



Implementing a UK longitudinal survey in EUROMOD

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Introduction

Aim

To extend the types of analysis possible using EUROMOD by implementing a version using Understanding Society, the United Kingdom Household Longitudinal Study (UKHLS).

The project aims to extend the ways in which tax and benefit policies in the UK can be investigated by exploiting unique features of the UKHLS. UKHLS is a representative household panel survey which in its first sample wave contained detailed economic and sociodemographic information of 100,000 individuals in more than 40,000 households. The first wave started in 2009. It includes the sample from the British Household Panel Survey which has been interviewed since 1991.

Unique features of UKHLS

Researchers will be able to link key features UKHLS to EUROMOD analyses. These include::

- Household panel design: longitudinal information on individuals and changing households
- Annual interviews providing high frequency measurement
- Very large sample size (possible to analyse specific sub groups of interest)
- Ethnic minority boost sample
- Design covers a very wide range of topics
- Rich health and biomarker data

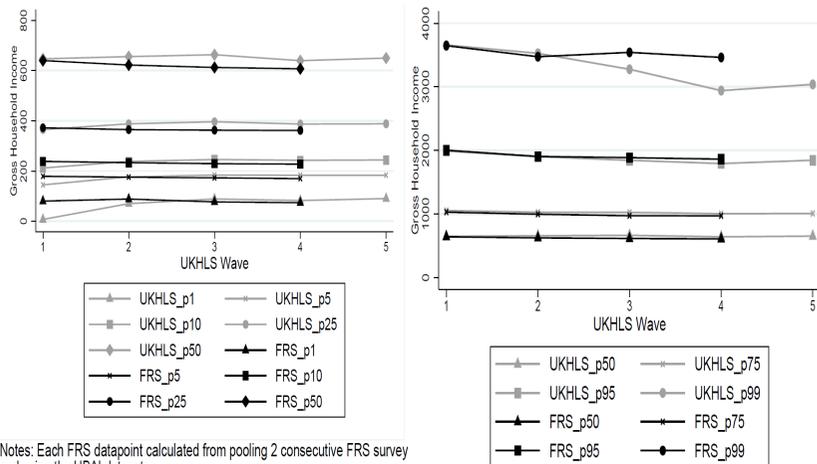
Motivation and purpose

Whilst existing microsimulation models already exist for the UK, for example the Family Resources Survey is used for the current UK input data for EUROMOD and also forms the basis of the EU-SILC for the UK; these models these are cross-sectional and therefore cannot consider the relationship between changing individual and household circumstances and changing policies.

The very nature of policies is that they are intended to affect individual behaviour. UKHLS offers researchers the unique ability to evaluate tax and benefit policies and follow the same individuals from one year to the next. We hope the model will open a new avenue of research for research carrying out evaluation of tax and benefit policies.

It aims to support linking the effects of tax-benefit changes to a wide range of transitions, including demographic changes, to study how the effects of tax and benefit changes evolve as people age, using longitudinal histories to better simulate certain tax-benefit components, linking the effects of tax-benefit policies to wide range of other characteristics measured in the UKHLS including health, education, attitudes, family relationships within and outside the household.

Comparing income distributions: FRS vs UKHLS



Discussion

The graph shows that percentiles of the income distribution in UKHLS and FRS as reported in the surveys are very similar. This consistency suggests that the UKHLS provides a comparable basis for exploring tax and benefit policies using EUROMOD.

We will also compare distributions of all variables used in the UKHLS input dataset with their FRS counterpart as well as simulated distributions.

Conclusion

Existing microsimulation models in the UK are based on cross sectional data. This project will use Understanding Society, the largest household panel study of its kind in the world in EUROMOD.

We hope that UKHLS-EUROMOD will provide new exciting opportunities to researchers wanting to understand the behavioural implications of tax-benefit modelling in the UK.

Methods and progress

We have started by implementing a single wave (Wave 4) in EUROMOD. This wave was chosen because it included the wealth supplement. We have established that all required input variables can be produced, occasionally with some additional imputation. Initial results from a comparison of simulations with those based on FRS suggest a good level of comparability in most cases.

There are some issues still to resolve on this single wave imputation, in particular the fact that the UKHLS single wave fieldwork period covers two calendar years and thus three policy years.