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REVOLUTION 4.0 AND EMPLOYMENT: SOME EVIDENCES AFTER THE FINANCIAL CRISIS IN SPAIN

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Abstract:
We are just perceiving the first effects of the new wave of digital automation on labour market. These emerging technologies are basically based on artificial intelligence and robotics and they have a potentially disruptive impact in the economic activity because digital technologies can replace both manual and cognitive skills.

Although the advocates of this kind of Revolution 4.0 predict huge gains in efficiency, productivity and income, the recent research concerning the prospects of these technologies have focused on the substitution effects in the labour market.Certainly, the new developments in the capacity of computation, information processing and machine learning are placing the future of work at the centre of attention.

Automation replaces human labour and demand new capabilities. Progressively, technological change is skill and routine-biased. However, these emerging technologies do not substitute occupations but tasks although usually require the reorganization of many jobs. At the same time, they stimulate complementarities between human labour and complex machines, boosting productivity and creating new jobs.

The recent development of Spanish labour market in the aftermath of financial crisis, after changes in the regulatory framework and the influence of austerity policies, has shownthat the adoption and diffusion of new technologies does not take place in an empty space but in a specific social, legal and regulatory environment.

The appeal of Revolution 4.0 is competing with a predominant economic structure based on low wages, a limited set of complex skills and poor working conditions. The immediate result is a growing polarization in employment opportunities and incomes, so it is critical to understand the effects that digital automation has on labour supply and demand, to identify the most appropriate policies to transform this challenge into an opportunity for social progress.

Keywords: Employment; Industry 4.0, Technological Change, Skills

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