## Rhys Llewellyn Thomas

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I am an applied microeconometrician currently completing a PhD at the University of Southampton. My primary research interests are in health and public economics. I have extensive training in microeconometric methods, and I use them extensively in my work. Recently I have also developed my understanding of statistical learning techniques, and I have previously used these methods in my research. Prior to starting my PhD studies, I obtained a BSc. and MSc. in Economics both also at the University of Southampton.

#### Education

University of Southampton - Ph.D Economics

2017 - 2021 (Expected)

Working Thesis Title: "Three Essays in Health Economics"

Funding: ESRC 1+3 Ph.D Studentship (Advanced Quantitative Methods)

Compulsory Courses: Labour Economics, Health Economics & Policy and Epidemiological Methods

Additional External Courses: ECR Workshop: R for Health Economics (2020)

Partial identification in practice by Adam Rosen (2019)

Estimating causal parameters from a high dimensional model using the lasso in

Stata by David Drukker (2019)

Panel data methods by Jeffrey M. Wooldridge (2018)

University of Southampton - MSc. Economics (Distinction)

2016 - 2017

Funding: ESRC 1+3 Ph.D Studentship (Advanced Quantitative Methods)
Awards: Three Dean's list awards for outstanding academic performance

Athletic Union Half Colours

University of Southampton - BSc. Economics (First Class Honours)

2013 - 2016

Awards: Two Dean's list awards for exceptional academic performance

Talent ID Bursary Athlete

Academic Representative of the Year - Runner Up

### Working Papers

Spillover Effects of a Diabetes Diagnosis with Emmanouil Mentzakis (Job Market Paper)

Abstract: Diabetes is a unique condition, in that a positive change in lifestyle and behaviour, is both the first line treatment and the recommended method of preventing the disease. It is theoretically possible that by jointly partaking in diabetes treatment, partners of people with diabetes would substantially benefit from their partners' diabetes diagnosis. Using blood data from the Health Survey for England, and a fuzzy regression kink design, we causally estimate the effect of a diabetes diagnosis on health-related behaviours of the individual with diabetes, as well as, their partners. We find that a diagnosis of diabetes results in a significant increase in the probability of exercising and a decrease in the probability of currently being a smoker both for the diabetic individual and their partner. However, we find limited evidence of other lifestyle changes. From a public health perspective, our results are especially important for the evaluation of diabetes related policies, while positive spillovers, particularly within households, should be taken into account in the evaluation process.

Redistributive effects of public health insurance with Emmanouil Mentzakis

Abstract: Using data from the Oregon Health Insurance Experiment (OHIE) we analyse the redistributive impacts of a publicly financed health insurance expansion. We use a residual inclusion methodology combined with quantile, and ordered logit regressions to estimate the heterogeneity in the effects of health insurance across the income distribution. We find that there are indeed redistributive impacts, even in the small income window we have access to, which would otherwise be concealed in a linear regression. Those at the lower end of the income distribution tend to have a substantial increase in their disposable income as a result of health insurance coverage, while those at the upper end see no change in income.

## Work in Progress

More doctors, better health? with Thomas Hone & Christopher Millett

Abstract: Previous studies have focused on a binary measure of the Mais Médicos programme, however this clearly masks the potential differences in the effect by intensity of the treatment. We use the Generalised Synthetic Control (GSC) estimator developed by Powell (2019) to estimate the effect of the number of PMM doctors and in doing so eliminate potential bias from comparing treated and non-treated municipalities. Our analysis focuses on the effect of PMM doctors on hospitalisations and mortality. We also analyse the the heterogeneity in the treatment, and use a data-driven approach to uncover the determinants of the effect size. Our analysis allows us to make general claims regarding the impact of a primary care physician expansion, as well as make a claim regarding the optimal allocation of physicians within this PMM to maximise benefit in Brazil.

### Teaching Experience

University of Southampton - Lecturer for "Health economics and policy"

January 2020 - June 2020

Last academic year I was the lead lecturer for the masters module "Health economics and policy". The course was aimed at MSc. Public Health students whom have had limited exposure to economics beforehand. The course covers the fundamentals of economics and the main contributions to the field of health economics. For this module I gave weekly lectures, structured the module syllabus, compiled module material, and wrote the module assessments.

#### University of Southampton - Demonstrator

September 2017 - Present

Over the course of my PhD studies I have been a demonstrator and teaching assistant for various modules on a range of topics, including foundational microeconomic theory, statistical theory, applied economics and econometrics classes. My teaching evaluations have been excellent throughout that time, and have also improved in recent years. This year, I have also been required to teach courses online, and record seminars.

Teaching Assistant for the following modules:

- Undergraduate Dissertation (2017, 2018, 2019 & 2020)
- Applied Microeconomics 3 (2019 & 2020)
- Masters Dissertation (2019 & 2020)
- Quantitative Modelling in Economics (2019)
- Foundations of Microeconomics (2017 & 2018)
- Principles of Microeconomics (2017 & 2018)

Average Module Evaluation: 4.4/5

## Additional Experience

Department for Education - Higher Economic Assistant

December 2018- April 2019

At the Department for Education I worked on two main projects:

- <u>Timpson review of school exclusion technical note:</u> The analysis in the technical note aimed to estimate non-causal associations between a number of school and pupil characteristics and the probability of being excluded. We were tasked to reduce the bias caused by observable student characteristics. Published report available at <u>this link</u>
- School-level factors associated with disadvantaged pupil performance: This project involved using statistical learning techniques to analyse the factors most associated with disadvantaged pupil performance.

### Additional Activities & Responsibilities

Conferences: Royal Economic Society Conference (2021)

XXV AIES National Conference (2020)\*

30th Congress of the European Economic Association (2020) European Health Economics Association Conference (2020)\*

ALdE XXIII Applied Economics Meeting (2020)\*

ATINER International Conference on Health Economics, Management & Policy (2020)\*

ESRC South Coast DTP Final Year Conference (2019)

Economics PhD Workshop, University of Southampton (2018)

Family Finance Surveys User Conference (2017)

\*Conferences I was accepted to but was not able to attend due to the COVID-19 pandemic.

Invited Presentations: Virtual Seminar on the Economics of Risky Health Behaviors, Cornell University (2021)

Public Health Policy Evaluation Unit, Imperial College (2019)

Referee Experience: SSM - Population Health (2020)

Heylion (2018)

Administrative Department of Economics Discussion Event Organiser & Panellist (2020)

Responsibilities: Internal PhD Seminar Series organiser (2018, 2019 & 2020)

South Coast DTP Student Representative (2018, 2019 & 2020)

Economics PhD Program Student Representative (2020)

Undergraduate Economics Programs Validation Student Representative (2020)

Organiser of 1st Southampton Applied Workshop (2019)

S3RI Data Science Reading Group (2019)

Postgraduate Taught Economics Programs Validation Student Representative (2018)

SCDTP Final Year Conference Organiser (2017)

Research: Research assistant to Professor Jackie Wahba and Professor Corrado Giulietti (2020)

# Other Competencies

Languages: English (native), Welsh (native).

Software Skills: Stata (Advanced), IATEX(Advanced), R Statistics (Intermediate).

## References available upon request