



Deposited via The University of Sheffield.

White Rose Research Online URL for this paper:

<https://eprints.whiterose.ac.uk/id/eprint/181220/>

Version: Published Version

Article:

Naik, Y., Brook, A., Perraton, J. et al. (2021) Fiscal and monetary policies: the cutting edge of advocacy and research on population health and climate change. *Perspectives in Public Health*, 141 (6). pp. 325-327. ISSN: 1757-9139

<https://doi.org/10.1177/17579139211059983>

Reuse

This article is distributed under the terms of the Creative Commons Attribution (CC BY) licence. This licence allows you to distribute, remix, tweak, and build upon the work, even commercially, as long as you credit the authors for the original work. More information and the full terms of the licence here:

<https://creativecommons.org/licenses/>

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.

Fiscal and monetary policies: the cutting edge of advocacy and research on population health and climate change

This article outlines the likely mechanisms through which fiscal and monetary policies affect health and the environment, summarising innovative policies that may hold promise for planetary and population health.

Y Naik 

The University of Sheffield and Leeds
Teaching Hospitals NHS Trust, Sheffield,
UK

A Brook 

The University of Sheffield and Leeds
Teaching Hospitals NHS Trust, Sheffield,
UK

Email: anna.brook1@nhs.net

J Perraton 

The University of Sheffield, Sheffield, UK

P Meier

University of Glasgow, Glasgow, UK

Corresponding author:

Anna Brook, as above

INTRODUCTION

The recent pandemic, along with the pressing challenges of climate change and biodiversity loss, has led to increased recognition of the need for new forms of economic policy that prioritise people's health and the environment.¹

Macroeconomic policy includes fiscal and monetary policy.² Fiscal policy involves choices around government revenue and spending and the balance between the two. Monetary policy includes setting interest rates and purchasing government securities or other assets. A wide range of such policies have been deployed following COVID-19.³

This article advocates complexity modelling as an innovative approach to study these policies given the multiple relevant mechanisms of effect. It then draws conclusions for future research priorities and public health action.

HOW FISCAL AND MONETARY POLICY AFFECT POPULATION HEALTH AND CLIMATE CHANGE

Fiscal and monetary policy can significantly affect population health and environmental outcomes, for example through their influence on economic growth, which is often associated with improvements in population health.^{4,5} Beneficial effects of economic growth are thought to be due to increased government investment in services and infrastructure that promote good health, as well as increases in employment opportunities and household income. However, economic growth is currently also a driver of climate change and biodiversity loss, both of which have negative implications for population health and for economic

growth itself.^{1,6} There is a substantial debate about the ongoing focus on economic growth, including whether there may be limits to this growth,⁷ or whether it is possible to 'decouple' it from resource use and carbon emissions.⁸

Fiscal and monetary policies may also affect health and health inequalities through their impacts on other macroeconomic factors such as inequality and poverty.⁹ There are complex relationships between these various macroeconomic factors, and their collective influence on health outcomes has not been robustly conceptualised or extensively studied. More direct mechanisms include changes in consumption such as reduced fossil fuel use and concomitant air pollution due to carbon taxes.¹⁰

INNOVATIVE FISCAL AND MONETARY POLICIES

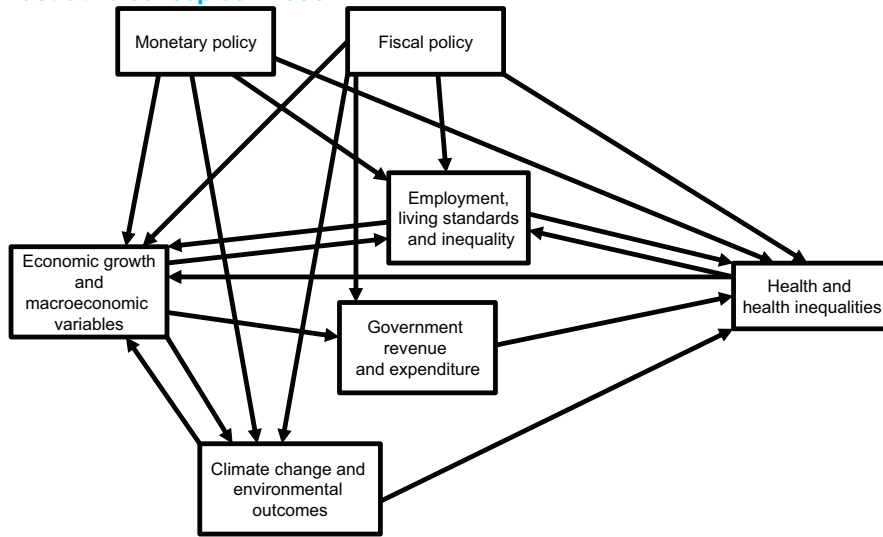
Many innovative fiscal and monetary policies have been proposed to address climate change.¹¹ These include reducing subsidies to fossil fuel companies, or central banks reallocating resources to sustainable economic sectors. The Green New Deal is a combination policy designed to address climate change and social inequality through government investment in a greener and more equal society with a focus on good jobs.¹² The Green New

The Green New Deal is a combination policy designed to address climate change and social inequality through government investment in a greener and more equal society with a focus on good jobs

Fiscal and monetary policies: the cutting edge of advocacy and research on population health and climate change

Figure 1

Illustrative conceptual model



Deal is one example of such innovative policies that has been gathering support from health advocates.¹³

There is no integrated view of how these different fiscal and monetary policies influence health and environmental outcomes that takes into account the distinct and overlapping mechanisms of effect. It is therefore not currently possible to develop a robust appraisal of the likely health impacts of these innovative policies, or to assess how individual policies or combinations of them might result in synergies or trade-offs across health and environmental outcomes.¹⁴

An illustrative conceptual model summarising some of the mechanisms and policies described above is provided in Figure 1.

COMPLEX SYSTEMS MODELLING?

The large number of dynamic relationships and feedback loops linking the economy, population health and environmental outcomes points to these forming part of a complex system.¹⁵ Complex systems require specific research methods, as they are characterised by nonlinear behavioural dynamics – for example stable states and tipping points (where the system undergoes a sudden shift) or emergence (where the behaviour of the whole

system is qualitatively different from the behaviour of its individual components, and therefore whole system behaviour cannot be predicted from studying only the individual parts).

Given the wide range of relevant variables, limited uptake of key policy proposals and the urgent nature of environmental issues, modelling is an ideal strategy to assess the likely impacts of innovative fiscal and monetary policy to aid the further development of policy priorities and proposals. Modelling is particularly able to test a wide range of assumptions when there is uncertainty – as there is in this case.¹⁴

Past models have incorporated the relationships between the economy, the environment and determinants of health such as employment or inequality but to date these models have not considered health outcomes or health inequalities.¹⁶

IMPLICATIONS

Achieving greater clarity on the likely health impacts will require collaboration across disciplines. While the urgency of climate change means we cannot wait for perfect evidence, we argue that increased

understanding about the potential health impacts of monetary and fiscal policies is necessary to help steer policy as it develops. This will only be achieved if research funders prioritise this topic. It will also require interdisciplinary collaborations between public health, economics and environmental scientists. This article has made a case for complex systems modelling as a viable methodological approach for addressing these questions, though it is clear that there is also a need for more social epidemiology that can illuminate the relationships between the diverse variables in question and be used to populate such complex models. Such models can and should also be used to connect with public conversations about shared values that will shape trade-offs and decisions as we build a fairer, greener society and economy.

As health advocates, we should be clear about the evidence base for our policy demands. We should also be transparent about ethical trade-offs between the quality of evidence, levels of uncertainty and the urgent need for action. It seems clear that no single policy can solve climate change and health inequalities, requiring the adoption

It seems clear that no single policy can solve climate change and health inequalities, requiring the adoption of a broad portfolio of well-aligned fiscal and monetary policies

of a broad portfolio of well-aligned fiscal and monetary policies.

Public health agencies will also have a key role to play by working with key government departments such

as finance ministries and central banks to embed health and wellbeing at the heart of fiscal and monetary policy.

CONFLICT OF INTEREST

The author(s) declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article: YN was recently the Interim Director at the UK Health Alliance on Climate Change which is calling for policies considered in this article. YN is now employed by London Borough of Merton which accepts no liability for the views expressed in this paper. Other authors report no conflicts of interest to disclose.

Fiscal and monetary policies: the cutting edge of advocacy and research on population health and climate change


FUNDING

The author(s) disclosed receipt of the following financial support for the research, authorship and/or publication of this article: PM was supported by the UK Prevention Research Partnership SIPHER Consortium (MR/S037578/1, Meier). PM also receives

funding from the UK Medical Research Council and Chief Scientist Office grants MC_UU_00022/5 and SPHSU20. All salaries were paid by respective employers, no other funding was received for this work and funders did not have a role in the manuscript.

ORCID IDS

Yannish Naik  <https://orcid.org/0000-0001-7719-9984>

Anna Brook  <https://orcid.org/0000-0003-3771-3904>

Jonathan Perraton  <https://orcid.org/0000-0003-3743-6847>

References

- HM Treasury. Final report – the Dasgupta review: independent review on the economics of biodiversity, 2021. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962785/The_Economics_of_Biodiversity_The_Dasgupta_Review_Full_Report.pdf (last accessed 25 May 2021).
- Horton M, Ganainy A. Fiscal policy: taking and giving away, 2020. Available online at: <https://www.imf.org/external/pubs/ft/fandd/basics/fiscpol.htm> (last accessed 5 September 2020).
- IMF. Policy responses to COVID-19, 2020. Available online at: <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19> (last accessed 6 September 2020).
- Lange S, Vollmer S. The effect of economic development on population health: a review of the empirical evidence. *Br Med Bull* 2017;**121**(1):47–60.
- Ridhwan M, de Groot H, Nijkamp P *et al*. The impact of monetary policy on economic activity – evidence from a meta-analysis, 2010. Available online at: <https://research.vu.nl/ws/portalfiles/portal/2717546/10043.pdf> (last accessed 5 June 2020).
- Stern S. Economic development, climate and values: making policy. *Proc R Soc B* 2015;**282**:20150820.
- Meadows DH, Meadows DL, Randers J *et al*. *The limits to growth; a report for the club of Rome's project on the predicament of mankind*. New York: Universe Books; 1972.
- Otero I, Farrell K, Pueyo S *et al*. Biodiversity policy beyond economic growth. *Conserv Lett* 2020;**13**(4):e12713.
- Mosquera I, González-Rábago Y, Bacigalupe A *et al*. The impact of fiscal policies on the socioeconomic determinants of health: a structured review. *Int J Health Serv* 2017;**47**(2):189–206.
- Ambasta A, Buonocore JJ. Carbon pricing: a win-win environmental and public health policy. *Can J Public Health* 2018;**109**(5–6):779–81.
- Krogstrup S, Oman W. *Macroeconomic and financial policies for climate change mitigation: a review of the literature*. IMF Working Paper No. 19/185, 4 September 2019. Available online at: <https://www.imf.org/en/Publications/WP/Issues/2019/09/04/Macroeconomic-and-Financial-Policies-for-Climate-Change-Mitigation-A-Review-of-the-Literature-48612> (last accessed 5 September 2020).
- Galvin R, Healy N. The Green New Deal in the United States: what it is and how to pay for it. *Energy Res Soc Sci* 2020;**67**:101529.
- Abrams R, Adhikari R, Aked H *et al*. *The public health case for a Green New Deal*. London: Medact; 2021.
- Meier P, Purshouse R, Bain M *et al*. The SIPHER Consortium: introducing the new UK hub for systems science in public health and health economic research [version 1; peer review: 2 approved]. *Wellcome Open Res* 2019;**4**:174.
- Byrne D, Callaghan G. *Complexity theory and the social sciences*. London: Routledge; 2014.
- Hardt L, O'Neill D. Ecological macroeconomic models: assessing current developments. *Ecol Econ* 2017;**134**:198–211. Available online at: <https://www.sciencedirect.com/science/article/pii/S0921800916303202>

Level 2 Food Safety and Hygiene E-learning

RSPH
ROYAL SOCIETY FOR PUBLIC HEALTH
VISION, VOICE AND PRACTICE

Our e-learning programme offers a flexible, simple approach to studying food safety and is designed to fit around professional schedules.

Safe food is a significant element of public health. It is a legal requirement that anyone who handles food for others (either paid or voluntary) must receive training or instruction in how to handle food safely. Our Food Safety programme covers:

- Keeping food safe
- Personal hygiene in food safety
- Hygiene in the work area
- Legal responsibility for food safety
- The application and monitoring of good food safety procedures

Suitable for food handlers in catering, retail, child care and residential care and also for training centres as part of their blended learning programme.

Please note that this is an e-learning programme only. To obtain the RSPH Level 2 Award in Food Safety in Catering, candidates can sit an invigilated exam with a recognised RSPH centre.

For more information or to discuss tailoring the programme, please contact learn@rsph.org.uk or call 0207 265 7372

 Twitter: @R_S_P_H  Facebook: Royal Society for Public Health  LinkedIn: Royal Society for Public Health