

## **SMALL AREA ESTIMATION IN THE SPANISH LABOUR FORCE SURVEY**

Jorge Saralegui<sup>1</sup>, Montserrat Herrador<sup>1</sup>, Domingo Morales<sup>2</sup> y Agustín Pérez<sup>2</sup>.

<sup>1</sup> Instituto Nacional de Estadística

<sup>2</sup> Centro de Investigación Operativa, Universidad Miguel Hernández de Elche

### **Abstract**

Once the EURAREA project was finished, the activities of the research group of experts which had participated in the EURAREA project focused on assimilating and applying project results to real data provided by surveys from the National Statistical System. In addition to an overview of such activities within the framework of the Spanish Labour Force Survey, some small area estimators of ILO unemployment totals and rates are presented. Survey and aggregated data are taken from the autonomous community of Catalonia in the second trimester of 2003. Practical problems appearing when applying small area estimation techniques are described and, from the analysis of the obtained results, some recommendations are given. In addition a naïve two-stage bootstrap method is proposed to introduce performance measures to compare estimators.

**Key words and phrases:** Labour force survey, small area estimation, linear models, mean square error, bootstrap, unemployment totals, unemployment rates.

**AMS subject classification:** 62E30, 62J12.