



Artificial Intelligence and Employment Futures for the Arab Region

Executive summary



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This report by the United Nations Economic and Social Commission for Western Asia (ESCWA) and the International Labour Organization (ILO) – Regional Office for Arab States examines the potential implications of artificial intelligence (AI) for employment in the Arab region between 2025 and 2035. While the timelines and specifics are impossible to predict, the impacts of AI on employment are inevitable. Preparing for a range of possible futures is crucial.

The spread of AI is projected to further drive changes in labour markets and for workers. Like the broader economic impacts of AI, these changes are not just projections for the future; they are already happening today. Multiple reports have assessed AI exposure, the degree to which a significant portion of the tasks within a job, an industry or an individual worker's activities can or cannot potentially be performed by or augmented with AI. Evidence is only now emerging of the actual impacts to date of AI eliminating or disrupting jobs around the world. The greatest impacts thus far have been on entry level workers, with some companies making workforce cuts.

Projections of the future impact on jobs are numerous, with one report projecting the elimination of 83 million jobs worldwide due to AI by 2027, offset by creation of 69 million new ones. The net loss of 14 million jobs represents 2 per cent of the global workforce.¹

The novelty of the phenomenon of AI, combined with the speed at which it is advancing throughout the world, makes all such projections uncertain. The only certainty about the impacts of AI on employment is that they will be considerable. It is thus essential that leaders utilize a strategic foresight approach and consider a range of alternative future scenarios as to what the impacts might be, and consider different policy choices and actions that could influence the impacts in different ways.

AI rolls out across the Arab region

The landscape and trajectories of trends in AI investment, research and development, startup and adoption in the Arab region portend substantial changes in the region's societies and economies.



Infrastructure investment has been particularly strong in the Gulf Cooperation Council (GCC) countries, and is accelerating in many other Arab countries. Investment will continue to grow. Across the GCC countries alone, projections show data centre capacity rising to 3.36W by 2030, more than triple the current capacity. The foundation is being built for a decade of robust AI acceleration across the Arab region.

A number of Arab countries are already emerging as leaders in AI research and development. Nine Arab region countries have national AI strategies, and nine others have national digital transformation strategies encompassing AI in various ways. Research and development is a central element of many of these strategies.

A vibrant ecosystem of AI startup companies is growing throughout the Arab region, with the potential to have a substantial impact on local economies and in the global economy. There were 332 active AI startup companies in the region in 2025, a 30 per cent rise over the previous year, and investment from around the world is fuelling AI startup activity in the region.²

The rates of adoption already being seen in businesses, Governments and other types of enterprises indicate that the Arab region is embracing AI in ways that have direct and substantial implications for jobs and employment. Recent analysis projects a region-wide rise in GDP of up to \$1.11 trillion by 2035 from the 2025 baseline GDP of \$3.57 trillion.³ That growth is fueled by widescale AI adoption in industries from energy to manufacturing to agriculture, retail, transportation, finance, public administration and health.

AI and the present and future of labour markets

AI is already impacting the structural and other dynamics that have defined the labour markets of the Arab region for generations, and is poised to further disrupt them in unprecedented ways. These disruptions could worsen employment prospects for many. At the same time, it is possible that AI will provide an opportunity for the region to escape the labour market dynamics that have historically kept it from realizing its full economic, social and human potential.

Modelling provides an indicative picture of how AI could reshape employment in the Arab region between today and 2035. AI automation may reduce employment in clerical, sales, retail and routine administrative functions, while increasing jobs in health, education, management and technology-intensive activities. The effects of AI will differ substantially across demographic groups between today and 2035. Young people (15–24 years) are poised to benefit most. Workers aged 25–54 years may experience short-term displacement as automation replaces mid-skill routine tasks, before reskilling and mobility toward new jobs allow recovery and eventual net gains. Older workers (55+ years) face the highest risk of exclusion due to AI, and gender disparities are expected to remain pronounced.

ILO analysis shows that regional GDP could expand by as much as \$14 billion above the baseline from productivity gains and innovation triggered by AI-enabled jobs. After initial job losses, employment is projected to return to positive ground, potentially producing a net gain of nearly 120,000 jobs.⁴ However, these jobs will not be evenly distributed across the economy. AI is likely to reshape sectoral balances rather than to cause a universal expansion in jobs.

AI integration into economies in the Arab region between today and 2035 will intersect with other social divides, deepening challenges of inclusion and vulnerability affecting persons with disabilities, migrants, refugees and low-skilled workers. AI has the potential to lift productivity in multiple ways, but the expected net result is that AI will amplify existing structural divides. The productivity improvements will depend not only on technology, but also on the capacity of firms to reorganize workflows, invest in human capital, and embed innovation into business models.

Building the skills for an inclusive AI ecosystem

The Arab region is at a pivotal moment. With coordinated and sustained investment in human capital, lifelong learning pathways and regional governance capacity, the region can move from being primarily a user of imported technologies to a contributor and shaper of global AI development. However, the window for action is finite.

Preparing for an era of AI-driven jobs cannot be reduced to producing more programmers or adding isolated modules to traditional curricula. AI readiness must be understood as a lifelong, inclusive system of learning that supports individuals through different life stages. At the foundation, citizens and residents in every Arab country require a baseline of digital and AI literacy. There is also a need for a spectrum of advanced and applied technical competencies including machine learning, cybersecurity, data stewardship, robotics and AI-driven engineering. Equally critical are governance and ethical competencies for AI deployment. Human skills including creativity, systems reasoning, leadership, communication, research literacy and ethical judgment will be even more essential as automation expands. These skills will ensure that AI complements human agency rather than replaces it.

The first pillar of a framework for developing human capital for AI-centric employment in the Arab region is advanced technical and research capabilities. Strengthening technical capacity also means expanding research ecosystems and building talent retention pathways. AI technical specialists in the region must also understand societal context and responsible AI innovation practices.

A second pillar is the recognition that the AI transformation of employment in the Arab region extends beyond technical professionals. Workers across sectors including public administration, education, logistics, manufacturing, health, tourism, finance and creative industries will increasingly interact with AI-enabled tools and services. AI literacy will allow these workers to understand how automated systems operate, to interpret their outputs, and to integrate them responsibly into everyday workflows.

A third pillar focuses on the competencies required to guide AI deployment responsibly and align it with public interest priorities. AI systems will increasingly support decision-making in public services, legal systems and economic governance. There will be a growing need for policymakers, regulators, legal experts, civil servants and institutional leaders to have skills in AI oversight, procurement, auditability, transparency and ethical evaluation.

Developing the skills required for an inclusive, resilient AI economy in the Arab region is not a single reform, but a long-term systemic effort. It requires alignment across education systems, labour markets, public institutions and innovation ecosystems. Transition from fragmented initiatives to an integrated skills strategy will depend on institutional requirements as foundations for Arab countries to gradually, sustainably and equitably build the AI talent and skills they need.

The first requirement is the establishment of a coherent national vision for AI-related talent development. Curriculum reform is the second requirement; introducing AI awareness early in schooling and, at the tertiary level, transcending technical-centric curricula to interdisciplinary curricula. Teacher preparedness is the third requirement; scaling high-quality teacher training will be essential. Alongside formal education, applied and vocational learning pathways are critical in the Arab region in light of youth unemployment, rapid industrial automation and uneven workforce participation. For those already in the workforce, flexible and accessible learning models including micro-credentials, short courses, community-based programmes and Arabic-language digital content will be essential. Effective implementation of systemic AI skill and talent development must also include mechanisms for quality assurance, and sustaining progress will require shared

responsibility across Governments, the private sector, universities and research institutions, and civil society, all with regional coordination.

Recent and anticipated trajectories for AI technology

Emerging trends in AI technology are indicative of further challenges and opportunities that workers in every sector will face, and will need to prepare for and adapt to. The fastest moving among these technology advancement trends are agentic AI tools that take actions on behalf



of human users; reasoning models that autonomously break down complex problems, synthesize information, and produce decisions for human users to implement; multimodal AI models that combine text, image, audio, video, sensor and other types of data; and vertical AI systems trained on specialized data, terminology and operational processes for specific domains or industries. Other emerging advancements include physical AI that integrates AI with machines such as robots and smart spaces in factories or warehouses, as well as automated machine learning in which AI is used in creating and deploying other AI models.

Alternative futures for AI and employment

A scenario approach is here employed to provide leaders in the Arab region with a structured way of considering how the impacts of AI on employment in the region could manifest in different ways and to different degrees. Three scenarios are provided, each set in the year 2035. Because the impacts of AI on employment are impossible to predict with precision, recommendations across the three scenarios will help to ensure that leaders implement robust actions beneficial to societies, no matter the timelines or specifics of the future that emerges.



1. In one scenario, Arab countries experience a mutually reinforcing interplay over the decade between steadily advancing AI technologies and a rapid pace of AI adoption in public and private sector enterprises. Societies benefit significantly from new products, services and abilities. Stability in the pace of AI capability advancement emboldens Governments and employers to push for the deployment of AI systems very rapidly and at scale. They are confident they can manage the disruptions resulting from the kinds of tasks automation has enabled. The result is substantial upheaval in employment across the region. Millions of jobs are eliminated. Millions of other workers across sectors have to gain new skills and shift into new roles profoundly

unlike their old ones. Familiar institutions such as national education systems are reimagined to help with the impacts. Many programmes are created to provide the upskilling people need to transition to new kinds of jobs, provided by government agencies at the national, sub-national and municipal levels, and by employers and civil society organizations. Leaders in the public and private show great willingness to contend with the challenges AI poses, intent on reaping its benefits by devoting resources and creativity to transition their workforces to a new era.

2. In a second scenario, by 2035, Arab countries are leaning into an environment of AI advancing far beyond even the optimistic expectations of a decade ago. There are successive astonishing breakthroughs in agentic AI, reasoning models and embodied AI, which combines AI-enabled sensors to perceive the physical world and take autonomous actions in 3D space. Unfortunately, as AI is advancing in these ways, the mechanisms for bringing the workforce along at a comparable pace are struggling. Ministries, universities and civil society actors are siloed, deploying fragmented and often outdated approaches to reskilling, adaptation of labour laws and social protection. This mismatch, with transformative technological capability and bracing uptake, alongside inertia in transitioning workforces, is vastly deepening gaps in equality. Many citizens, and a growing number of business leaders, believe that a careful approach to AI has been ignored. These interwoven dynamics create a volatile landscape that undermines social stability and risks reversing some of the economic diversification gains made over the last decade.

3. In a third scenario, Arab countries orchestrate an AI environment that unfolds along a tempered trajectory. Businesses, government agencies and other organizations readily leverage steady advances in language models and other AI tools developed throughout the world. While not ignoring the kinds of applications that global frontier models have been making available, the priority is productivity gains and economic growth that are just as achievable from leveraging open-source and small-language models. Countries create opportunities for themselves to experiment with creative means of preparing their citizens and residents to work in the era of AI. Businesses consider how to use AI in ways that not only fuel profit and growth, but also respect ethical considerations and employees' mental and physical wellbeing. Governments take care to introduce policies at an

iterative pace they are confident will produce positive outcomes. These dynamics reshape the region's employment landscape in sometimes surprising but consistently

constructive ways. Progress and opportunity are uneven, but a solid development trajectory is evident.

Endnotes

1. [World Economic Forum. Future of Jobs Report 2023. World Economic Forum, May 2023.](#)
2. [Rabbie, Eden, editor. 2025 MENA Early Stage Data Handbook. Clearworld, June 2025.](#)
3. [PwC. "Strategic AI adoption and climate resilience could add US\\$232 billion to Middle East GDP by 2035", July 2025.](#)
4. [International Labour Organization. "Navigating the Digital and Artificial Intelligence Revolution in Arab Labour Markets: Trends, Challenges and Opportunities", 1st ed., September 2025.](#)





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