INSTITUT DE STATISTIQUE, BIOSTATISTIQUE ET SCIENCES ACTUARIELLES

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A Stochastic Independence Approach for different Measures of Global Specialization

Abstract: Based on data in the form of a two-way contingency table "Regions × Activities", the concepts of specialization and of concentration are naturally based on the analysis of the conditional distributions, or profiles. The natural tool for measuring the degrees of specializations are provided by discrepancies, more precisely distances or divergences, among distributions: between profiles and a uniform distribution for absolute concepts, between profiles and the corresponding marginal distribution for the relative concepts or between the joint distribution and the product of the marginal distributions for the global concept. This is the approach of stochastic independence that conducts the analysis in terms of stochastic independence between activities and regions and the global discrepancy is viewed as a measure of row-column association. This paper presents the results of an extensive analysis of the numerical values of measures derived from this approach and from other approaches widely used in the literature. A main conclusion of this analysis is that although the different measures under consideration display rather similar numerical behavior, differences of ranking about the degree of specialization among activities, among regions or among countries call for a particular care when interpreting the numerical results.

March 18, 2011 - 14:30 - Room c 115

You are welcome at the coffee break (room : c 105)