At national level, social partners in Germany say they have been discussing the issue for a long time (through Work 4.0) and, as a result, are amending their business models and the way they organise work. Germany is one of the most advanced countries when it comes to managing the digital revolution\(^\text{13}\), and even IG Metall says they are still at the stage of identifying problems before being able to seek a common solution, although a lot of progress has been recently made.

In countries where social dialogue is not firmly established, developing a joint approach to changes in the employment market is even more difficult. In Poland, for example, the problem is twofold. First, sectoral insufficiencies are depriving the country of relevant national regulations, which could play a key role in dealing with current changes. Second widespread fragmentation of social dialogue because it is the companies that have most control.

The scope and increasing speed of the societal and economic transformation brought about by digitalisation are however widely acknowledged. New competitors are emerging at an unprecedented rate in an increasingly competitive international environment. So stakeholders have no choice but to tackle both challenges head on: not only the digital and energy transitions but also the need to become more competitive. At present, the main focus of social dialogue within companies is competitiveness, although the digital transition is starting to make an informal appearance on the agenda.

There is no consensus either at European level or in Member States regarding the impact of the digital transformation on employment (net balance). The debate over the quantitative effects on employment is far from over.

The digital transition is destroying some jobs, creating new ones, and changing all of them\(^\text{14}\):

- New types of jobs are emerging: developers, big data analysts, electrical engineers for smart grids, etc.
- Some jobs are being destroyed, extremely physical jobs in particular
- All jobs are changing, from manual jobs to knowledge-based jobs without exception

Some jobs are considered more at risk of automation or digitalisation (office work, sales and commerce, transport, etc.) than others (management, human resources management, scientists, engineers, some types of services such as social work and hairdressing)\(^\text{15}\). Nevertheless, the boundary between jobs at risk and those hitherto believed safe is moving all the time, with more jobs entering the at-risk category (legal service providers, for example, who thought they were protected).

It is affecting jobs in all sectors, although there is no consensus on which are or will be most affected.

- Some, for example in the local and regional government sector, believe digitalisation (in this particular case in public services) is having a negative impact on job numbers: social partners in the sector adopted a joint statement on 11 December 2015 on the opportunities and risks of digitalisation in local and regional government, which says the digital economy has brought with it a stagnation or even a decline in jobs, particularly in the public sector.

Some argue the digital transition could lead to a polarisation of the labour market into very high-skilled jobs and relatively low-skilled jobs, with medium-skilled jobs becoming increasingly rare. The situation is all the more worrying because it is the peripheral countries (Romania, Portugal, Bulgaria and Greece) that are most affected by job computerisation. This creates a high risk of

\(^{13}\) See the studies and discussions conducted by the Hans Böckler Foundation.


\(^{15}\) Christophe Degryse, “Digitalisation of the economy and its impact on labour markets”, Working Paper 2016.02, ETUI, on the basis of data from Frey&Osborne, Ford, Valsamis, Irani, Head Babinet (click on the link to view the document online).
intra-European polarisation, concealed behind an estimated European average of 54%\textsuperscript{16}.

- This transformation is leading, via a “network effect”, to a concentration of power in the hands of private monopolies and new players (Uberisation), which are tempted to keep the benefits to themselves; not an ideal situation for society as a whole.

- Lastly, it is changing our relationship with work and with the traditional employment contract based on job security and subordination. New forms of employment are emerging, encompassing a broad variety of situations (see the section on new forms of employment in the second part of this report). At the moment, there is no consensus on this issue. Employers’ associations generally call for greater flexibility to respond to changes in progress, while employee representatives criticise the instability and/or inequality they introduce compared to traditional forms of employment (IndustriAll European Trade Union) or see them as a “negation of the employment relationship” (UniEuropa). We will look at these issues in greater detail in the second part of this report. There are fears of a negative effect on job quality, in terms of security, stability, qualifications and social protection (particularly of independent workers), and the porous line between work and personal life.

Companies are also seeing changes in their management methods. At present, workers and their representatives on the ground are left to decide how best to organise their work. Management models must therefore change; traditionally vertical, they must now assign meaning and identify targets.

In this respect, the digital transition opens up new opportunities for controlling workers, for example imposing a work pace defined and controlled by a machine, whereby workers renounce their control of the way they organise their work at the risk of becoming the tool of a robot and its algorithms\textsuperscript{17}. But it also creates new opportunities for cooperation, thanks to more “agile” and “cooperative” work organisation.

The digital transition will not be a natural process for everyone and that substantial incentives will be needed to ensure the smooth redeployment of labour and the massive retraining of unused reserves of human capital left by the wayside. There is an urgent need for training and for better identification of skills needed by the employers. Inadequate training is a threat to our competitiveness on the global scene. In 2020, 90% to 100% of all jobs may require digital skills, and therefore new skills.\textsuperscript{18} As highlighted in a joint statement by European social partners signed by the ETUC, BusinessEurope, UEAPME and CEEP and submitted to European leaders at the Tripartite Social Summit of 16 March 2016: “it is vital that people possess the skills needed in our constantly changing labour markets, so that they have access to the new jobs being created.”

Therefore, social partners have an essential role to play in encouraging workers, the unemployed and those furthest removed from the job market to engage in further training, in order to reduce discrimination between the young and old, between highly-qualified and low-qualified workers, and so on. Some companies\textsuperscript{19} have addressed this problem, but the majority are still facing a huge skills shortage. There are still no global mechanisms to help equip businesses in Europe with the necessary digital skills.

To develop relevant training programs, it is vital that we identify the skills most requested by businesses and specific sectors. Social partners are in the best position to do this, but some warn against the practical difficulty of evaluating long-term skills needs.

\textsuperscript{16} Christophe Degryse, “Digitalisation of the economy and its impact on labour markets”, Working Paper 2016.02, ETUI, on the basis of data from Frey&Osborne, Ford, Valsamis, Irani, Head Babinet (click on the link to view the document online) and from a study by Bruegel.

\textsuperscript{17} C. Degryse, ibid.

\textsuperscript{18} Estimations of the European Commission, in the framework of the Digital agenda for Europe.

\textsuperscript{19} Thales and Areva are examples of companies that have already passed agreements with their social partners regarding digital skills training.
COURSES OF ACTION

- The changes brought about by digital technology (personalised products, global value chains, etc.) make it even more necessary to develop training programmes meeting the changing needs of the economy, digital skills and a common language encompassing digital technology and project management to facilitate communication and teamwork. Education programme content must be improved to increase innovation capacity and ensure no-one is left on the sidelines. At the same time, lifelong learning is key to the successful redeployment of the workforce.

- We need to give the scientific/digital/technological world a better image. The Grand Coalition for Digital Jobs, launched in March 2013 by the European Commission, is already working towards this goal, but it could be reinforced. National partnerships for digital skills can also play an important role.

- Workers and businesses alike, while in different situations with regards to the digital transformation, are in need of massive investments in line with global industrial policies, including investments in human capital.

- The European Social Fund could be better spent (the funding has not all been used up), geared more towards training, and benefit larger numbers of workers.

- We must promote the anticipation of skills related to the digitalisation of the economy. The ETUC has suggested creating a Europe-wide forum composed of the European Commission, the European Parliament and social partners to develop a shared vision of what a “digital Europe” might look like. Works councils in Europe could also focus more on these subjects and carry out prospective studies.

- We should introduce incentives for public authorities, regions and municipalities. For example a “Youth Guarantee +”, which would extend the “Youth Guarantee” to young people pursuing careers in the digital sector.

- We must explore the possibility of developing a large-scale retraining programme for all Europeans.

- Opportunities to enter a more diversified workforce do exist: machines are going to relieve workers from hard physical labour to some extent, although new opportunities will have to be offered. This could be a chance to integrate more underprivileged or disabled people into the workforce.

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