icom institute for competitiveness

HIGH LEVEL BACK-TO-BACK EVENT

THE FUTURE OF WORK IN EUROPE

Digitization and its impact on new and old jobs

Turin, 29th September 2017

BACKGROUND NOTES

Since 2013, 11 million jobs have been created in the European Union. The **unemployment rate** dropped to 7.7% in July 2017, the lowest percentage in the last nine years. This is also the result of the **European growth** over the past two years being higher than in the United States and Japan. The increase in **investments** was also a factor, also thanks to the "**Juncker Plan**", which mobilized resources for 225 billion euros in the Member States[1].

There are still strong regional disparities (in the Member States, the unemployment rate varies from 2.9% in the Czech Republic to 21.7% in Greece) and between different demographic and social groups. Particularly alarming is the **unemployment rate among under-25s** (16.9%) that still affects over a third of the young people in Greece (44.4%), Spain (38.6%) and Italy (35, 5%)[2]. At the same time, **senior workers** are the ones most at risk of losing their jobs, because of the ongoing fourth industrial revolution.

Automation and the pervasive introduction of digital technologies within production processes is the reality for a large part of the economic system and an indispensable challenge for the rest. The **new generation of ICT technologies (the Internet of Things, Robotics, Cloud Computing, Big Data Analysis, 3D Printing, Artificial Intelligence, Blockchain, etc.)** provides businesses with many development perspectives and allows consumers to buy increasingly advanced and customized goods and services.

The labor market is facing two main challenges. On the one hand, there is the need to reduce the risk of dismissing active workers. On the other hand, paradoxically, the difficulty for many companies to find skilled workers matching their needs is growing. According to a recent study on the **impact of automation** in the US[3], an additional robot per thousand workers reduces the employment rate of between 0.18% and 0.34% and salaries within a range between 0.25% and 0.5%. The risk that a job would be replaced by automation is estimated equal to 57% in OECD[4] countries, with wide differences between countries (and even cities) and within the same geographic areas. On the other hand, despite these figures having to be still confirmed, one can imagine that, as in any other acceleration in history, other jobs will be created. Not necessarily for the exclusive benefit of high-skilled workers. It has been demonstrated[5] that, for each new high-tech workplace, five new jobs are being created in the services sector.

Equal concern should be devoted to a growing **skills gap** between demand and supply in the labor market. For example, in 2016, the gap between the demand and supply of data analysts in Europe amounted to 420,000 vacancies, equal to 6.2% of total demand. It is estimated that this gap will increase to 769,000 units in 2020[6].

The European institutions, together with Member States, launched various initiatives to enable businesses and workers to address these challenges. In particular, in addition to the "Juncker Plan", it is worth mentioning the **Youth Guarantee System**, which has involved more than 18 million people since January 2014, providing them with a job or internship within four months after having completed their studies or the beginning of their unemployment period, and the **Agenda for Skills for Europe**, which helps poorly skilled adults to acquire a minimum level of literacy, mathematic and digital skills.

1 State of the Union 2017 by Jean-Claude Juncker, President of the European Commission, 13 September 2017
2 Eurostat, 31 August 2017
3 Acemoglu, D., Restrepo, P., "Robots and Jobs: Evidence from US Labor Markets", 2017
4 World Bank Development Report, 2016
5 Moretti, E., "The New Geography of Jobs", 2012
6 Eurostat and ICD are the sources of the data. For an analysis of the effect of IoT on industry, you can look at I-Com," Thinking the Future of European Industry", 2017

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KEY ISSUES AND POSSIBLE THOUGHTS FOR DEBATE

- What impact on industry and services do you expect from the fourth industrial revolution? What are the differences between Europe and other advanced geographic regions and between different European countries?
- Which productive sectors have greater growth margins and which other, on the contrary, will suffer from downsizing?
- How do we rethink venture industrial relations in the light of the challenges of digitization?
- In the current international context, can EU economic, industrial and employment policies help the European production system to be better placed in the global value chains and to thrive in the global competition?
- Which are, among the new digital technologies, those that impact more on development and wellbeing and which we need to invest more in?
- How could IoT applications to industry and services improve social cohesion, quality of life and working conditions?
- How do we address the skills gap challenge in ICT professions, increasing even in the most advanced countries of the European Union?
- How could the creation of new ICT jobs be combined with the reduction of the unemployment rate and youth unemployment?
- How could active labor policies be used to requalify and reintegrate into the workplace workers that were fired because of obsolete technology?
- How could programs such as the Youth Guarantee and the Skills Agenda for Europe be further strengthened?

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