



The Future of Jobs Report 2018: Constant Technological Advancement and Shifting Skills Requirements

by Mariarosa Pasquali

Introduction

This contribution aims at providing a summary of the report [*The Future of Jobs Report 2018*](#), published in September 2018 by the World Economic Forum, which stands for a second iteration of a previous and - to some extent - similar survey published in January 2016 [*The Future of Jobs. Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*](#). Indeed, the primary difference between the two documents lies in a change of focus: instead of looking at the future of work in twenty or more years and, somehow, pondering on a (rather too) far term horizon, this latest report draws attention to an “operational time horizon” of five years - and sets out to do so also in other future editions.

The objectives of the report are thus presented as twofold, for the document seeks to better understand the main trends expected in the shorter 2018-2022 period, while serving as a call to action for businesses, workers, governments and all stakeholders participating in the global labour market. Actually, the authors strongly believe that, if managed wisely, the predicted major transformations triggered by the unfolding Fourth Industrial Revolution will lead to enhance both productivity and quality of work; if managed poorly, however, they will exacerbate skills gaps, inequalities and polarization. The report should therefore function as a useful tool for shaping the future of work in a proactive and, above all, positive manner.

First Findings

The results display the operational understandings of strategic human resources professionals who are at the frontlines of workforce transformation in 20 developed and emerging economies and 12 industry sectors. In so doing, they map the transformations that are currently underway and will have a disruptive, but also opportunities-creating, impact on jobs over the period up to 2022.

They cast light on the fact that, similarly to the 1990s and 2000s when companies used to compete in creating global supply chains, they now feel competitive pressures in adopting new technologies. Overall, though in different proportion according to each sector, four specific technological advances are set to be taken up by enterprises and, thus, play a key role in the next 2018-2022 period, namely *high-speed mobile internet*, *artificial intelligence*, *big data analytics*, and *cloud technology*.

As a consequence, the outcomes of the report secondly bring to the fore companies' increasing demand for workers offering new skills, either digital or not. Occupations expected to experience increasing redundancy are therefore those susceptible to technological advancements and process automation, i.e. mostly routine-based, middle-skilled white-collar jobs (e.g. Data Entry Clerks, Accounting and Payroll Clerks, Secretaries, Auditors, Bank Tellers and Cashiers).

Conversely, occupations that will experience increasing demand are: a) *jobs significantly based on, and enhanced by, the use of technology*, such as Data Analysts and Scientists, Software and Applications Developers and E-commerce and Social Media Specialists; b) *profiles linked to distinctively “human” traits*, such as Customer Service Workers, Sales and Marketing Professionals, Training and Development, People and Culture, and Organizational Development Specialists as well as Innovation Managers; c) *wholly new specialist roles required to understand and take advantage of the latest emerging technologies*, such as AI and Machine Learning Specialists, Big Data Specialists, Process Automation Experts, Information Security Analysts, User Experience and Human-Machine Interaction Designers, Robotics Engineers and Blockchain Specialists.

Regarding all these aspects, the report forecast appears to be, in general, *rather comforting*. 75 million current job roles (around 10 percent) are expected to decrease by 2022 while, in turn, 133 million emerging job profiles (around 11 percent), characterized by different quality, location, format and permanency, are predicted to grow and compensate for job losses. Ultimately, about half of today’s jobs are forecast to remain stable.

Companies’ Future Workforce Strategies

Companies’ response to these trends, i.e. business leaderships’ decisions and their interplay, will largely have implications for the future nature of jobs. Principally, their investment strategies will concern *workforce augmentation, through automation, and employee reskilling*.

- **Workforce Augmentation**

The division of labour between humans, machines and algorithms will shift from a current average of 71 percent of total task hours across the industries performed by humans and 29 percent by machines or algorithms, to an expected average of 58 percent task hours performed by humans and 42 percent by machines or algorithms in 2022.

In particular, the report suggests a change in viewpoint. Accordingly, machines and algorithmic labour augment human work by automating routinized, repetitive tasks and reducing the risk of error; in this way, they empower employees to use their distinctively human talents and create value-added tasks never done before (e.g. app development, drones piloting, patient health monitoring, etc.). The expansion of machines’ share of work task performance will especially take place in reasoning and decision-making, administrative and information search tasks, as well as – to a lesser degree – communicating, interacting, coordinating, managing and advising.

- **Employee Reskilling**

On the other side, and indispensable for the success of the workforce augmentation strategy outlined above, new tasks at work will require workforce which is both equipped with skills in line with the new technologies and motivated and agile, i.e. willing and able to continuously retrain and upskill oneself. In fact, the global average “skill stability” - the proportion of core workplace skills that will not change over the period 2018-2022 - is forecast to become about 58 percent, while the remaining 42 percent corresponds to the expected average of shifting skills.

Skills that will be no more in-demand are largely manual and physical or related to financial management, basic technology installation and maintenance. Conversely, skills that will gain in significance are the technology-related analytical thinking and innovation, active learning, technology design and programming, but also distinctively “human” skills like creativity, originality and initiative, critical thinking, persuasion and negotiation, attention to detail, resilience, flexibility and complex problem-solving, emotional intelligence, leadership and social influence, as well as service orientation.

Potential Multistakeholder Collaboration for Agile Lifelong Learning

Since companies consider reskilling and upgrading as narrow strategies limited on specific employee groups and not as a comprehensive strategy to influence the global labour market transformation, it is regrettably to be noted that those most in need of reskilling are the least likely to receive it at the moment, in spite of the already highly-skilled and highly-valued employee group. Actually, whereas investing in workforce reskilling has become extremely important, companies have less gain in doing so, for workers are expected not to remain for long time but to switch among different companies instead, also through the so-called “platform economy”.

Nevertheless, enterprises are to become real learning organizations. As the report highlights, they can already search for support among multiple possible stakeholders (e.g. other industries, school and college educators, labour unions, etc.) to collaborate and enable their retraining endeavours. In addition to that, governments ought to realize their key role in promoting lifelong learning, by creating incentives, setting common standards for reskilling and ensuring safeguards for workers in transition.

Conclusions

In line with its objectives, *The Future of Jobs Report* gives a detailed and data-supported overview of the trends and expected outcomes by 2022, fostering well-informed and conscious strategies on the side of companies but, as already seen, not only them.

In particular, two are pointed out as *conditio sine qua non* for positively shaping the future global labour market: the proactive, strategic and targeted investment in workforce reskilling, and thus redeployment, on the one hand; the updating of contractual arrangements and employment relations to adequately accompany new technologies adoption along with soaring project-based, temporary and freelancing roles, on the other.

Finally, yet importantly, the survey prompts not only industries and governments but also workers to change their mind-set and take personal responsibility for their own lifelong learning and career development also asking for proper support during job-transition and retraining periods.

It is to be noted that these conclusions correspond to the ILO’s standpoint, which has been recently expressed following the publication of the World Bank Group’s [World Development Report 2019: The Changing Nature of Work](#) and can be found in the [ILO’s Statements and Speeches online page](#). Here, ILO criticises the World Bank Group’s report for not having sufficiently addressed the concept of lifelong learning in financial terms nor given first advice on how to encourage the participation of both employers and individuals in post-compulsory education and training. Once again, it therefore points out very clearly that one of the most significant challenges as regards the future of work and jobs transition consists in *adjusting the traditional education and training systems*.

Il futuro del lavoro (2018): a Perspective about the Future of Jobs in Italy

It seems interesting to shortly compare and contrast the outcomes carried out by the World Economic Forum presented in *The Future of Jobs Report 2018* with some analyses conducted by ADAPT and Assolombarda and published in May 2018 in a report entitled [Il Futuro del Lavoro](#).

Both take companies and changing business models as starting points to seek to anticipate the most probable outcomes in Italy’s future labour market. Likewise, both estimate that job losses will be offset by new demand for modern job roles and high value-added skills.

Yet, specifically for Italy, next to the *new technology adoption* - which will have significant impacts on job tasks and skills demand, work organization (also related to working hours and workplace), industrial relations practices and welfare models - there can be found other two main transformation trends, namely the *demographic and climate changes*.

The former concerns longer life expectancy (men and women born in Italy in 2016 can hope to live respectively 14 and 11 years more than men and women born in 1976), along with population decline and the challenge of migration, which let deduce a severe trend in demographic ageing and

population changes, thus workforce changes as well. The latter regards protection and improvement of the quality of the environment and eco-sustainability as competitive strategy to which the companies' but also national and global agendas should give priority.

In a similar – yet alerting – way to *The Future of Jobs Report*, the suggestions presented in *Il Futuro del Lavoro* firstly identify for Italy the need of strengthening a new idea of stability no more based on work performed in a fixed place for a fixed employer but, rather, based on discontinuous careers. Additionally, they underpin rethinking public welfare systems that should consider both older working population and constantly necessary workforce reskilling, especially as regards technological advancements. In conclusion, they foster businesses to undertake an economy that is more sustainable, i.e. circular, together with tools to prevent and manage natural and environmental disasters – which will also produce new jobs creation.

As brief as this transformations description may seem, it can already be useful to draft some general recommendations. They are significantly in line with the findings of *The Future of Jobs Report* and complete them in part by showing the perspective of a developed, European economy such as the Italian.

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