

## The Transformation of Industry: Automation and the Future of Work

Productivity, human resources, automation and innovation are all terms used in studies on the labor market and innovation. The importance of studies dealing with the global labor market is well known, especially with regard to the introduction of new technologies into the production process. This discussion has always been present in studies on the subject and has been the subject of analysis by organizations seeking to intensify this relationship in order to restructure a constantly changing labour market.

In order to understand the future of the world of work, it is essential to consider the ability to adapt to new economic and social relations, which change as new technologies are introduced, forcing us to understand new contexts that are constantly being formed. In the context of production, the balance between human resources and technological means is not always even. More and more corporations are partially or totally replacing human resources (workers) with intelligent machines.

In a recent study, Kljucnikova and other authors discuss the future of work in corporations and present a restructuring in which intelligent machines would be directed towards more elaborate, complex and routine tasks. On the other hand, human resources would be better able to dedicate themselves to activities aimed at inspiration, creation and innovation, in a safe working environment and, above all, preserving their dignity. An interesting observation made by the authors, in a way contradicting already crystallized conceptions that there would be a total replacement of manpower by machines, is that intelligent machines will not replace human work but complement it, in order to promote a certain balance of functions.

The immediate consequence of this restructuring proposal would be better management of human resources, as well as creating the right conditions for a significant increase in productivity, since a healthy working environment has a direct impact on worker commitment. Supported by a dense literature review, the authors propose the creation of a competitive model between human resources and intelligent machines (Ključnikov, 2023). In this proposal, workers and technology would be sharing the work environment with the aim of adding skills and making it capable of meeting market demands. The results of the study point in the opposite direction to the common-sense perception that human labor would be completely replaced. Some of the conclusions are set out below:

1. The reorganization of the work environment, taking into account that intelligent machines will not replace human work but complement it, will lead to better acceptance by workers, preventing the spread of "technophobes" who fear or dislike technological development and fostering a certain confidence in "technophiles", who believe that technology can be an ally in guaranteeing a healthy work environment;
2. The new workspace model, combining human and technological resources, will provide greater opportunities for engagement, with potential social and technological growth;
3. The increase in productivity is not directly related to the advance of intelligent machines in the workplace, but exactly the opposite: investment in the digital skills of human resources must be considered, because the massive spread of automation alone does not represent an increase in revenue. According to the study, the misuse of robotics in the production process will have the opposite effect, because instead of helping, it could slow down production and create an atmosphere of discontent and insecurity among workers;
4. Organizations are facing a major challenge: to promote the adaptability of human resources and automation, with a view to complementing rather than excluding them, since the construction of a new model of productive work environment that generates skills and abilities for workers depends on this combination.

According to a recent report by the International Labor Organization, automation does not yet represent a risk to the labor market in industry, as most jobs are not subject to replacement by intelligent machines and are more likely to be complemented by automation rather than replaced (Gmyrek, 2023). But how can we reconcile human resources and automation while preserving productivity and a healthy working environment? There is certainly no "recipe" for how to conduct this model, but it is up to managers and workers to decide how intelligent machines will share the workspace in order to complement each other, ensuring not only productivity, but also changes in job quality.

Given this context, it is possible to point out that the possible effects of automation, whether negative or positive, and how intense they will be in organizations and in the world of work, depend very much on the conduct of managers and on the possibilities for workers to participate and have their say during the process. Perhaps this is the balance that has long been sought.

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#### Further reading:

Gmyrek, P., Berg, J., & Bescond, D. (2023). *Generative AI and jobs: A global analysis of potential effects on job quantity and quality*, ILO Working Paper 96 (Geneva, ILO).

<https://www.ilo.org/static/english/intserv/working-papers/wp096/index.html>

Ključnikov, A., Popkova, E.G., & Sergi, B.S. (2023). Global labour markets and workplaces in the age of intelligent machines. *Journal of Innovation and Knowledge*, 8(4), art. no. 100407.

<https://doi.org/10.1016/j.jik.2023.100438>