

**Club of Florence – Workshop 2020 – Call for Contributions**

## **Global and Regional Employment Effects of Automation, Robotics and AI in Supply Chains**

**Caroline Ruiner, Matthias Klumpp**

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### **Background and Objective**

Digital developments are facing anxiousness in many industries and areas of work as doubts about the expected employment effects are considered. Various studies investigate the substitutability of jobs by computers, robotics and machines (e.g. Autor, 2015; Bonin, Gregory, & Zierahn, 2015). The much-discussed work of Frey and Osborne (2013) analyzed to what extent occupations are susceptible to computerization: They found that 47% of jobs in the USA are potentially at risk. This is despite the fact that technological change in the past has led to higher labor productivity and added value (e.g. through the use of automation, robotics and AI) as well as to wage increases and has created more jobs than were destroyed (Graetz & Michaels, 2015). In the light of fast-changing technologies and work processes, also an update from the 2013 perspective is required as concurrent studies highlight (Balsmeier & Woerter, 2019; Dengler & Matthes, 2018).

The substitutability of humans was discussed since the 1980s, pointing at results of technological change regarding job design, motivation and efficiency (e.g. Dewar & Dutton, 1986; Hyclak & Kolchin, 1986; Pierce, 1984; Roskies, Liker, & Roitman, 1988). Therefore, the tension between positive and negative employment effects through new technology applications is a core question for the expert discussion in the Club of Florence network in 2020. The objective is to drill down the empirical analysis of employment effects found for specific industries such as logistics and supply chains and jobs due to digitalization within countries such as Brazil, China, France, Germany, India, Italy, Japan, South Korea, UK or USA.

We aim to encourage research from a wide range of disciplines applying different methods and data (e.g. labor market and corporate efficiency analyses as well as case studies). We especially aim to answer the following questions for the countries addressed within the logistics and supply chain sector:

- (1) What are the impacts of digitalization (automation, robotics, AI) for employment?
- (2) In which fields do we observe job losses, job gains or no change at all (and why)?
- (3) What distinguishes jobs that are substitutable from the ones that are not?
- (4) Are we facing digital unemployment? Is there a development e.g. a shift or acceleration of job losses recognizable?
- (5) How do organizations implement new technologies and design (new) processes and jobs?

In addition, contributions beyond these issues are welcome. The specific country analyses will be put together in a global compendium of employment effects of digitalization as the first international book report of the Club of Florence.

### Submission and 2020 Workshop Participation

The deadline for workshop submissions is **December 15<sup>th</sup>, 2019**. Academic papers up to 3,000 words should be submitted via E-Mail to the conveners in MS Word and/or PDF format, making clear statements about the theoretical framework, the empirical basis and results obtained regarding employment effects of automation, robotics and AI in supply chains. Acceptance information and detailed instructions will be sent out before January 15<sup>th</sup>, 2020 to all participating experts and authors. Full papers are expected to be submitted before the workshop. Detailed information will be provided with the individual author invitation.

The 2020 Workshop of the Club of Florence will take place on **March 26<sup>th</sup> and 27<sup>th</sup>** at the Scuola Normale Superiore, COSMOS – Center on Social Movement Studies, Palazzo Strozzi, Piazza degli Strozzi 1, 50123 Florence, Italy. High-level speakers will be invited for an international panel discussion on the workshop topic besides the outlined country and research paper presentations. Questions regarding this call can be directed to the conveners Caroline Ruiner (ruiner@uni-trier.de) and Matthias Klumpp (matthias.klumpp@uni-goettingen.de).

### References

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