

Shrinking middle-skilled jobs and wage inequality in Europe during the Great Recession

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The central aim of our work is to explore EU-SILC data (European Survey on Income and Living Conditions) and their potentiality to investigate how the heterogeneity in the individual capacity to earn income among different categories of employees affects wage inequality. The objective of the research hypothesis is to investigate the potential link between the employees' skills and earnings inequality and, if it exists, to quantify how strong this connection is.

The idea of setting up this work was born out of the evaluation of the main changes in the employment composition by skill levels and wage inequality tightened by the recent economic crisis. Indeed, although the Great Recession hit the European countries with different extents, timing and intensities, the overall unemployment of the Eurozone rapidly increased between 2007 and 2013 and, in particular, the jobs requiring a middle level of competences are the most affected by the shrinking of job opportunities. This progressive impoverishment of middle-skilled jobs, from a quantitatively viewpoint, represents the common element defining several structural changes (e.g., job polarisation, upgrading and downgrading of occupations) that have occurred in the labour market in the most developed economies. While job polarisation consists of a simultaneous growth in the demand of jobs requiring high and low skills, the upgrading of occupations favours workers with high-qualifications; downgrading of occupations represents the case in which low-skilled jobs grow faster than other ones.

The first pioneering studies on the shrinking of the middle-skilled jobs in the US and UK labour markets proposed, through the classification of occupations according to the average or median earnings (which is a proxy of the level of expertise required to perform the occupation itself), the creation of three distinct groups of workers in high-, middle-, and low-skill, and then the evaluation of changes over time of employment shares in each category. For both countries, the empirical evidence confirmed that the distribution of occupations followed the typical behaviour of job polarisation, where job growth doubled for the high-skill groups and nearly doubled at the lower ends of the skill distribution.

The explorative analysis upon the harmonized EU-SILC data, in which working activities are ranked according to the ISCO-08 classification (2-digit level), allowed us to compare the changes that have occurred between 2005 and 2013 across four countries of Western Europe: Germany, whose labour market is currently characterised by job polarisation, France and the United Kingdom,

which are characterised by the existence of upgrading of occupations, and Italy, where neither of the two phenomena can be clearly identified.

More specifically, through the RIF (Recentered Influence Function) regression, the analysis aims to achieve two goals: first, to evaluate the determinants of the overall wage distribution and to analyse the changes over time in wage inequality in each country; and second, to decompose the total temporal gaps into the composition effect, which assesses the portion of the change attributable to the employees' characteristics, and the wage structure, which explores the capability of the country's labour market to transform individual skills into job opportunities and earnings. A further step allows decomposing these two components in order to evaluate the contribution of each covariate to the changes in the Gini index. This two-stage procedure that generalizes the Oaxaca–Blinder decomposition has the advantage of being applied to different distributional statistics beyond the mean (e.g., quantiles, variance or Gini coefficient).

Preliminary results highlight the crucial role of gender, education and experience in the labour market in determining wage inequality is common to the four countries share, which draws attention to the economic status, type of contracts and type of job held as driving forces. The evolution over time of wage inequality draws a contraposition between France and Germany, on the one hand, and Italy and the United Kingdom, on the other hand. However, while for France and Germany the decrease of wage inequality is due mainly to employees' characteristics (composition effect), in Italy the increasing pattern of wage inequality is imputable to the lower efficiency of the country's labour market in creating job opportunities, better job-related careers, and higher salaries for employees (wage structure). As regard the United Kingdom, the analysis shows a slightly different configuration compared to the other countries; albeit the wage inequality increased as is the case of Italy, its change is mainly due to the composition effect (as stated for Germany and France).

In sum, some results seem to suggest how the employment structure could explain a fraction of wage inequality. Gini index decreased in both Germany and France – where well-defined structures of job polarisation and upgrading of occupations, respectively, are sketched – and increased substantially in Italy, whose labour market is not clearly defined. However, Gini index increased for the United Kingdom despite the labour market follows the typical behaviour of upgrading of occupations.