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Shaping the introduction of AI for the benefit of All
TUAC Briefing on the OECD Conference on Artificial Intelligence

Paris, 26-27 October 2017

Artificial Intelligence (AI) is steadily growing as a policy issue. This requires building an understanding of the benefits (medical diagnostics, environmental efficiency) and the challenges that it might bring. Amidst a lot of hype, there should be caution about the state of technological development and implementation. The OECD held a high-level conference on AI in Paris on 26-27 October. With the main business leaders and experts in attendance, it is clear that it is not only the trade unions which are concerned about its employment and societal effects.

We are still far away from general artificial intelligence (i.e. applications that can perform tasks at a comparable or higher level of cognitive capacities and judgement as humans). No AI system has flexible cognition or the capacity to make inferences. Instead, we are dealing with "narrow AI": online translation services or predictive data analytics (e.g. financial services). Yet, there is no doubt that big data (and cross-border data flows) and computational power reinforce each other, and machine learning thrives on sophisticated algorithms.

It will be important to keep track of new milestones in AI research and applications, as well as to look at the immediate impact of "narrow" AI on all economic sectors along business value chains. Keeping a human-centred approach over its introduction, design and use is pivotal. Trade unions need to assume a central role in industrial relations to prevent high societal costs including security risks, job displacements and discriminative algorithms. The mainstreaming of AI should not deepen inequalities in income and opportunities as any productivity gains from AI, and digitalisation at large, should be shared fairly.

Trade unions made clear that there will be no public acceptance for radical widespread disruption led by a few. Instead policy makers, the social partners, the technical and the academic communities should strive for a digital diffusion with a strong social dimension. To be able to anticipate and devise strategies, it is important to look at the drivers, key players, elements for scenario building and policy needs:

Drivers

- Reinforcing dynamics between machine and deep learning, big data and computing power;
- The convergence between mutually-reinforcing technologies such as the Internet, digitisation, big data analytics, cloud computing, and AI;
- An exponential rise in investments: the OECD estimates that the "AI market" will be at around USD 70bn by 2020, with the number of AI acquisitions doubling from 2015 to 2016.

Key players

- A handful of firms, namely the six biggest digital businesses from the United States and a parallel thriving market in China, are driving AI corporate research, acquiring start-ups and implementing systems. They own the majority of data, the very building blocks of AI;
- Partnerships discussing the application of AI are mostly disconnected from one another and/ or co-sponsored by major industry players – there is a lack of publicly led dialogue with exceptions in a few OECD member states.

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Scenarios

To anticipate the impact of AI and understand its network effects, the following aspects need to be considered across policy silos:

- the broader effects and level of adaptation of digital technologies and the combination thereof;
- predictions on automation, its net effect on job growth and income inequality;
- changing occupational tasks and skills needs (complexity, routine content, level of collaboration);
- changing business models affecting organisational environments – including the increase of cross-border operations, servicification and the value of data all influencing working conditions and overall employment;
- the underlying market structure and investment streams;
- the scope of application with regard to functionality and spread, including by differentiating sectors, global regions and along time scales (short-term, medium term – up until 2030, and long-term);
- the costs of implementation and maintenance.

Policy needs

Public policy needs to look into the economic, social including labour market, ethical and legal aspects of AI as several risks arise and regulatory frameworks are not keeping up and:

- develop operational, legal and ethical standards and avoid a fragmentation of rules and regulations;
- set human-in-command requirements including the right of explanation and that robots and AI must never be "humanised";
- devise and finance transition strategies for workers to retain or change their job if the occupational task content is significantly altered by AI;
- engage social partners in industrial and innovation dialogue processes towards ensuring the appropriate parameters for standardisation, fairer outcomes through collective bargaining, and the autonomy of workers in machine-to-human interactions;
- anticipate what competencies are needed to complement tasks performed by cognitive technologies and develop training policies and the underlying financing under a lifelong learning prism with the participation of trade unions in governance, design, implementation and oversight;
- ensure the quality of data sets that AI is built on: bad algorithms may lead to detrimental outcomes: among others, challenges to data ownership arise in view of the opacity of data processing and repurposing, and look into ways towards the anonymization of personal data (including privacy impact assessments);
- audit machine learning techniques against bias and security risks and discuss liability and consumer protection, as well as Occupational Health and Safety (OHS);
- support public R&D that currently lacks the resources needed to pursue longer-term goals compared to corporate laboratories, and to this effect encourage innovation eco-systems and clusters in regions;
- create incentives for and make simulations and validation systems when testing AI obligatory.

Role for trade unions and social dialogue

Taking all of the above into account – the challenges to occupational content, the apparent market concentration and lack of public dialogue and regulatory standards – call for a stronger involvement of trade unions: through collective bargaining to set and maintain wage levels (also for emerging occupations), agree on the design and implementation of training programmes as well as of data usage and protection, and by bringing the workers' voice from the shop floor to alert to security, safety and working time challenges. From recent global framework agreements to technological agreements at firm level, social dialogue is becoming essential to ensure the empowerment of workers, to secure responsible business conduct and to implement an overall long-term vision for sustainable business operations.

Towards a social dimension for AI diffusion

As set out in the TUAC recommendations on Digitalisation and the Digital Economy (February 2017), all technological transformations including the diffusion of AI should be accompanied by "just transition" principles for workers. Such policy framework should address the uncertainties regarding job impacts, risks of job losses, of undemocratic decision-making processes and of lowering rights at work, as well as of regional or local economic downturn, among others. While the framework was initially developed by trade unions in the context of climate change and endorsed in the COP21 agreement, its principles are valid to address the digitalisation of economies including:

- Research and early assessment of social and employment impacts;
- Social dialogue and democratic consultation with social partners and stakeholders;
- Active labour market policies and regulation, including training and skills development;
- Social protection, including securing of pensions;
- Economic diversification plans;
- Sound investments leading to high quality, decent jobs.

Moving ahead, future OECD work on AI should focus on ethical and operational standards for the design, diffusion and application including governance frameworks and regulatory parameters. The OECD should also foster coherence by bringing other policy areas into the discussion in its Going Digital horizontal project and beyond to ensure that such technological disruptions are shaped by proactive regulatory, economic and social policies. In doing so, it needs to include both social partners and other stakeholders into future deliberations.