

Themen Masterarbeiten

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1. Marktzugang und Diffusion von Innovationen

Do high quality drugs diffuse faster?

Use of low value health technology is a source of inefficiency of health care systems. Countries with high health expenditures are seeking for means to reduce such inefficiencies. One means is to evaluate the value of new drugs upon market entry. Aim of the thesis is to investigate whether high quality drugs diffuse faster and whether there is a difference between countries using HTA to evaluate drug quality.

Data:

- Prescription data Denmark: Medstat DK (<http://www.medstat.dk/da/download>)
- Prescription data Germany: upon request, selected years and variables

- Prescription data UK: <https://digital.nhs.uk/data-and-information/areas-of-interest/prescribing/practice-level-prescribing-in-england-a-summary> (very large)
- Drug quality ratings Germany: upon request

Literature:

Kyle, M., Williams, H., 2017. Is American Health Care Uniquely Inefficient? Evidence from Prescription Drugs. *American Economic Review* 107, 486–490.
<https://doi.org/10.1257/aer.p20171086>

Chandra, A., Skinner, J., 2012. Technology Growth and Expenditure Growth in Health Care. *Journal of Economic Literature* 50, 645–680.

Fischer, K.E., Heisser, T., Stargardt, T., 2016. Health benefit assessment of pharmaceuticals: An international comparison of decisions from Germany, England, Scotland and Australia. *Health Policy* 120, 1115–1122. <https://doi.org/10.1016/j.healthpol.2016.08.001>

Hat das AMNOG den Marktzugang neuer Arzneien in Deutschland verändert? - Ein Vergleich mit der französischen HTA-Behörde Haute Autorité de Santé (HAS)

In Deutschland und Frankreich (<http://www.has-sante.fr/portail/>) wird für die Bewertung von Arzneimitteln der medizinische Nutzen herangezogen, der die nachgelagerten Prozesse zur Preissetzung informiert. In Frankreich werden seit Oktober 2013 zudem Aspekte der Kosten-Effektivität berücksichtigt. Somit hat sich die Anreizstruktur für den Zeitpunkt des Markteintrittes durch den pharmazeutischen Unternehmer in beiden Ländern verändert. Ziel der Analyse ist ein Vergleich des Marktzugangs und der Ergebnisse der Nutzenbewertung zwischen dem deutschen AMNOG-Prozess und dem Verfahren in Frankreich.

Kenntnisse der französischen Sprache sind Voraussetzung. Zur Bearbeitung kann auf eine Datenbank mit AMNOG-Entscheidungen des G-BA zugegriffen werden. Es wird erwartet, dass weitere Datenpunkte zu den Entscheidungen der HAS und Daten zum Zulassungszeitpunkt auf europäischer Ebene (European Medicines Agency) erhoben werden.

Literatur:

Szerb A, Kanavos P. Health Technology Assessment of Cancer Drugs in France and Germany: Commonalities and Differences in the Value Assessment of Medical Technologies. *LSE Health Working Paper*. 2015;(43).

Bending M, Hutton J, McGrath C. A comparison of pharmaceutical reimbursement agencies' processes and methods in France and Scotland. *Int J Technol Assess Health Care*. 2012;28:187–94.

2. Einfluss von Regulierung auf Agenten und Wettbewerb in Gesundheitsmärkten

Verordnungsverhalten von Ärzten zu Biologika und Biosimilars und Regulierung in den USA

Biosimilars ähneln den biopharmazeutischen Originalarzneimitteln und unterscheiden sich somit von Generika, deren Wirkstoffe identisch zu dem chemisch-synthetisch hergestellten Original sind. Die Besonderheiten von Biosimilars im Vergleich zu Generika führen dazu, dass Ärzte bei der Entscheidung Biosimilars einzusetzen höheren Unsicherheiten ausgesetzt sind. Deshalb ergreift die Regulierung Maßnahmen, die Nachfrage nach Biosimilars zu steuern, welche kostengünstiger sind als deren Originalprodukte. Ziel der Arbeit ist es das Verordnungsverhalten von Ärzten zu untersuchen sowie die Diffusion von Regulierungen zum wirtschaftlichen Verordnen von Biologika / Biosimilars auf Ebene der Bundesstaaten in den USA.

Daten: Statewide Prescription Drug Database (<http://www.ncsl.org/research/health/prescription-drug-statenet-database.aspx>), Datensätze zur Inanspruchnahme: Medical Expenditures Panel Survey (<https://meps.ahrq.gov/mepsweb/>), US National Ambulatory Medical Care Survey (<https://www.cdc.gov/nchs/ahcd/index.htm>)

Literatur:

Scott Morton FM, Stern AD, Stern S. The Impact of the Entry of Biosimilars: Evidence from Europe. *Rev Ind Organ.* 2018 Aug 1;53(1):173–210.

Mulcahy AW, Hlavka JP, Case SR. Biosimilar Cost Savings in the United States. *Rand Health Q [Internet].* 2018 Mar 30 [cited 2019 Mar 20];7(4). Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6075809/>

Berndt ER, Gibbons RS, Kolotilin A, Taub AL. The heterogeneity of concentrated prescribing behavior: Theory and evidence from antipsychotics. *Journal of Health Economics.* 2015 Mar;40:26–39.

3. Technologiemanagement und Gesundheit

Die Inanspruchnahme biomedizinischer Innovation – Gibt es Unterschiede nach Geschlecht?

Biomedizinische Innovationen haben im letzten Jahrhundert wesentlich zur Verbesserung der Gesundheit beigetragen. In dieser Arbeit soll mit Daten aus Dänemark für ausgewählte Medikamentenklassen mittels empirischer Modelle überprüft werden, ob es Unterschiede in der Inanspruchnahme nach Geschlecht und Innovationsgrad eines Produktes gibt. Daten zum Innovationsstatus (Zeitpunkt der Erfindung) eines Medikaments werden aus bibliometrischen Daten bzw. der US-basierten Drugs@FDA Datenbank hinzugespielt. Der/die Studierende erhält entsprechende Unterstützung.

Daten:

Medstat DK (<http://www.medstat.dk/en>), Pubmed (<https://www.ncbi.nlm.nih.gov/pubmed/>), Drugs@FDA (<https://www.accessdata.fda.gov/scripts/cder/daf/>)

Literatur:

Lichtenberg FR. The long-run impact of new medical ideas on cancer survival and mortality. *Economics of Innovation and New Technology*. 2018 Dec 23;1–19.

Lichtenberg FR. The Impact of Pharmaceutical Innovation on Premature Mortality, Cancer Mortality, and Hospitalization in Slovenia, 1997–2010. *Applied Health Economics and Health Policy*. 2015 Apr;13(2):207–22.

4. Policy evaluation

Drug shortages in Europe - What is the role of cost-containment policies?

Drug shortages pose an increasing problem to health care providers. One claim that made is that cost-containment policies such as reference pricing increase the likelihood of drug shortages. Aim of the thesis is to study the patterns and causes of drug shortages in Europe.

Data:

- Shortage databases: European Medicines Agency + National Databases on Drug Shortages: <https://www.ema.europa.eu/en/human-regulatory/post-authorisation/availability-medicines/shortages-catalogue>
- Prescription data Denmark: Medstat DK (<http://www.medstat.dk/da/download>)
- Prescription data UK: <https://digital.nhs.uk/data-and-information/areas-of-interest/prescribing/practice-level-prescribing-in-england-a-summary> (very large)

Literature:

Brekke, K.R., Canta, C., Straume, O.R., 2016. Reference pricing with endogenous generic entry. *Journal of Health Economics* 50, 312–329. <https://doi.org/10.1016/j.jhealeco.2016.04.003>

Stomberg, C., 2016. Drug Shortages, Pricing, and Regulatory Activity. NBER Working Paper 22912, NBER working paper series 33.

Dave, C.V., Pawar, A., Fox, E.R., Brill, G., Kesselheim, A.S., 2018. Predictors of Drug Shortages and Association with Generic Drug Prices: A Retrospective Cohort Study. *Value in Health* 21, 1286–1290. <https://doi.org/10.1016/j.jval.2018.04.1826>

Communicating risky health behaviors in the public - the impact of public narratives on beer consumption on motor vehicle collisions in Germany

Public media may be a source to inform the public about key health topics. If news or reports include information about risky health behaviors this may have a negative impact on population health. The aim of this thesis is to test whether two narratives on beer consumption with respect to risky drinking behavior in the German public have influenced the number of motor vehicle collisions.

Data:

- DESTATIS Verkehrsunfallstatistiken 2004, 2008 (<http://www.forschungsdatenzentrum.de/bestand/strassenverkehrsunfall/index.asp>)

Literature

Brodie M, Foehr U, Rideout V, Baer N, Miller C, Flournoy R, et al. Communicating Health Information Through The Entertainment Media. *Health Affairs*. 2001 Jan 1;20(1):192–9.

Vandoros S, Avendano M, Kawachi I. The short-term impact of economic uncertainty on motor vehicle collisions. *Preventive Medicine*. 2018 Jun 1;111:87–93.

Do shocking pictures on cigarette boxes reduce smoking?

Around 100 countries have introduced shocking pictures on cigarette packages over the last decades. The student would accumulate the dates of these introductions and combine them with publicly available health information for all countries in the world.

A diverse skillset is needed for this thesis project: English, micro-econometrics, Stata and creativity.

Literature:

Brewer, Noel T., et al. "Effect of pictorial cigarette pack warnings on changes in smoking behavior: a randomized clinical trial." *JAMA internal medicine* 176.7 (2016): 905-912.

McCool, Judith, et al. "Graphic warning labels on plain cigarette packs: will they make a difference to adolescents?." *Social science & medicine* 74.8 (2012): 1269-1273.

Does the economy make you a murderer? New(spaper) evidence from the American gold rush

The student will look at the relationship of the discovery of precious metals (e.g. gold and/or silver) and murders reported in local newspapers from the second half of the 19th century. Newspaper data is scraped from large newspaper archives in the US. Precious metal data is available on a state-year level. Data for some other variables exists; other data would need to be transcribed by the student. Various sources for potential further variables can be made available.

A diverse skillset is needed for this thesis project: English, micro-econometrics, Stata and creativity.

Literature:

Ruhm, Christopher J. "Recessions, healthy no more?." *Journal of health economics* 42 (2015): 17-28.

Ruhm, Christopher J. "Understanding the relationship between macroeconomic conditions and health." *The Elgar companion to health economics* 1 (2012).

Mental health differences by occupation - An efficiency analysis

The student will conduct an efficiency analysis to determine whether certain occupations are associated with better mental health. Various datasets could be employed (GSOEP, UKHLS, HES, etc.) and various estimation techniques (Stochastic Frontier Models, Data Envelopment Analysis, etc.).

A diverse skillset is needed for this thesis project: English, micro-econometrics, Stata and creativity.

Literature:

Jacobs, Rowena. "Alternative methods to examine hospital efficiency: data envelopment analysis and stochastic frontier analysis." *Health care management science* 4.2 (2001): 103-115.

Jacobs, Rowena, Peter C. Smith, and Andrew Street. *Measuring efficiency in health care: analytic techniques and health policy*. Cambridge University Press, 2006.

The Effect of Early Childcare on Children's Outcomes

Major part of modern day life is finding a life-work balance. Labor supply of mothers' is increasing and in part, it is attributed to the extension of the early childcare (ECC) availability. Recently many countries have significantly increased the number of publicly funded early childcare slots. However, it is considered that children in this age are very sensitive to the kind of care they receive and it is argued that the best type of care is in-family care. Therefore, an evaluation of the reform that significantly expands ECC availability is required. Some of the question we would like to answer is what happens to children's cognitive development and health outcomes when introducing universal high-quality childcare for very young children under 3 that crowds out of family care. The aim of the thesis is to conduct a systematic review of empirical literature on the topic that summarizes the state of current research (with particular focus on German ECC reform).

Literature:

Cornelissen, Thomas, et al. "Who benefits from universal child care? Estimating marginal returns to early child care attendance." *Journal of Political Economy* 126.6 (2018): 2356-2409.

Felfe, Christina, Natalia Nollenberger, and Núria Rodríguez-Planas. "Can't buy mommy's love? Universal childcare and children's long-term cognitive development." *Journal of population economics* 28.2 (2015): 393-422.

Felfe, Christina, and Rafael Lalive. "Does early child care affect children's development?." *Journal of Public Economics* 159 (2018): 33-53.

The Effects of Paternity Leave Reform on Children's (and Parents') Outcomes

In recent years several European countries have introduces parental leave for fathers. This reform aims to strengthening the father-child relationship; and to promote gender equality in couples. While there exists an extended literature on the effects of maternal leave on labor supply, fertility, and child outcomes, such literature is lacking on paternity leave. We would like to conduct a systematic review of empirical literature on the topic.

Literature:

Bünning, Mareike. "What happens after the 'daddy months'? Fathers' involvement in paid work, childcare, and housework after taking parental leave in Germany." *European Sociological Review* 31.6 (2015): 738-748.

Cools, Sara, Jon H. Fiva, and Lars J. Kirkebøen. "Causal effects of paternity leave on children and parents." *The Scandinavian Journal of Economics* 117.3 (2015): 801-828.

Rege, Mari, and Ingeborg F. Solli. "The impact of paternity leave on fathers' future earnings." *Demography* 50.6 (2013): 2255-2277.