

# **Cloud-Powered Insights: Unveiling the Effects of Macprudential Policy in a Small Open Economy**

**Jagoda Kaszowska-Mojša, INE PAN & University of Oxford**

During the presentation, the objectives and stages of the MACROPRU project will be presented. Then, details of the collaboration on the global ABM model with the team of J. Doyne Farmer, especially with S. Wiese, will be presented. Finally, details of the implementation of the MACROPRU model in the cloud, developed in collaboration with the AWS High Performance Computing Impact Team from the USA, will be presented.

The MACROPRU project, funded by the European Commission, investigates the impact of macroprudential policies on financial stability and societal inequality. Employing cutting-edge agent-based simulation techniques, our study explores the redistributive effects of these policies in a small open economy.

This presentation focuses on the use of cloud computing solutions for large-scale simulations using proprietary Household Finance and Consumption Survey data from the European Central Bank. Our findings underscore the crucial role of policy calibration in shaping redistributive outcomes, and emphasise the potential adverse consequences of an inappropriate combination of macroprudential tools.

We highlight the challenge of limited credit access, which perpetuates inequality and hampers economic and social progress. Our analysis aims to inform the implementation of the macroprudential policies that mitigate such disparities. While these policies can support social initiatives, they also have a redistributive power that can hinder progress.

This research offers a comprehensive examination of a data-driven agent-based simulation of an economy, and showcases an innovative tool that was developed at the University of Oxford. The MACROPRU model holds promise for adoption by central banks and financial supervisory bodies with implications for public policy.

Additionally, we explore the advantages of harnessing cloud computing for simulation calibration and validation, and offer insights that will contribute to the field of computational economics.