08:00 – 10:00	TH office	Paper writing help desk (TH)
42	Mon 10/15	10:00 – 12:00	EC1:135	Lecture 9 (JB)
42	Thu 10/18	14:45 – 16:15	JB office	Extended office hours (replaces Lecture 10)
42	Fri 10/19	08:00 – 10:00	EC1:135	In-class exam E2 (JB)
43	Tue 10/23	14:00 – 16:00	TH office	Paper writing help desk (TH)
43-44	TBD			Student seminar S3
44	Fri 10/26	10:00 – 12:00	EC1:135	First re-take of in-class exams E1 and E2
45	11/07/18	Midnight		Deadline for handing in final paper
	TBD	TBD		Second re-take of in-class exams E1 and E2