

ІНФОРМАЦІЙНІ ТЕХНОЛОГІЇ /  
ИНФОРМАЦИОННЫЕ ТЕХНОЛОГИИ

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THE AI WORKFORCE REVOLUTION

*The article discusses the impact of artificial intelligence (AI) on the labor market. AI has the potential to automate various tasks, leading to job displacement in some sectors. However, it can also create new jobs and improve productivity. The effect of AI on employment varies by industry and skill level. Governments and businesses should invest in education and retraining to help workers adapt to the changing job market.*

**Key words:** *artificial intelligence (AI), job market transformation, economic growth, AI-driven innovation, labor market trends.*

*Стаття аналізує вплив штучного інтелекту (ШІ) на ринок праці. ШІ має потенціал автоматизувати різні завдання, що може призвести до заміщення робочих місць у деяких секторах. Однак він також може створювати нові робочі місця та підвищувати продуктивність. Вплив ШІ на зайнятість залежить від галузі та рівня кваліфікації. Уряди та підприємства повинні інвестувати в освіту та перепідготовку, щоб допомогти працівникам адаптуватися до ринку праці, що змінюється.*

**Ключові слова:** *штучний інтелект (ШІ), трансформація ринку праці, економічний розвиток, інновації на основі ШІ, тенденції на ринку праці.*

The rise of artificial intelligence (AI) altogether affects work commercialization. The improvement of AI throughout the most recent very long while has prepared robots to take on obligations in the labor force that was before elite people. The room push-on has been changed thanks to artificial data in many industries, including production, medical services, transportation, and money. Indeed, even while it can create new positions and industries, AI is causing critical disturbances in the labor market. It is becoming progressively typical for calculations and robots to assume control over positions recently completed by human labor, and this move is expected to become extensively more ordinary in the long time to come. In the new period, the presentation of AI has affected the commercialization of work with unique open doors. The utilization of made-up terms has not just prompted the production of new occupations but has likewise been answerable for the end of others in various industries. Because of progress in artificial intelligence innovation, work commercialization has faced various open doors and issues. The essential goal of this piece is to lead an examination concerning the association between AI and the labor market, especially regarding the thoughts of replacement and substitution [5].

In many countries, technological innovations are displacing human staff from production. This shift is causing concerns about social changes due to potential job losses, especially with the rapid development of robotics and AI, which threatens jobs in technical fields and roles requiring mental skills.

AI is a field of science that creates systems capable of performing tasks that typically require human intelligence. Its main advantage is the creation of new opportunities for businesses, countries, and society as a whole. AI can perform various tasks, including transcribing audio, summarizing information, generating ideas, analyzing large datasets, and creating strategic plans. While some see AI's development as a technological breakthrough, others worry about its impact on employment.

According to a study by the McKinsey Global Institute, up to 300 million people could lose their jobs due to AI by 2030 [3]. Automation and AI could replace 375 million jobs worldwide yet create about 135 million new ones, resulting in a net loss of about 300 million jobs (10% of the global workforce).

The effect of AI on employment will differ by industry. Routine tasks in data entry, accounting, and manufacturing are at high risk of automation. Conversely, jobs requiring creativity, critical thinking, and emotional intelligence, such as teaching and nursing, are less likely to be affected.

In the United States, office support has the highest automation potential (46%), while sectors like building maintenance are the least affected (1%). In Europe, 24% of work could be automated, with clerical support the most impacted. Despite these challenges, AI can also create jobs in fields like AI development and data analysis, requiring specialized skills that lead to higher salaries. Moreover, AI can improve safety by taking over dangerous jobs, allowing workers to focus on more rewarding careers [4].

Increased productivity could drive economic growth and create new job opportunities, potentially offsetting job losses. Income distribution will be influenced by AI's effect on capital income, favoring AI-driven industries. According to the IMF, 60% of jobs in advanced economies could be affected by AI, compared to 40% in emerging markets and 26% in low-income countries [1].

Almost 40 percent of global employment is exposed to AI. Historically, automation and information technology have tended to affect routine tasks, but one of the things that sets AI apart is its ability to impact high-skilled jobs. As a result, advanced economies face more significant risks from AI and more opportunities to leverage its benefits than emerging markets and developing economies.

AI may impact about 60 percent of jobs in advanced economies. Roughly half the exposed jobs may benefit from AI integration, enhancing productivity. For the other half, AI applications may execute essential tasks currently performed by humans, which could lower labor demand, leading to lower wages and reduced hiring. In the most extreme cases, some of these jobs may disappear.

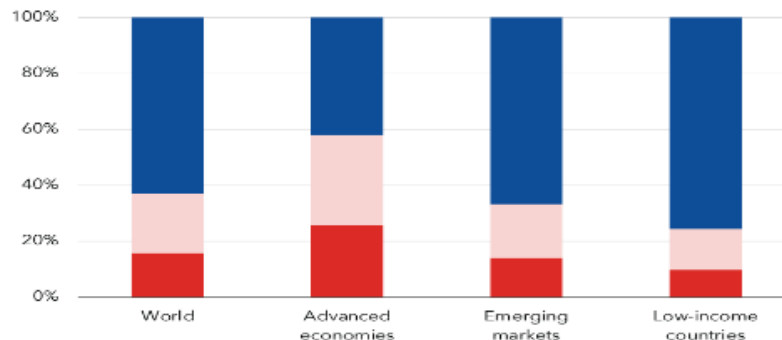
In contrast, AI exposure is expected to be 40 percent and 26 percent in emerging markets and low-income countries, respectively. These findings suggest that emerging markets and developing economies face fewer immediate disruptions from AI. At the same time, many of these countries do not have the infrastructure or skilled workforce to harness the benefits of AI, raising the risk that, over time, the technology could worsen inequality among nations (pic. 1).

### AI's impact on jobs

Most jobs are exposed to AI in advanced economies, with smaller shares in emerging markets and low-income countries.

#### Employment shares by AI exposure and complementarity

■ High exposure, high complementarity ■ High exposure, low complementarity ■ Low exposure



Source: International Labour Organization (ILO) and IMF staff calculations  
Note: Share of employment within each country group is calculated as the working-age-population-weighted average.

IMF

Picture 1. AI's impact on jobs [2]

AI could also affect income and wealth inequality within countries. We may see polarization within income brackets, with workers who can harness AI seeing an increase in their productivity and wages – and those who cannot fall behind. Research shows that AI can help less experienced workers enhance productivity more quickly. Younger workers may find it easier to exploit opportunities, while older workers could struggle to adapt.

The effect on labor income largely depends on how much AI complements high-income workers. If AI significantly complements higher-income workers, it may lead to a disproportionate increase in their labor income. Moreover, gains in productivity from firms that adopt AI will likely boost capital returns, which may also favor high earners. Both of these phenomena could exacerbate inequality.

In most scenarios, AI will likely worsen overall inequality, a troubling trend that policymakers must proactively address to prevent the technology from further stoking social tensions. Countries must establish comprehensive social safety nets and offer retraining programs for vulnerable workers. Doing so can make the AI transition more inclusive, protecting livelihoods and curbing inequality [2].

In conclusion, the AI revolution transforms job markets and economic growth by boosting productivity and creating new opportunities while displacing traditional roles. By using AI to complement, rather than replace, human workers, we can harness its full potential for shared prosperity. To address AI's impact on employment, governments and businesses should proactively invest in education and retraining programs to help workers adapt to the new economy. Preparing the workforce through these initiatives will be crucial to ensure that AI-driven progress leads to inclusive economic growth.

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