University of York

Centre for Health Economics

PhD Opportunity

We are looking for exceptional individuals to apply for a funded PhD opportunity at the Centre for Health Economics (CHE). This studentship is part of a work programme of the Economic Methods of Evaluation in Health and Social Care Interventions (EEPRU). EEPRU is funded through the National Institute for Health Research's Policy Research Programme, and undertakes work for the Department of Health and Social Care and arm's-length bodies including NICE and NHS England. We are offering a studentship in the following topic area:

Estimating opportunity costs of health policies in the UK

Committing resources to a particular health policy or new health technology carries an opportunity cost, which is what could otherwise have been done with the next best available use of those resources. These opportunity costs are a key tenet of economic analysis but have had little role in economic evaluation in health. As a result, analysts often focus on the effectiveness of policies or new health technologies (i.e. the improvement in health among direct beneficiaries), while neglecting the opportunity costs and their true cost-effectiveness. The danger with this is that the negative consequences of funding these policies or new health technologies are then ignored in analysis, but felt by the population at-large as scarce resources are diverted away from other uses (often disproportionately affecting more deprived sections of the population).

Recent work has framed the estimation of opportunity costs in health as an empirical question, which has been answered by exploiting regional variations in health care expenditures and health outcomes obtained from routine data. By controlling for observable health care need, and using econometric strategies that allow for unobservable health care need (such as using instrumental variables), analysts have identified plausible estimates of the marginal productivity of health care expenditure in the English NHS.[1] This marginal productivity informs what the English NHS would likely achieve in terms of health outcomes if resources were not committed to a specific policy or new health technology and so provides an estimate of its health opportunity cost. It can also form part of the evidence base concerning allocating the appropriate level of resources across sectors, e.g. how to prioritise between health care, public health and social care.

There are alternative ways that this empirical question could be addressed and alternative ways by which results could be presented, both of which merit further investigation. For example, in terms of estimation, variations in expenditures and outcomes from policy reforms as natural experiments could form the basis of an alternative econometric strategy to using instrumental variables. Or entirely different routes to estimating opportunity costs could be pursued to establish the degree of consistency in estimates between the different approaches. And while, at present, results tend to be presented in terms of a national-level benchmark, more localised results might better inform local decision-makers who have recently been given greater autonomy within health. In addition, the policy implications for this area of research are not fully explored, for example about how estimates of health opportunity costs can inform difficult decisions about negotiating appropriate prices for new health

technologies that are often highly innovative, but with significant NHS budget impact and uncertain effectiveness.

The aim of this PhD is to further develop methods for the estimation of opportunity costs in health. The PhD could focus on a range of topics within this broad area including: using new econometric methods or other alternative approaches to estimate the effectiveness of NHS expenditure at the margin, considering better ways to present the results of analysis aimed estimating health opportunity costs, and economic modelling of implications of results for a broad range of policy questions. The PhD is likely to involve methodological and applied elements, and close collaboration with researchers within CHE and the Department of Economics and Related Studies (DERS) who are working on this topic.

The ideal candidate will have (or be about to complete) a Master's degree in economics or a specialization within economics, with a substantial quantitative component. Knowledge of econometric or statistical methods for causal inference and of the principles and methods for the economic evaluation of health care interventions would be beneficial.

Supervisory team: James Lomas, Mark Sculpher

References

(1) Lomas, J.; Martin, S.; Claxton, K. Estimating the marginal productivity of the English National Health Service from 2003/04 to 2012/13. Policy Research Unit in Economic Evaluations of Health & Care Interventions, York. December 2017. Available from: http://www.eepru.org.uk/allocative-efficiency/.

Supervision and research environment

The successful candidate will be supervised in CHE and will be registered through the Department of Economics and Related Studies or the Department of Health Sciences at the University of York. This is an opportunity to work in close contact with researchers in one of the most successful health economics research groups in the UK. CHE has a leading international reputation, and is one of the world's largest health economics research centres. Its mission is to undertake "high quality research that is capable of influencing health policy decisions". The Centre attracts some of the best and brightest people in the field in the form of PhD students and visitors from overseas, creating a vibrant research environment. The University of York is widely recognized as one of the leading research universities in the UK and is also at the top of the teaching quality rankings.

CHE has an Athena SWAN Silver award which recognises our commitment to good practice in recruiting, retaining and supporting the careers of women. We strive to provide a supportive culture and family friendly work environment and to offer equal opportunities to all staff members. We seek to ensure the policies and procedures in the department are fair and support good work practices for everyone.

The award

The award will cover academic fees at the UK/EU rate plus a maintenance stipend for 3 years (£15,009 in 2019/20). Non-EU/UK students will be expected to meet the cost of the difference between the UK/EU rate and the International (non-EU) rate.

Students are welcome to register full-time or part-time.

Eligibility criteria

To register in the Department of Economics, the ideal candidate will have (or be about to complete) a master's degree in economics or a specialization within economics, with a substantial component in econometrics or a related quantitative subject. The English language requirement is IELTS: 6.5, with no less than 6.0 in each component.

To register in the Department of Health Sciences, please note the English Language requirement is a total IELTS score of at least 7 (or equivalent) with a minimum score of 6.5 in each component of the test.

Process for application

Applications should be received no later than 9 June 2020 before 16.00h (UTC)**.**

Applications should be made using the University of York on-line application process which can be accessed using the following link. http://www.york.ac.uk/study/postgraduate/apply/. Select PhD in Economics on the application form, in order to be registered in the Department of Economics and Related Studies. Alternatively, select PhD in Health Sciences to be registered in the Department of Health Sciences. Insert reference **CHE EEPRU HOC PHD2020** in "How studies will be funded" field. Please also provide a curriculum vitae and two academic references. In addition, you should upload an outline of your intended approach to the area of research, noting the potential methods or approaches that could be used (Note that for this particular studentship you are only required to submit up **to 500 words in PDF** format). If you have already published academic papers, one of these may also be uploaded.

Interviews

Shortlisted candidates will be interviewed (by ZOOM). Interviews take place on Tuesday 7 July 2020.

At interview, candidates will be expected to give a short presentation on their proposed project including relevant literature, potential data sources and applicable methods. It should also focus on their plans for the studentship for which they have applied and the skills they would bring to their doctoral research.