



Economic
and Social
Research Council



Misinformation, Trust, and Vaccine Uptake: Theory and Evidence from the UK

ESRC DTP Collaborative Studentship

University of Birmingham and UK Health Security Agency (UKHSA)

The Midlands Graduate School is an accredited Economic and Social Research Council (ESRC) Doctoral Training Partnership (DTP). One of 15 such partnerships in the UK, the Midlands Graduate School is a collaboration between the Universities of Warwick, Birmingham, Nottingham, Aston, Leicester, Loughborough, De Montfort and Nottingham Trent.

The University of Birmingham as part of Midlands Graduate School is now inviting applications for an ESRC Doctoral Studentship in association with our collaborative partner UK Health Security Agency to commence in October 2026. **The studentship is available to students with home fee status only.**

Project Outline

Vaccines are among the most effective tools for controlling infectious diseases, yet vaccination uptake in the UK has declined in recent years. Understanding the economic and behavioural determinants of vaccine hesitancy is central to effective public-health policy and pandemic preparedness.

This PhD project lies at the intersection of economic epidemiology, political economy, and data-driven analysis. It will develop economic models to study how vaccination decisions are shaped by misinformation, trust in institutions, and socio-economic heterogeneity, and how these forces interact over time.

The project has three closely linked components.

- Theoretical modelling in economic epidemiology using modern dynamic frameworks that integrate disease transmission with individual behaviour, incentives, and policy interventions.
- Rigorous empirical analysis of UK data to identify the socio-economic and political-economic determinants of vaccine uptake with a focus on causal interpretation and policy relevance.
- The role of misinformation and information environments using state-of-the-art large language models (LLMs) linking these measures to observed vaccination outcomes.

Training, collaboration and supervision

The student will be based in the Department of Economics, Birmingham Business School, and will follow the ESRC DTP training pathway, receiving advanced instruction in economic theory, econometrics, and research methods. Additional training in economic epidemiology modelling, machine learning, text analysis, and computational methods will be available.

The studentship includes a structured placement at UKHSA, offering direct exposure to policy-facing analysis and public-health modelling.

Candidate profile

Applicants should have

- A strong quantitative background in economics or a closely related discipline.
- Be comfortable working with large-scale data and conducting rigorous empirical analysis. Prior experience with research projects is desirable.
- Experience with programming and computational methods is an advantage. This includes familiarity with languages such as Python, R, Julia, or similar, and exposure to data science, machine learning, or text-as-data methods.

Strong analytical foundations and the ability to learn new methods are more important than prior experience with specific tools. The project is well suited to candidates with experience in analytical and mathematical methods and an interest in combining economic theory with empirical research.

Application Process

To be considered for this PhD, please complete the Collaborative Studentship application form available online here: <https://forms.office.com/e/fky2RsXX8z>. Applicants will be required to upload an anonymised CV, anonymised cover letter, and transcripts as part of the online application process.

Application deadline: Sunday 7th June

Midlands Graduate School ESRC DTP

Our ESRC studentships cover fees, a maintenance stipend, and extensive support for research training, as well as research activity support grants. Support is available to both home and international applicants. For further details, visit: www.mgsdtp.ac.uk/studentships/eligibility/.

Informal enquiries about the research or Department of Economics, University of Birmingham prior to application can be directed to a.goenka@bham.ac.uk.