Lifelong learning has become a recognized EU-28 education priority in response to fast-paced technological transformations. However, not everyone is equally able or willing to participate in lifelong learning. Particular disadvantaged groups are more likely excluded from participation to lifelong learning. This may have implications for the society as a whole. We investigate the accessibility of lifelong learning participation and its impact on economic growth. In particular, we look at unequal access to lifelong learning between the rich and the poor, and between the low-educated and the high-educated. With this we explicitly focus on two disadvantaged groups, the poor and the low-educated, who are at-risk of exclusion from the advantages of 'skill-biased' innovation, and who are increasingly at-risk of job loss, of obsolete skills and dismissal, of long-term unemployment, and even of social exclusion.

If, education and training are important determinants of the wealth of nations, then one can reasonably argue that limited and unequal access to education or training restricts the possible channels to impact growth. Lifelong learning then is not only a matter for the disadvantaged individual, or group, but also for society as a whole, which requires policy action that enhances individuals’ prospects and with this also societies’ wealth. This idea of thought is in line with the ENLIVEN Horizon 2020 project.

For the empirical analysis, the authors collected data from the European Union Labour Force Survey (EU LFS) for 23 European countries between 2011 and 2016. These 23 European countries comprises of 211 regions (NUTS-2), the level at which our analyses are conducted. Hereby, it is acknowledged that regions, or communities, is the disaggregated level at which educational and labor market policy often takes place. In particular, we have...
excluded the small countries, and the Netherlands, countries which only have one region at NUTS-2. Further, looking at regions in a European context rather than at countries offer several statistical advantages for the empirical strategy. In particular, we apply dynamic panel data estimation techniques and offer a wide set of robustness analyses including country fixed effects.

The main results indicate that the growth rate is significantly reduced by -0.4 percentage points when inequality between low-educated and high-educated in the access to lifelong learning increases. Similar results are observed for the impact of unequal access to lifelong learning between rich and poor on growth, but these findings are not significant. It is then argued that the skill-biased technological change, which implies that technological progress is only in favour of the high-educated, is not favourable for economic growth as a whole. Three implications are discussed: (1) the level of educational attainment in the population cannot explain why some countries excel and others fall short in the lifelong learning participation rate; (2) inequality in access to lifelong learning between low- and high-educated is worse in societies with high shares of routinized jobs; and (3) the costs of lifelong learning can explain about 0.1 percentage point of the total negative impact of the HCI-index on growth.

**Keywords:** Adult Education; Growth; Inequality; Lifelong learning; Training; Workplace

**JEL:** I20; J24; O15