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Segmentation or Convergence in Eurozone Household Income Distributions? New Tools for Analyzing Multilateral Differentness in Collections of Distributions

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The nature of the mutual proximity of a collection of distributions is of interest in many fields. Multilateral comparison of many distributions is of the essence in mobility/equalopportunity, growth/convergence/polarization, portfolio comparison and treatment effects literatures. All involve assessment of the degree of "differentness" within a collection of distributions. Here some indices and tests for measuring commonality and differentness collections of distributions are proposed. Based upon extensions to, and modifications of, Gini's Transvariation and Relative Mean Difference coefficients, they are proposed and implemented in the context of a subgroup convergence - divergence study of 21st century household income distributions in the Eurozone. When nation boundaries and identities are introduced in a representative agent view of the world,

Eurozone Nation household income distributions are becoming increasingly similar with growing transnational distributional inequalities being more equally shared, suggesting that the perceived inequalities may not be such a threat to cohesiveness as they may have been thought to be. However the multi-nation population weighted version of the distributional inequality measures suggest that there is increasing distributional inequality in terms of increasing segmentation among the more populated nations in the Eurozone which could pose a threat.