YOUTH EMPLOYMENT IN EUROPE:
THE ROLE OF EDUCATION AND MARKETS REGULATION

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Abstract
In this paper we empirically investigate the joint effect of high education and both labour and product markets regulation on youth labour market performance.

Young people have been particularly hit by the economic crisis, as shown by the high and increasing unemployment and inactivity rate, as well as by the changing labour market conditions, with flexible forms of employment gaining in importance in all EU Member States. Among young, as well as in all other age groups, those who have been more hit by the crisis are the low educated/low skilled ones. However, there are large differences between countries in terms of youth labour market performance by skill: while youth unemployment has been increasing especially among low-educated young people in EU countries such as Estonia, Greece, Ireland and Spain, the same indicator has been declining in other EU countries, notably in Austria and Germany. Furthermore, in most EU countries young women still face worse labour market conditions relative to young men, despite they have on average higher attainment rates in upper secondary and tertiary education than men of the same age. This evidence implies that education per se is not sufficient to protect young people from unemployment.

The high heterogeneity in labour market response to the economic crisis registered across OECD (and EU) countries suggests that (high) youth unemployment may be the product of the interaction between the economic context and particular policies/institutions.

Our main research hypothesis is that the effect of high education on the youth labour market performance may depend on the degree of rigidity/flexibility that characterizes both labour and product markets. More specifically, if highly educated workers are complement to high technology and innovation, the incentives to acquire education, and the actual effect of the latter on youth employment and unemployment, depends on whether and how labour and product markets regulation fosters innovation and research.

The aim of the empirical analysis is to estimate the effect of education and markets regulation on gender-specific youth labor market indicators and the corresponding gender gaps.

Estimates are based on an original country-level panel dataset matching youth labour market indicators with policy and institutions indicators for all the OECD European Countries over the 1998-2012 period. More specifically, we compute country-level data on youth characteristics and labour market indicators on the basis of EU-LFS microdata, while data on policies and institutions comes from different Eurostat and OECD databases. We focus our analysis on youth population aged 15-29 years. We measure youth labour market performance with two main indicators: the employment rate and the NEET rate (e.g. the percentage of the 15-29 population who is not employed and not involved in further education or training).
First estimates confirm that high education *per se* is not a guarantee of better labour market outcomes, particularly in the case of females, whose employment opportunities are significantly negatively affected more by product market regulation rather than by employment protection. More rigid product markets are in fact associated with a lower female employment rate, a higher NEET rate and larger corresponding gender gaps.

The interaction between PMR and high education partly off-set the positive effects of high education on employment opportunities of young women, exacerbating gender differences.

However, not all the PMR components have negative effects on youth labour market performance: the strictness of regulation of entrepreneurship reduces significantly the employment rate for both males and females, but product market regulation related to state control significantly improves the labour market performance mainly of young men. Our attempts to control for the quality of education confirm that high education *per se* is not sufficient to increase the youth employment rate. In the case of males, the share of graduates in Mathematics, Science and Technology (MST) has a positive and statistically significant effect on the male employment rate, while the effect of high education is positive but never statistically significant. In the case of females, we find that the share of young women graduating in MST increases their employment rate, but this effect is lower the higher is PMR. Furthermore, for both males and females the type of education reinforces the effect of the quantity of education in reducing the likelihood to be NEET.

In terms of policy implications, our results suggest that education policies may be less effective in too regulated product markets and the progressive deregulation progress implemented in the last decades in many EU Member States may have contributed to counterbalance the negative effect of other factors (such as population ageing, pensions reforms, increasing migration flows) on job opportunities for the young, particularly for women.

**Keywords:** Youth employment rate, NEET rate, education, apprenticeship, regulation

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