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Pudney, Stephen; Hancock, Ruth; Sutherland, Holly

**Working Paper**

# Simulating the reform of means-tested benefits with endogenous take-up and claim costs

ISER Working Paper Series, No. 2004-04

**Provided in Cooperation with:**
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*Suggested Citation:* Pudney, Stephen; Hancock, Ruth; Sutherland, Holly (2004) : Simulating the reform of means-tested benefits with endogenous take-up and claim costs, ISER Working Paper Series, No. 2004-04, University of Essex, Institute for Social and Economic Research (ISER), Colchester

This Version is available at:
https://hdl.handle.net/10419/91935

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# SIMULATING THE REFORM OF MEANS-TESTED BENEFITS WITH ENDOGENOUS TAKE-UP AND CLAIM COSTS

**Stephen Pudney**

**Ruth Hancock**

**Holly Sutherland**

**ISER Working Papers**
**Number 2004-04**

## Institute for Social and Economic Research

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- ESRC Research Centre on Micro-social Change. Established in 1989 to identify, explain, model and forecast social change in Britain at the individual and household level, the Centre specialises in research using longitudinal data.

- ESRC UK Longitudinal Studies Centre. This national resource centre was established in October 1999 to promote the use of longitudinal data and to develop a strategy for the future of large-scale longitudinal surveys. It was responsible for the British Household Panel Survey (BHPS) and for the ESRC's interest in the National Child Development Study and the 1970 British Cohort Study

- European Centre for Analysis in the Social Sciences. ECASS is an interdisciplinary research centre which hosts major research programmes and helps researchers from the EU gain access to longitudinal data and cross-national datasets from all over Europe.

The British Household Panel Survey is one of the main instruments for measuring social change in Britain. The BHPS comprises a nationally representative sample of around 5,500 households and over 10,000 individuals who are reinterviewed each year. The questionnaire includes a constant core of items accompanied by a variable component in order to provide for the collection of initial conditions data and to allow for the subsequent inclusion of emerging research and policy concerns.

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BHPS data provide the academic community, policymakers and private sector with a unique national resource and allow for comparative research with similar studies in Europe, the United States and Canada.

BHPS data are available from the Data Archive at the University of Essex
http://www.data-archive.ac.uk

Further information about the BHPS and other longitudinal surveys can be obtained by telephoning +44 (0) 1206 873543.

*The support of both the Economic and Social Research Council (ESRC) and the University of Essex is gratefully acknowledged. The work reported in this paper is part of the scientific programme of the Institute for Social and Economic Research.*

**Acknowledgement:** We are grateful to the Economic and Social Research Council for financial support of this research, under project grant R000239105. Material from the Family Resources Survey, made available by the Department for Work and Pensions via the UK Data Archive, has been used with permission. Geraldine Barker and Monica Hernandez provided valuable assistance. All responsibility for the analysis and interpretation of the data presented here lies with the authors. Participants in the NATSEM International Conference on Microsimulation, Canberra, December 2003 made valuable comments.

**Readers wishing to cite this document are asked to use the following form of words:**

> **Pudney, Stephen, Ruth Hancock and Holly Sutherland (March 2004) 'Simulating the reform of means-tested benefits with endogenous take-up and claim costs', *Working Papers of the Institute for Social and Economic Research*, paper 2004-xx. Colchester: University of Essex.**

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Institute for Social and Economic Research
University of Essex
Wivenhoe Park
Colchester
Essex
CO4 3SQ UK
Telephone: +44 (0) 1206 872957
Fax: +44 (0) 1206 873151
E-mail: iser@essex.ac.uk
Website: http://www.iser.essex.ac.uk

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**ABSTRACT**

Microsimulation models are commonly used to examine the distributional impact of reforms of the means-tested benefit system. Take-up behaviour is related to the level of entitlement, so reform may induce changes in take-up. We develop a stochastic simulation method and apply it to a probit model of Income Support take-up by British pensioners. The method allows us to adjust net income for the welfare losses due to tangible or intangible claim costs. Endogenous take-up and claim costs both have an important impact on the simulated outcomes of the policy reform.

## NON-TECHNICAL SUMMARY

In the UK, means-testing plays a large role in the targeting of welfare benefits on those in need. Examples of means-tested benefits include Income Support, Housing Benefit and Council Tax Benefit, which are only available to those with sufficiently low levels of income and savings. While means-testing is effective in controlling the cost of the benefit system, the necessity to claim one's entitlement and then meet an income/assets test may deter some low-income households from taking up their entitlements.

Analysis of the impact of a proposed reform of the benefit system is usually done by means of microsimulation models, which examine the financial impact of the reform on a large sample of individual households. Such simulations are most commonly done under very strong assumptions about take-up behaviour (for example, 100% take-up) and they usually make no attempt to quantify the claim costs which prevent people claiming their entitlements.

In this paper, we do four things:

(1) We develop a statistical model of the take-up of Income Support (also known as the Minimum Income Guarantee) by pensioners, using data from the Family Resources Survey from the three tax years 1997-2000. We focus on the group of older pensioners (specifically 1- and 2-pensioner households, with members at least 5 years over state retirement age), who have a relatively high poverty rate. The take-up model demonstrates that the dominant influence on take-up behaviour is the size of the entitlement – people are more likely to claim large amounts than small ones – but it also identifies other important influences.

(2) We develop a method of taking take-up behaviour into account when simulating the impact of a benefit reform, together with a method of constructing confidence intervals to indicate the statistical reliability of the simulation results.

(3) We show how to quantify in cash-equivalent terms, the barriers to take-up (which might include social stigma, the "hassle" of claiming, the difficulty of finding out about the benefit system, etc.). It is then possible to adjust benefit income by subtracting these implicit claim costs to give a measure of income net of claim costs.

(4) We explore a hypothetical benefit reform that replaces the Housing Benefit and Council Tax Benefit systems with a housing allowance addition to Income Support. This new allowance would depend on regional average rents but not on the rent a claimant actually pays. Thus, unlike the present system, there would be no incentive for claimants to expand their housing expenditure at public expense. Using the simulation methods we have developed, we show that take-up behaviour makes a significant difference to the measured impact of the reform on poverty rates and thus to the policy conclusions that would be reached.