The regional socio-economic impact of the 4th industrial revolution

The technological transformations associated to the so-called 4th industrial revolution (or Industry 4.0) are indeed a reality even if still in infancy and raise several concerns about the socio-economic impacts of the adaptation to these new technological trends. Whereas the impact on productivity and growth are expected to be positive, concerns exist and the debate is still open about the substitution effect of these technologies with respect to labour and the risks of the so-called technological unemployment because of "functions – and tasks within functions – at risk of automation" (Autor et al., 2003; Acemoglu and Autor, 2011; Autor and Dorn, 2013; Arntz et al., 2016).

Differently from previous technological revolutions, however, the present one implies an increasing automation not only of routine tasks but also of non-routine ones, having thus the potential of transformative, if not, disruptive effects on the economy and the society through the impact on whole sets of sectors and occupations (Frey and Osborne, 2017).

The pervasiveness of such effects, therefore, requires a deep understanding of the mechanisms enabling to take advantage of the opportunities opened by the new technologies (i.e. the maximization of the economic benefits) while minimizing the social costs that may arise in terms of restructuring of the labor market, possible unemployment growth and social inequality.

The present special session is aimed at promoting the discussion on these issues from a regional and urban perspective, unfortunately largely neglected in existing studies even if with some exceptions (Autor and Dorn, 2013; Gregory et al., 2016). The session aims at gathering papers offering conceptual contributions and empirical cross-country and within-country analyses on:

- the advancement of the penetration of technological transformations in European regions and cities;
- the identification of regions and cities more likely to benefit and those more likely to suffer from the diffusion at large of these technological transformations;
- the impacts of the penetration of technological transformations on the economic performance of European regions and cities;
- the impacts of the penetration of technological transformations on the structure of the labour markets (and not simply on employment and unemployment levels) of European regions and cities.

Given the strong content relation to the congress theme, ERSA2019 represents an ideal setting to broaden knowledge and bring fresh evidence on the topics addressed by this special session.

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