

WHEN AI IS WORKING FOR US

IN BRIEF

- Artificial intelligence (AI) plays a central role in digital transformation. We are frequently confronted with AI in everyday life, often without being aware of this.
- AI influences many decisions that affect people; in many cases such decisions are made without human intervention.
- AI has great potential to increase productivity and make our lives easier, but this comes with correspondingly high ethical and social risks.
- Major changes are to be expected, particularly for the world of work.

WHAT IS IT ABOUT?

AI is progressing: Machine learning and processor performance are improving rapidly, and digitisation provides us with ever more data, further accelerating AI deployment. As a result, AI, or more precisely, algorithmic decision-making, is being used in more and more domains. The results of search engines, product recommendations on the Internet, voice assistants, personalised news feeds from social media, but also decisions on insurance conditions or the granting of loans are just a few examples of AI-supported processes.

The use of the expression “artificial intelligence” is misleading, even though it has become generally accepted. Strictly speaking, machine learning is the analysis of correlations in large quantities of data; it has little to do with detecting causality or understanding relationships. Moreover, the term AI is not only misleading, but also seductive in the sense that it gives this technology more power than it is entitled to. The data that goes into these systems can indeed be biased; thus AI-based decision-making can further reinforce social distortions.

Many AI systems function as a black box, i.e. it is not possible to explain or to understand how they arrive at their conclusions. This also implies that neither transparency nor comprehensible justifications can be provided for decisions

based on black box AI. In general, the design of AI systems also incorporates attitudes or values that can lead to unfair results. In the AI study commissioned by TA-SWISS, the ethical and socio-economic challenges of the use of AI were examined in five areas: work, education and research, consumption, media, and administration and jurisdiction. Owing to COVID-19, the situation in the world of work has literally become virulent. On the one hand, digitisation got a further push and has accelerated enormously, and on the other hand, certain economic sectors are struggling with major declines in employment, at least in the medium term.



The world of work in upheaval because of AI

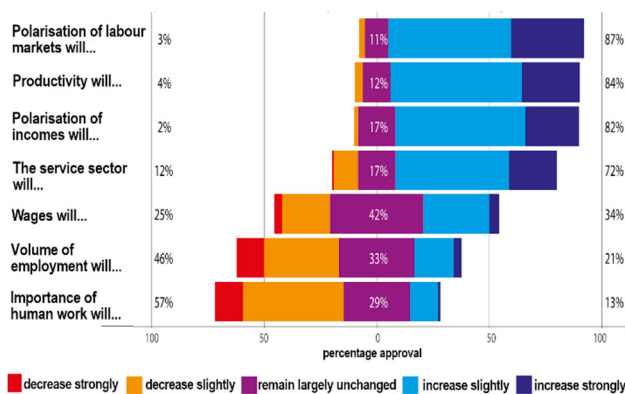
As a result, expectations or fears of job losses, which were linked to the use of AI in the longer term, have become true within a very short period of time. In general, AI has great potential for increasing productivity and thus also for rationalisation. Not only can it make traditional forms of automation more efficient and profound, AI can also support or even replace human beings in complex tasks which were previously requiring and depending on human action or supervision. As a result, the potential for distortions in the labour market is of course high. In addition to the effects estimated in the online survey (see chart overleaf), substantial changes are also expected with regard to the qualifications required in future labour markets.

BASIC DATA

Project title:	Wenn Algorithmen für uns entscheiden: Chancen und Risiken der künstlichen Intelligenz
Project team:	Čas, J., Krieger-Lamina, J. (in an international consortium)
Duration	04/2018 – 12/2019

KEY RESULTS

It is generally assumed that the use of AI will further deepen existing inequalities in the labour market. The share of high-skilled as well as low-skilled, low-paid jobs will increase at the expense of medium-skilled jobs, and the pay gap will also continue to widen. Similarly, it is widely expected that the overall volume of work will decrease. Without active countermeasures, the benefits of technical progress will be distributed unevenly and existing disparities will be further aggravated. It is therefore not very surprising that AI is frequently not seen as a possible relief from strenuous or monotonous activities, but rather as a threat to future opportunities to find work and to earn sufficient incomes.



Results of the expert survey on macro-economic effects (n = 115) (Christen *et al.* 2020)

Sustainable strategies for an economically efficient and viable use of new technologies must also ensure that the corresponding benefits are distributed fairly. As long as (justified) fears cannot be dispelled, only suboptimal use can be expected. The reduction in working hours in the form of involuntary unemployment is not a sustainable strategy: it is inefficient and unfair, puts financial burden on social budgets, and also jeopardises social cohesion and political stability. However, AI not only influences the volume of work demanded, but also the organisation and content of the work. Qualitative aspects and impacts of AI range from the assessment of applications in recruitment to the monitoring of employees and the allocation of work assignments by machines. As a result, this not only addresses key ethical questions of fairness, quality and transparency of decisions made by AI systems, but also touches the very core of human autonomy and dignity. In order to be able to take on and carry out new activities whilst preserving human autonomy and responsibility for AI systems, opportunities must also be created and provided to acquire the necessary key qualifications.

WHAT TO DO?

AI technologies will play an increasingly important role in the future world of work. Adequate framework conditions and policies must be established in order to be able to use technical progress in line with human and social advancement.

- A basic option – at least until recently and for countries with a good economic basis – would have been to passively await further developments and to address any potentially emerging problems on the labour market through the social system and further training programmes.
- A second option would be to proactively plan for possible slumps in the labour market. With this option, long-term high unemployment rates would have to result in mandatory government countermeasures: e.g. in form of a general reduction in working hours, public investment, or programmes to boost the economy.
- A third option would imply a rather fundamental change of the economic system. Productivity gains are used to decouple income and work more strongly through unconditional basic income (UBI).

The first option is probably impossible to realise for some considerable time: the economic crisis caused by COVID-19 and the economic downturns are too deep to make it a feasible alternative. Government-funded short-time work is an example of the second option; however, this chosen measure is neither a fair nor a sustainable model in the long run. Productivity gains achieved through AI could help fund a UBI. Yet it remains to be seen how such a system can be designed in a socially acceptable and economically sustainable manner. Respective political decisions must be accompanied by broad social debate in order to find solutions in which human intelligence decides on ways to a liveable future.

FURTHER READING

Christen, M., Mader, C., Čas, J. et al., 2020, Wenn Algorithmen für uns entscheiden: Chancen und Risiken der künstlichen Intelligenz; Zürich: vdf
vdf.ch/index.php?route=product/product/download&eo_id=9141&product_id=2192

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