

Over the past two decades or so, the fourth industrial revolution—or “digital revolution”—has significantly changed our lives. The digitalization currently underway in many economic areas entails a number of controversial changes for the nature of work. Some consider the end of work as imminent, as the latter is substituted with labour-saving technologies, while others argue that the digital economy will actually create new employment opportunities and improve workers’ quality of life. It is difficult to establish a precise relationship between technological change and the nature of work, however some trends can be identified.

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Digitalization: risks and potentials

Data suggests that digitalization’s ability to create new professional profiles and work opportunities is not sufficient to compensate for those jobs in danger of disappearance. According to [a study](#) by Carl Benedikt Frey and Michael Osborne, nearly 47% of jobs under scrutiny presents a high risk of substitution by the year 2033 because of automation. The situation in Europe is in line with the global trend, with almost [54% of jobs at risk of disappearance](#). A second, and partly conflicting factor to keep in mind is that the nature of work itself is changing due to digitalization which, for instance, now makes it possible to include in the workforce people with disabilities or those who have to reconcile work and family commitments. Moreover, the work of the future could be less and less routinized and procedural and allow the elimination of exhausting activities. However, new competences in terms of, among others, creativity, entrepreneurship, and adaptability will be required on the part of the workforce in order for it to benefit from technological opportunities and favour a virtuous, complementary combination of human skills and technology, rather than a substitutive one.

A related consequence of digitalization is an acceleration of the process of employment polarization, whereby the share of employment in both high- and low-skilled occupations rises, to the detriment of employment in the middle. This is explained by the fact that computers are ever more able to perform jobs like translation, insurance underwriting, or even medical diagnostics. One of the outcomes of polarization is increasing income inequality: while medium-qualified workers have to face the consequences of labour-saving cost-reduction strategies by firms, highly-skilled ones are most resilient to change and find themselves in a stronger position in the labour market.

Bringing the social dimension back in

[According to the World Bank](#), in order to make the benefits of digitalization higher than its risks, and to spread the “digital dividends” across the population, public policy interventions are necessary. Since the second half of the 1990s European employment policies have been following mostly a market-oriented approach. The European Employment Strategy (1997), the Lisbon Strategy (2000), the Europe 2020 Strategy (2010) and the Social Investment Package (2013) have gone in this direction, promoting concepts such as employability, adaptability and entrepreneurship, which are at the core of the Commission’s programme. The idea of investing in human capital throughout workers’ life-cycle so as to adapt to changes has become dominant in Europe’s policy agenda. Such an approach seems to take into account the impact of technological change on labour, although it should be supported by other measures aimed at sustaining the employment rate and the level of income in the delicate transition to the digital economy.

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An appreciable initiative is the recent European Pillar of Social Rights, which should result, early next year, in a reference framework for the appraisal of the Eurozone welfare systems.

This is an important step in the direction of bringing the economic and social dimension of integration on the same footing within the European Semester. At the moment, governance objectives like the sustainability of public finance or the correction of macroeconomic imbalances are priorities, while social policy is defined as a residual variable. To better balance the economic and social dimension a “social Eurogroup” should also be created, to gather welfare and employment ministers on a par with finance ministers.

Supporting social investments

Another answer to digitalization is the support of social investments. The social investment paradigm calls for policies to strengthen people’s skills and capacities and support them to participate fully in employment and social life. Although it is becoming the reference model within the European Union, we are still far from a widespread application of its principles, as countries most in need for social investments are currently also the least likely to develop high-quality social investments, partly because of the negative impact fiscal consolidation has had on spending for social policy.

The idea to introduce a golden rule for investment in the Eurozone—meaning that debt made to finance public investments is not counted against the Stability and Growth Pact fiscal rules—is not new and has been supported even by the German Council of Economic Experts. Recently, economist [Achim Truger has proposed to apply such a rule to social investments](#). For example, since the first three years of life of a person are recognized to be crucial for the correct development of future cognitive and emotional skills, public spending for early childhood education and care should be considered an investment able to produce future economic benefits in terms of higher productivity and growth.

By the end of 2017, the so-called Fiscal Compact will have to be incorporated into the legal framework of the EU. On that occasion, “on the basis of an assessment of the experience with its implementation” (Art.16 of the Fiscal Compact), an improvement of existing fiscal rules should be considered, including the introduction of a “golden rule for investment” next to the “budget balance rule”. Later, the possibility to apply such a rule to specific social investments such as education, should be considered.

A universal basic income?

Although the EU cannot legislate on wage policy, recently the Commission has been paying close attention to the hypothesis of supporting a universal basic income, in preparation for a

discussion to be held next year with member states on how to improve social policies. In the meantime, some national experiments are starting. Finland, for example, is looking to introduce a basic, universal and unconditional monthly payment for its citizens in 2017 as a way to reform its welfare system and cut spending. (Curiously, one of the first experiments with the universal basic income is to be found in the Silicon Valley, where a private such scheme has been conceived as an alternative to the existing social safety net as a way to respond to technological unemployment and its effects on consumption).

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[According to philosopher Philippe Van Parijs](#), a basic income is unconditional in three additional senses. It is individual, i.e. independent of its beneficiaries' household situation; it is universal, i.e. entitlement to it is not dependent on the level of income from other sources; finally it is duty-free, i.e. not restricted to those working or willing to work. These features prevent the universal basic income from disincentivizing the search for other sources of income, while at the same time ensuring secure and decent existence for all.

For workers in the digital economy a universal basic income would represent a support to low earnings as well as promoting the opportunity to reduce excessive working time or to take a career break. Furthermore, the absence of an income proof makes sense, since the mechanism is financed through income taxation, therefore high earners will pay for their own basic income and for part of the basic incomes paid to others. Finally, an income paid automatically to all, rather than a means-tested scheme, ensures quick distribution and low administrative costs.

[Some think that the universal basic income proposal is not a suitable solution for technological unemployment](#), whereas a job guarantee scheme, whereby the state creates meaningful employment at a decent wage if the private sector does not provide it, could be. An intermediate solution could be a basic income conditional on the search for a job or the attendance of a training course in line with the trends in labour demand, in order to support

workers in periods of inactivity due to requalification of skills or family commitments. However, in this case real-time service delivery of the grant would become more complicated.

Technological and social innovation

The Commission has decided to tackle the problematic relationship between digitalization, work and social policy mainly through active labour market policies. However, the speed and scope of technological change require complementary measures, such as investment-friendly fiscal rules for the Eurozone and passive labour policies. The consultation launched for the European Pillar of Social Rights is a good starting point to focus on the new challenge facing national welfare systems. But this process requires a good understanding of ongoing dynamics, to ensure that digitalization bring about innovation not just in the technological field but also in the social one.



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A longer version of this article has been published on the website of the [Centro Studi sul Federalismo](#).

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