

Postdoctoral Research Fellowship in Dynamic Economic Modelling in the Centre for Social Science Research

The [Adolescent Accelerators Research Hub](#) (AARHub) in [Centre for Social Science Research](#) (CSSR) seeks to recruit an exceptional quantitative postdoctoral researcher to join a multi-country, multi-institutional research collaboration focused on economic modelling and return-on-investment (ROI) analysis for programmes improving outcomes among children and adolescents across Africa. This post is part of a partnership between the Universities of Oxford, Cape Town, and the Witwatersrand, working with the Gates Foundation and government partners across Africa. The project aims to identify and model cost-effective, scalable interventions that improve education, health, and economic outcomes for children and adolescents and to generate evidence-based investment cases to guide policy and funding decisions.

The Postdoctoral Research Fellow will lead the design, implementation, and analysis of economic models estimating the cost-effectiveness and ROI of adolescent-focused interventions in Sub-Saharan Africa, working closely with senior investigators and international collaborators. The fellow will build and apply economic models, conduct advanced quantitative analyses, estimate costs and returns for intervention packages, integrate national datasets into dynamic models, and contribute to policy-focused publications and investment cases for governments and donors.

The CSSR is an interdisciplinary research centre at the University of Cape Town dedicated to conducting and building capacity for systematic, policy-relevant social science research in South Africa, the region and across Africa. Our teams work on translating mixed-methods multi-disciplinary research evidence into programmatic recommendations, and cost-effectiveness, cost-benefit and investment cases for potential interventions and combinations of interventions that improve the lives of adolescents and young people. Our unified goal is to promote high-quality evidence to improve the lives of adolescents in resource-limited settings. We welcome applications from participants with experience in innovative approaches and enthusiasm for these shared research and advocacy goals.

Conditions of Award:

Eligible applicants must have completed their doctorate within the past 4 years, and may not previously have held full-time permanent professional or academic posts.

The successful candidate will have:

- Doctorate (PhD/DPhil) in economics, health economics, statistics, public health, or quantitative social sciences.
- Advanced quantitative analysis skills with statistical programming in R and Stata.
- Experience applying economic evaluation or modelling methods such as cost-effectiveness, cost-benefit, or ROI analysis.
- Demonstrated record of high-quality research outputs in peer-reviewed publications with first-authored and co-authored papers in peer-reviewed publications of their field.
- Demonstrated record of having presented at conferences, seminars, and/or workshops.
- Strong communication skills with ability to translate complex analyses for policy audiences.
- Experience working on research on health, education, and other outcomes for children and/or adolescent in lower and middle income countries.

- Experience working with interdisciplinary and international teams, ideally in Low- and Middle-Income contexts.
- Commitment to improving outcomes for children and adolescents in Sub-Saharan Africa.
- Organisational skills and ability to work independently and to deadlines.
- The ability and willingness to teach and mentor quantitative methods.
- The ability to travel for work when needed.

The successful candidate will be required to complete the following research deliverables:

- Develop advanced simulation-based economic models, using Markov, general equilibrium modelling, and Lexis-type modelling techniques for comprehensive cost-effectiveness and return-on-investment (ROI) analyses.
- Conduct costing analyses, in collaboration with implementing partners, using programmatic and administrative datasets from multiple countries.
- Integrate parameters derived from published statistical analyses of randomised trials and longitudinal studies to develop life-course simulation-based models.
- Conduct advanced secondary statistical analyses including multi-level, structural equation, and longitudinal models to generate key parameters for simulation and economic modelling.
- Contribute to data cleaning, merging, management, and visualisation.
- Lead or contribute to peer-reviewed publications, conference presentations, and/or other platforms (for examples, policy or research briefs).
- Prepare materials for dissemination to policy stakeholders and represent the research group in relevant academic and policy meetings.
- Work with diverse data sources including private sector and climate data.
- Present their work at seminars, conferences, workshops, and/or public meetings.
- Manage their own academic research and administrative activities. This involves small-scale project management, to co-ordinate multiple aspects of work to meet deadlines.
- Contribute to strategic planning and scenario analyses for new funding mechanisms, including debt-for-development swaps, climate adaptation financing, and private sector investment models.
- Act as a source of information and advice and contribute to capacity-building and mentorship of early-career researchers.
- Prepare and edit study protocols and ethical approval packages (as needed).

Advantageous skills/experience include if the applicant has:

- Experience conducting economic modelling in LMIC contexts or for multi-sectoral interventions.
- Knowledge of demographic, health, or education datasets (e.g., DHS, MICS, VACS, PIRLS, GAGE).

- Experience engaging policymakers or contributing to investment cases for donors or governments.
- The ability to communicate technical research considerations to policymakers in a non-technical manner;
- Published papers in international peer-reviewed journals, and/or
- Convened courses, or mentored/supervised students.

The candidate will be supervised by Prof Elona Toska together with A/Prof William Rudgard (Oxford University/UCT Honorary Research Associate), and work closely with Prof Lucie Cluver (Oxford/UCT) and Prof Chris Desmond (University of the Witwatersrand).

Moreover, the candidate:

- May not hold any other fellowships without permission of their supervisor;
- May not undertake employment of any nature without the permission of their supervisor; and
- Must comply with the University's approved policies, procedures and practices for the postdoctoral sector.

Value and Tenure:

The value of the fellowship is R343,000-R543,000 per annum, depending on experience and qualifications. Flexibility on a start date can be discussed and the fellowship amount will be prorated in line with the starting date. Renewal for a further year may be considered and is contingent of satisfactory academic progress and availability of funds.

Application Procedure:

Eligible candidates should provide the following in ONE SINGLE PDF:

- A letter describing research interest and the candidate's suitability for the fellowship, highlighting how they meet the requirements for the fellowship.
- A CV that includes details for all conference attendance, publications and any other scholarly research output, and the names of two academic referees who have taught/supervised the candidate at university and can speak to their skills.
- A published written sample of their work that includes quantitative research led by the applicant.

Enquiries and completed application should be forwarded to:

Jolene Steenkamp (Jolene.steenkamp@uct.ac.za)

Closing date for receipt of applications: January 16, 2026

Selection: Eligible applicants will be considered by a sub-committee convened by the CSSR.

Please reference **"2026 CSSR Economic Modelling Postdoctoral Research Fellow"** in the email subject line.

<p>The University of Cape Town reserves the right to disqualify ineligible, incomplete, and/or inappropriate applications, to change the conditions of award and/or to make no awards at all.</p>
