

Statistics and Risk Management Seminar

Department of Mathematics, NOVA MATH/FCT NOVA

Title: Exploring Household Income in EU Countries: A Three-Parameter Distribution Perspective

Speaker: Kamila Trzcińska, University of Lodz, Poland

Date | Time: July 24, 2025 | 14:00

Location: VIII-4.6

Abstract: Household income is a key economic variable that reflects the living standards and material well-being of different social groups. Understanding its distribution is essential for analyzing inequality and economic structure. This study applies three-parameter income distribution models, known for their flexibility and strong statistical properties, to data from EU countries.

The focus is on evaluating how well these theoretical models, including the Zenga distribution (2010), approximate empirical income data. The goodness of fit is assessed using measures such as the coefficient of similarity, the Mortara index, and a newly proposed metric based on the comparison of empirical and theoretical cumulative distribution functions. Additionally, basic statistical characteristics derived from the models are compared with their empirical counterparts.

Short Bio: Kamila Trzcińska is Assistant Professor at the Faculty of Economics and Sociology, University of Lodz. Her academic work focuses on the statistical analysis of income and wealth distributions, with particular emphasis on measuring and understanding income inequality, poverty, and the concentration of wealth among households. She conducts in both theoretical and applied research, contributing to the broader discussion on socio-economic disparities and their quantitative assessment. Her studies explore statistical tools to analyze income dynamics and economic well-being.



Organizers: Isabel Natário and Mina Norouzirad and Frederico Caeiro



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