

2020

36th IARIW General Conference

Paper Prepared for the 36th IARIW General Conference, Oslo, Norway, August 24-28, 2020

A Fuzzy Approach to the Measurement of Employment and Unemployment

Alessandra Coli

Bruno Cheli

Andrea Regoli

Unemployment rate is among the most important economic and social indicators. However, its computation is conditioned by the rigid classification of labour force into the employed and unemployed groups. This implies a relevant loss of statistical information and wipes out all the nuances that exist between fully employed people and those ones who work only occasionally, while needing to work more.

Actually, employment and unemployment should not be considered as simple attributes that are present or absent but rather as a matter of degree. In this view, more accurate measures of them may be constructed according to the fuzzy set theory initiated by Zadeh (1965).

The aim of this paper is to define fuzzy measures of employment and unemployment using available information on the number of hours weekly worked and about the fact that part-time workers may not be satisfied of their condition and wish to work more.

In the empirical analysis we apply such measures to the Italian labour force data and compare the results with the official employment and unemployment rates.