The Use of Hypothetical Household Data for Policy Learning

Comparative tax-benefit indicators using EUROMOD HHoT

Katrin Gasior & Pasquale Recchia

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University of Essex

ISER INSTITUTE FOR SOCIAL & ECONOMIC RESEARCH

Tax-benefit microsimulation and hypothetical households 1/2

1. Tax-benefit microsimulation models typically assess the effect of tax-benefit policies by considering:
   - The interaction effects of policies
   - And the population structure in the underlying micro data
2. Tax-benefit microsimulation models are important tools for assessing the social impact of policy change, where:
   - Concrete examples can help to understand the effects
   - By abstracting from the complexity of the population structure
   - By presenting the pure policy effect

Tax-benefit microsimulation and hypothetical households 2/2

3. As such, they are not a substitute for distributional analysis – i.e. of the actual income distribution – but a valuable complement for various purposes and user groups (Burlacu et.al. 2014)

	Communication	Illustration	Cross-national comparison	Validation of simulations	Creating own data
Wider public	X	**X**	**X**	-	-
Policy analyst	X	**X**	**X**	X	X
Researcher	X	**X**	**X**	X	X

Policy Learning

Policy learning

- Learning from each other is an important element of policy reforms → policy diffusion (Dobbin et.al. 2007) and policy transfer (Dolowitz and Marsh 2000)
- Countries systematically respond to other countries' reforms by copying or by reacting to the pressure resulting from the reform (Obinger et.al. 2013)
- Intergovernmental exchange and collaboration within the European Union has strengthened and institutionalised this long history of policy learning
  - Many tax-benefit system in the EU show similarities in policy design
  - Policy learning can be used to reduce the uncertainty of consequences of policy change.

Policy learning using tax-benefit microsimulation models

- Provide a better understanding of how different policy designs affect the income situation of a specified household.
- Offer a reference point (baseline results) of current tax and benefit system in the EU.
- Aim of this paper: show how hypothetical household data can be used for both scientific research and policy analysis using EUROMOD HHoT

Hypothetical Household Tool (HHot)

- EUROMOD application for generating hypothetical household data based on user-specified characteristics (Goedemé et al. 2018)
  - Developed by University of Essex and University of Antwerp in the EU-funded InGRID project
  - Freely accessible, user-friendly and flexible (allows user to create ANY type of household)
  - Part of EUROMOD interface allows
    - To explore cross-national differences over time (more than 10 years in most countries)
    - To analyse the effect of policy change
    - To analyse work incentives
  - To carry out analysis on households not well captured in EU-SILC
  - To simulate policies that cannot be simulated using the standard EUROMOD model

Examples using HHoT

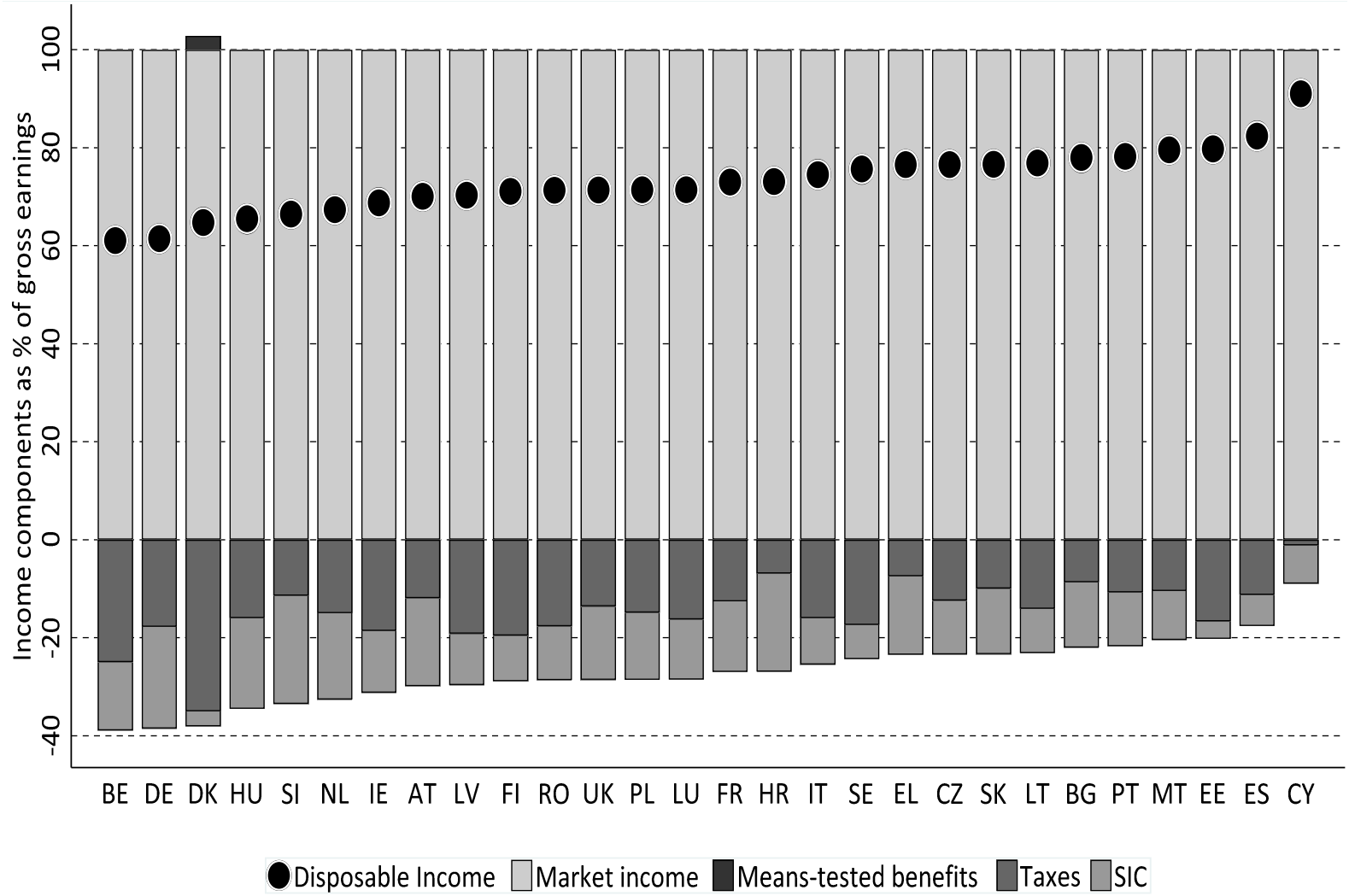
- Urban et al. (2017): compare support for children in Alp-Adriatic counties by varying the number of children and the earnings level of the parents
- Navicke and Lazutka (2016): research on work incentives in Lithuania over time
- Atkinson et al. (2017): analysis on Atkinson’s proposal for reducing income inequality
- Van de Ven et.al. (2017): asses the implicit equivalence scale of tax-benefit systems.

A proposal for policy learning in the EU using HHoT baseline indicators

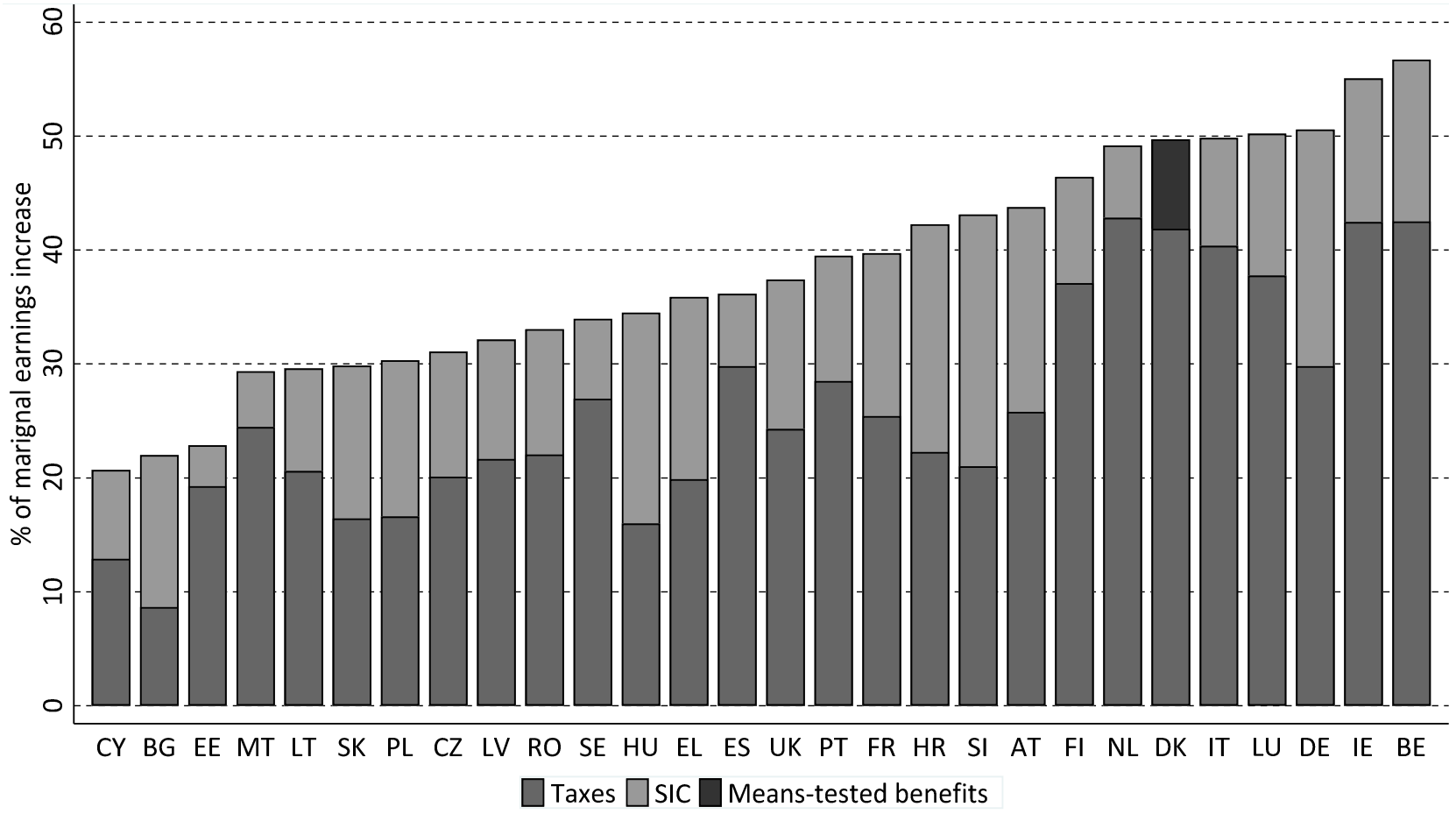
- Results based on EUROMOD H1.0+, policies as of June 2017
- Results presented as a percentage of the country-specific 2017 average gross earnings
- Assumptions for hypothetical households:
  - All adults aged 40, children 4 and 6
  - Employment: 40 hours per week, 10 years of work experience, 100% of the average monthly gross earnings
  - Rented accommodation, housing costs = 20% of the country-specific average monthly gross earnings
  - Full take-up, no tax aversion.

Selected results

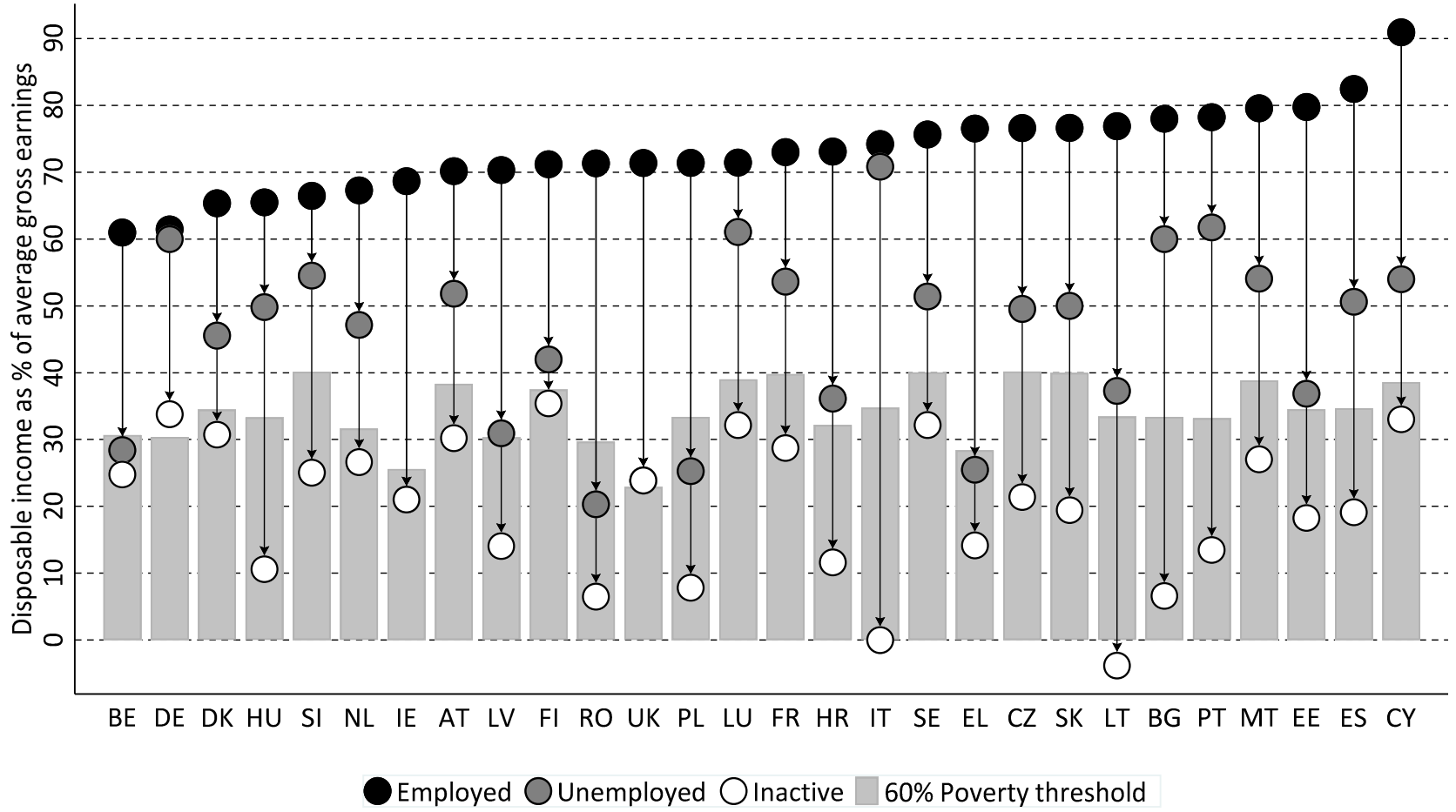
Gross vs. net income of average earners



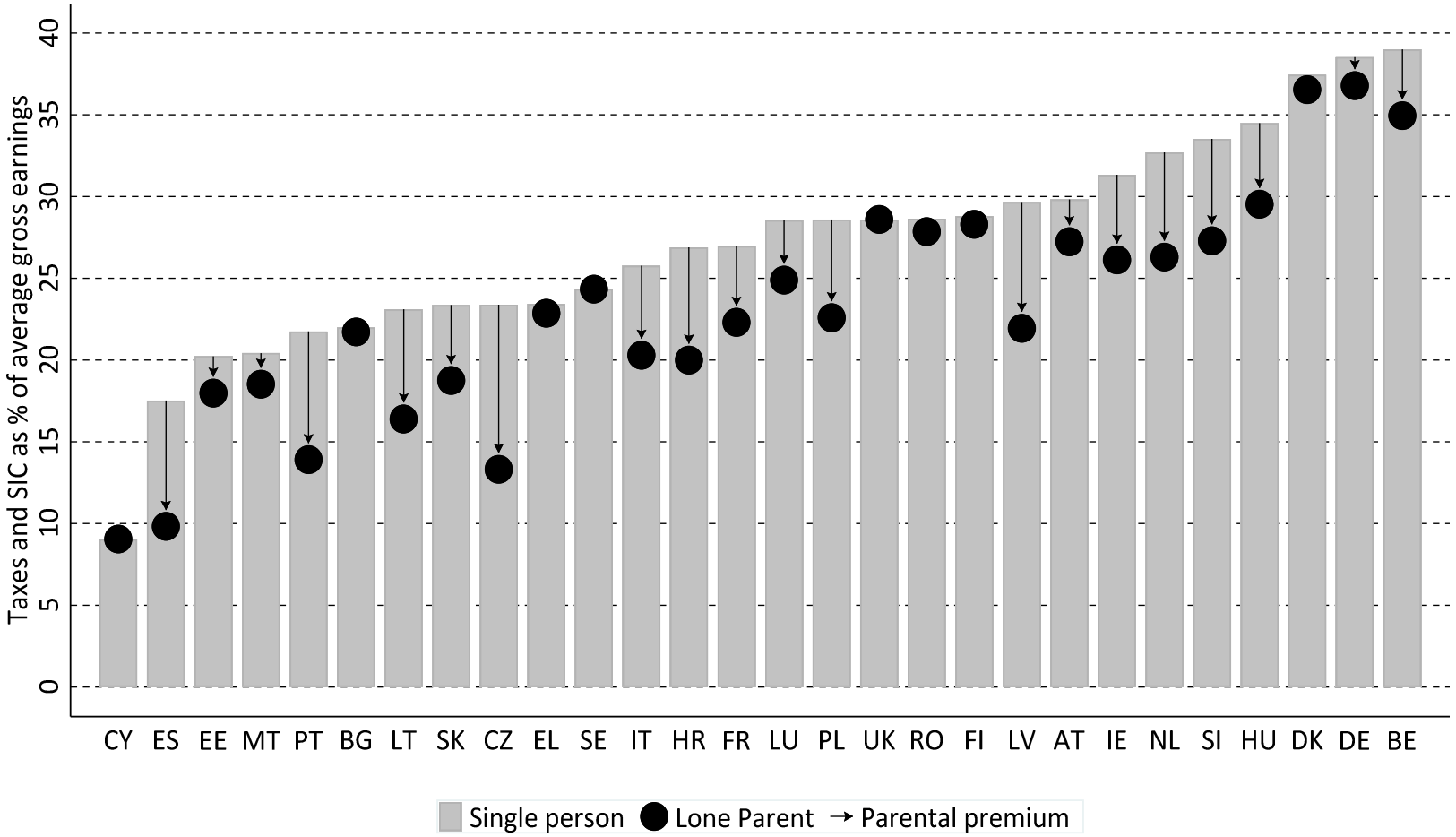
Work incentives at the intensive margin: Marginal Effective Tax Rates



Replacement incomes of unemployed and inactive persons



Parental tax premium



Conclusion and future outlook 1/2

- Hypothetical household data in combination with tax-benefit microsimulation models are useful to illustrate how tax-benefit elements interact with each other
- The indicators provide insights into the design of tax and benefit policies across the European Union and an opportunity for policy learning
- Future developments and potential use of the tool:
  - Bypass the lack of information in available micro data or lack of access to suitable microdata
  - Visualisation tool to facilitate the communication of results

Conclusion and future outlook 2/2

- The use of hypothetical household data clearly offers opportunities to a simplified presentation of complex realities and an expansion of research questions where no microdata are available.
- A discussion of the results needs to emphasize the abstraction from population structure especially (but not only) in cross-country analysis.
- Although this is important to highlight, it is at the same time the beauty of hypothetical data: to make complex tax and benefit systems accessible.

Thank you!

- Gasior, Katrin & Recchia, Pasquale (2018): The use of hypothetical household data for policy learning – EUROMOD HHoT baseline indicators. EUROMOD Working Paper Series EM6/18.
- More information on HHoT (user manual, baseline households):
  - https://www.euromod.ac.uk/using-euromod/user-resources/hhot-manual-households
- k.gasior@essex.ac.uk