Skill diversification in the Arab region: a pathway for economic prosperity

UNITED NATIONS
ESCWA

Shared Prosperity **Dignified Life**

Introduction

Societal evolution and the evolving demands of the labour market necessitate a diverse set of skills to achieve social and economic growth. The ability to embrace technological advancements and adapt to global economic trends is reflected in the demand for varied skills in the job market, as homogeneous skill sets have become insufficient to meet the multifaceted requirements of modern economies. In the Arab region, embracing skill diversification presents an opportunity to harness the region's rich human potential, rooted in a strong cultural and intellectual heritage, and is seen as a means to contribute to local and regional economies. It is also crucial for addressing socioeconomic challenges such as youth unemployment, and for reducing dependence on industries such as oil. Arab countries can thus explore emerging sectors such as technology and renewable energy, utilizing the capabilities of their young people to achieve sustainable development.

Embracing **skill diversification** presents an opportunity to harness the region's rich **human potential**

A. Challenges impacting skill diversification in the Arab region

Slow economic growth, economic dependency and high political instability

Over the past decade, the Arab region experienced an average economic growth of 2 per cent, primarily driven by oil prices. Economic growth, however, does not always result in more jobs or reduced unemployment. Nevertheless, it is a fundamental prerequisite for higher productive employment, which combines higher employment and labour productivity.

The Arab region encompasses a diverse range of countries, both economically affluent and disadvantaged. Its limited range of products and industries has a direct impact on the variety of skills in demand within the job market. As the region seeks to diversify its economy, a corresponding need for new and diverse skills emerges. Skill diversification is crucial for enabling economic and product diversification, as it broadens the skill base within the region, making it better equipped to adopt new technologies and drive innovation. Consequently, ensuring that the skills being developed align with the labour market's demands is essential for supporting economic diversification, a key element of economic development.

Political instability emerges as a prominent factor influencing skill diversification in the Arab region and is ranked as the most significant obstacle to firm performance. Between 2011 and 2023, many countries in the region grappled with heightened political unrest and violent conflicts that directly and indirectly affected most countries in the region.

Infrastructure challenges

Infrastructure investment holds the potential to stimulate both immediate and medium-term economic growth while driving the demand for skills. According to the World Bank in 2020,[1] a billion-dollar infrastructure investment in the Middle East and North Africa (MENA) region could generate significant job opportunities, creating 138,000 jobs in the short term and an additional 442,000 induced jobs in the long run. Investing in rural infrastructure is especially crucial for enhancing the income of rural populations.

Despite its abundant natural resources, the Arab region faces a challenge in terms of technology infrastructure. Investments in technology infrastructure within the Arab region vary significantly among countries,[2] with some countries performing exceptionally well and others still lagging behind. The Gulf Cooperation Council (GCC) countries have emerged as leaders in this regard by dedicating substantial resources to digital infrastructure, 5G and cloud technologies. In North Africa, countries are actively striving to leverage their demographics and limited financial resources to advance their digital landscape. In contrast, the Levant subregion, including Iraq, Lebanon and the Syrian Arab Republic, faces the most pronounced technology gap and lags behind both cloud technologies and North Africa.
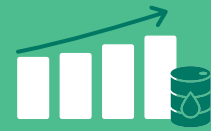
The Arab region experienced an **average economic growth** of

2% primarily driven by **oil prices**

A **billion-dollar infrastructure** investment could create

138,000 jobs in the short term and

442,000 induced jobs in the long run

Investments in **technology infrastructure** within the Arab region **vary significantly** among countries

Labour market inefficiencies and education mismatch

Informal employment is a pressing issue in the Arab region, constituting 68 per cent of total employment in 2019.[3] The majority of formal employment is concentrated in the public sector, while formal private-sector employment remains limited.

The Arab region's informal employment situation is intricately linked to the problem of skill mismatch, which represents a significant divide between the skills offered by the workforce and those sought by employers. Skill mismatch can be attributed to two primary factors: an insufficient demand for specific skills in the job market and inefficiencies in the transition from learning to earning. The persistence of skill mismatches can have detrimental effects, including inhibiting innovation and economic diversification.

Youth unemployment is also a pressing concern in the Arab region, surpassing global levels and increasing from 22 per cent in 2010 to a troubling 27 per cent in 2023. This trend is accompanied by significant gender disparities, with women experiencing higher unemployment rates (44 per cent in 2021) compared to young men (23 per cent).[4] Gender divides extend to multiple labour market aspects, and the region's education and training systems often fail to provide equal opportunities, influencing the academic choices of young women and discouraging pursuits in the fields of science, technology, engineering and mathematics.

Informal employment, including participation in the gig economy, is common among the region's young people. In 2023, approximately 75 per cent of young people were engaged in low-wage, informal jobs.[5] The shift towards informal employment highlights the urgent need for upskilling and reskilling initiatives. The lack of demand for skilled professionals may lead to a "brain drain" as talented individuals seek better opportunities abroad, resulting in a loss of human capital and hindering investments and growth opportunities.

Weak technical and vocational education and training systems

One critical concern in the Arab region is the subpar quality and secondary status of technical and vocational education and training (TVET) institutions, characterized by outdated equipment, curricula and teaching methods. Graduates often find their skills insufficient for employment, and opportunities for upskilling and reskilling are limited. Revamping TVET systems requires substantial investments, the integration of consultative mechanisms with private-industry councils, and a focus on practical experience through internships and apprenticeships. The region also has a limited number of TVET institutions that are actively collaborating with the private sector through initiatives such as internships and dual training programmes.

Youth unemployment is increasing from **22%** in 2010 to **27%** in 2023

In 2023, approximately **75%** of **young people** were engaged in **low-wage, informal jobs**

Graduates often find their **skills insufficient** for **employment**

©koldunova/stock.adobe.com

B. ESCWA Skills Monitor and labour-market trends analysis

The Arab region seems willing to adapt to new technological advancements and to maintain competitiveness in the global market. Figure 1 reveals a surge in the need for skills related to the fourth industrial revolution in the online job market, with computer science ranking high on the demand side. The figure indicates a consistent demand for 16 skills in the top-20 list for all three periods studied, which include many traditional skills such as accounting, auditing, finance, construction, and restaurant operation, alongside emerging skills such as computer science and data analysis. Similarly, figure 2 illustrates the annual top-20 soft skills in demand in the Arab region. The analysis identifies 25 distinct soft skills, with 17 consistently appearing in high demand across the three studied periods. Arabic and English consistently remain the top-two language skills required in the region. Communications remains the most demanded soft skill across all periods observed, with sales and management occupying the remaining spots of the region's top-three demanded soft skills. Problem-solving has advanced owing to its significance in technical and analytical roles.

EN AR

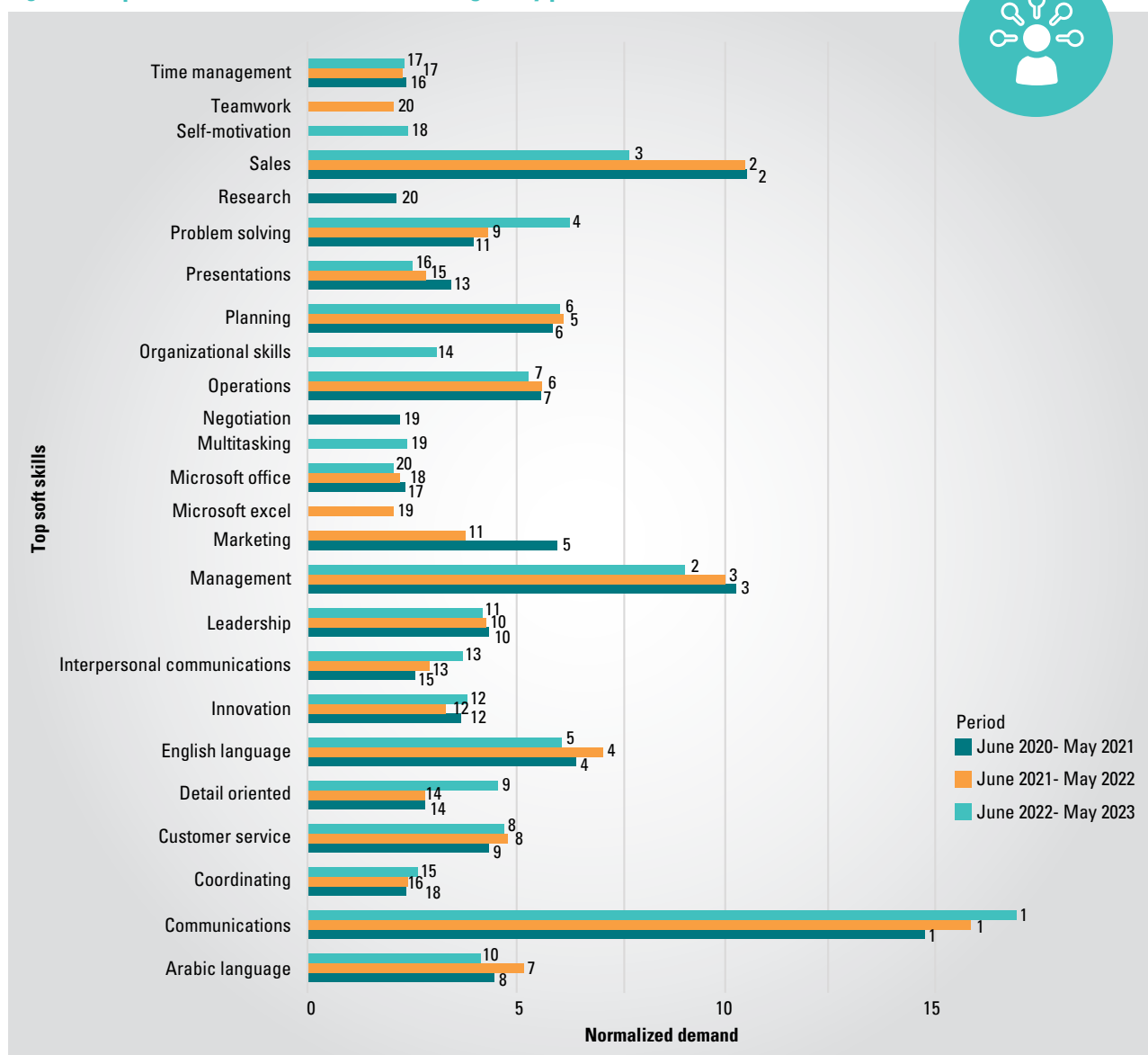**Arabic** and **English** consistently remain the **top-two** language skills required in the region. **Communications** remains the most demanded soft skill

Figure1. **Top 20 demanded hard skills in the region by period**
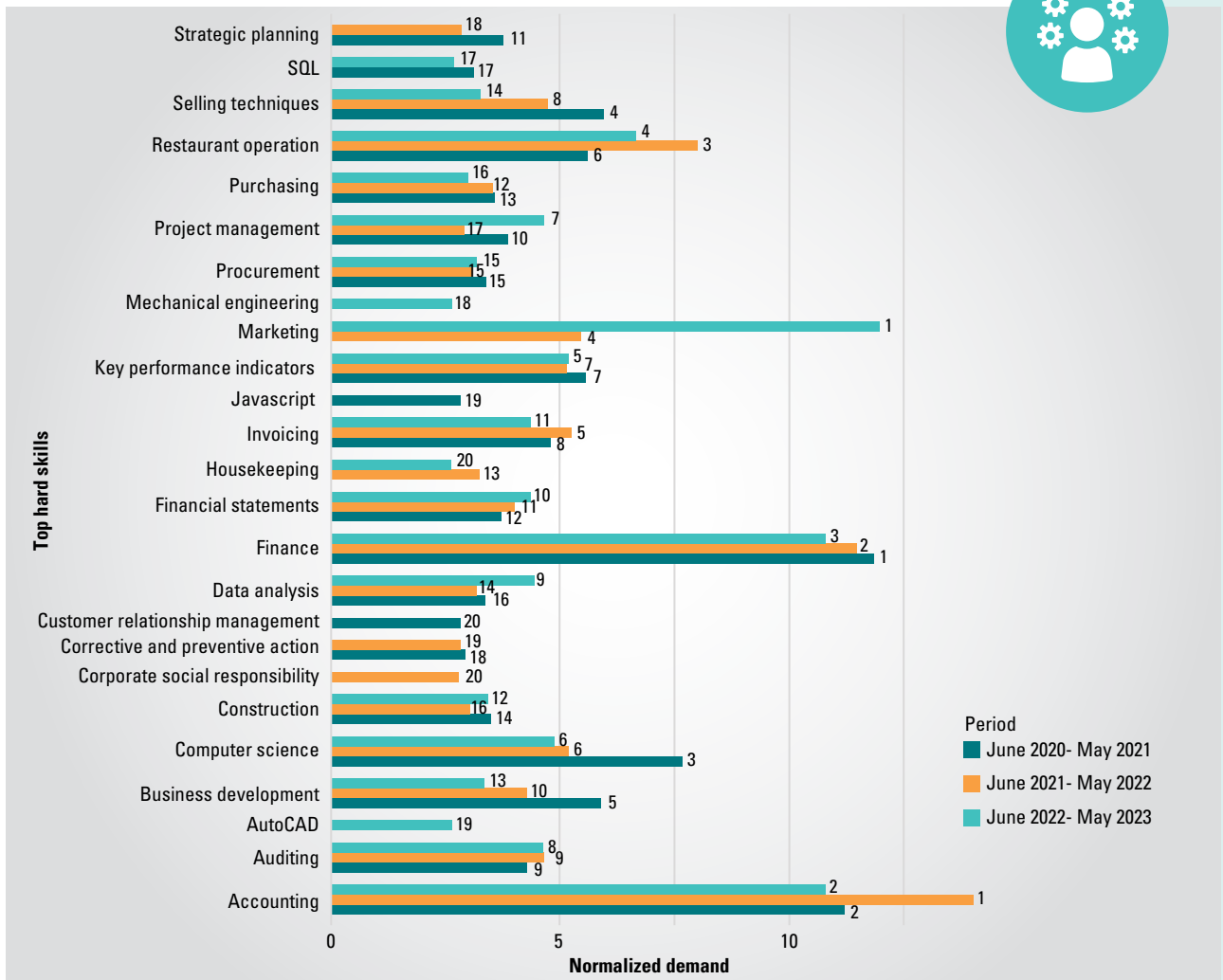
Source: ESCWA analysis and production based on data from the ESCWA Skills Monitor.
Note: The number attached at the top of each bar indicates the ranking of the skill in that period.

Figure 2. **Top 20 demanded soft skills in the region by period**

Skill	June 2020- May 2021	June 2021- May 2022	June 2022- May 2023
Time management	16	17	17
Teamwork		20	
Self-motivation			18
Sales	3	2	2
Research	20		
Problem solving	11	9	4
Presentations	13	15	16
Planning	6	5	6
Organizational skills			14
Operations	7	6	7
Negotiation	19		
Multitasking			19
Microsoft office	17	18	20
Microsoft excel		19	
Marketing	5		11
Management	3	3	2
Leadership	10	10	11
Interpersonal communications	15	13	13
Innovation	12	12	12
English language	4	4	5
Detail oriented	14	14	9
Customer service	9	8	8
Coordinating	18	16	15
Communications	1	1	1
Arabic language	8	7	10

Source: ESCWA analysis and production based on data from the ESCWA Skills Monitor.
Note: The number attached at the top of each bar indicates the ranking of the skill in that period.

©Pakin/stock.adobe.com

For each job posting in the ESCWA Skills Monitor, there is a measure of how many tasks within the job, identified from job descriptions, can be automated or augmented by artificial intelligence (AI). To test how AI is augmenting jobs, the Qatar Computing Research Institute (QCRI) built an AI-based method that measures the automation impact of AI on jobs. ESCWA partnered with QCRI and extended their AI model to measure the AI Impact Score on over 3 million online job postings from Arab countries.

The average AI score observed among the postings is around 0.31, which means that, on average, 31 per cent of job tasks can be augmented by existing AI patents. In an era where AI continues to make a significant impact, all skills and jobs can be automated or augmented by existing AI patents to a certain extent.

The connection between demanded skills and the Sustainable Development Goals (SDGs) is also analysed. The findings indicate that the skills demanded in the region align with the areas where the Arab region has made significant progress towards the SDGs. These areas include health care, education and sustainable communities. Contrary thereto, skills related to SDG 1 (poverty eradication), SDG 13 (climate action) and SDG 5 (gender equality) show limited correlation.

©Panumas/stock.adobe.com

31% of **job tasks** can be **augmented** by existing **AI patents**

C. Assessing skill diversification

The Skill Demand Diversity Scores (SDDS) are a set of measures constructed using the skill demand data observed in the ESCWA Skills Monitor to evaluate the diversity of skill demand in various countries within the online job market. It encompasses four individual indicators: skill variety (V), which refers to the number of distinct skills observed from the demand side of an online market; skill mobility (M), which identifies skills that are in demand across multiple European Skills, Competences, Qualifications and Occupations (ESCO) job families; future-oriented skills (F), which shows the average share of future-oriented skills across occupations observed in the online market in each economy; and the balance of skill distribution in economies (E). Eleven countries that recorded over 30,000 vacancy observations in the monitor's database were analysed to ensure adequate market size and occupation coverage.

The ranking of countries in the skill variety measure shows that the online labour market of Morocco exhibits the most substantial demand for distinct skills, conditional on its market size. The United Arab Emirates, Jordan, Egypt and Saudi Arabia also exhibited relatively strong demand for skill variety. In comparison, Lebanon, Oman and Kuwait have relative

11 countries recorded over **30,000** vacancy observations in the monitor's database

disadvantages in this measure. The relationship between skill variety and demand is characterized by positive incremental growth. The variety of skills referring to the number of distinct skills observed from the demand side of an online market shows that new vacancies contribute to increasing skill variety but at a diminishing rate.

The data show that the United Arab Emirates has a notable advantage in *skill mobility*. Saudi Arabia and Egypt also exhibit relative advantages in this measure, likely due to their market size. In contrast, countries such as Kuwait, Oman and Bahrain have lower skill mobility measures, indicating a relative disadvantage. As skill mobility identifies skills that are in demand across multiple job titles, the analysis consists of an overview of how many distinct job titles are observed in each country, the mean job titles coverage per skill, and the mean percentage coverage per skill (ranking). A skill associated with multiple job titles is easily transferable between different occupational families, and a market with a high number of mobile skills has lower barriers for transferring skill sets between occupations that share these mobile skills.

Morocco and Tunisia lead with the highest percentages in the analysis of *future-oriented skills*. Conversely, Kuwait lags with the lowest percentage. This measure represents the average share of skills related to the fourth industrial revolution across occupations in the online market of each economy.

Saudi Arabia, the United Arab Emirates and Egypt are the countries in which the most *balanced skill distribution* across skill categories is observed, whereas Bahrain scores the lowest in this criterion. This statistic can be understood as how close the country is to the equal distribution of skills across the skill categories in each occupation.

Morocco and **Tunisia** lead with the **highest percentages** in the analysis of **future-oriented skills**

©DIgilife/stock.adobe.com

Recommendations

Strategic policy framework for dynamic skill integration: advancing education to meet labour market needs

1

To enhance the effectiveness of the educational system, it is crucial to integrate a diverse range of skills that align with the dynamic demands of the job market. This involves tailoring curricula to meet industry needs, with a specific emphasis on microcredentials to facilitate swift skill acquisition. Investing in TVET systems includes securing adequate funding for TVET, simplifying transitions between different education tracks, and establishing coordination platforms involving academia, the Government and the private sector. Such comprehensive efforts will not only equip young people with relevant skills but also foster a seamless connection between education and the ever-evolving demands of the professional landscape.

Pioneering blueprint for innovation: bridging the skill gaps to foster entrepreneurship and streamline ecosystem coordination

2

To drive comprehensive innovation and economic growth, a multifaceted approach is essential. This includes creating a supportive environment for innovative start-ups, aligning educational outcomes with technological advancements, and addressing the skill gap through initiatives such as the ESCWA Josour initiative. Strategic investments in key sectors such as AI and renewable energy, coupled with the promotion of tech-innovation through start-up incubators, are crucial. Fostering knowledge transfer and collaboration among academia, the Government and the private sector is also pivotal for vision alignment. To bridge the digital skills divide in a digitized economy, a coordinated effort should emphasize language and technical training within collaboration platforms. The strategic empowerment of local science, technology and innovation ecosystems is also vital, necessitating the creation of platforms that facilitate such empowerment through coordinated endeavours.

Endnotes

1. World Bank, Building forward better in MENA: How infrastructure investments can create jobs, 2020.
2. Middle East Institute, The Middle East in an era of great tech competition, 2023.
3. Economic and Social Commission for Western Asia (ESCWA), Informal middle-class workers: the missing middle, 2023.
4. International Labour Organization (ILO), Global Employment Trends for Youth 2022: The Arab States, 2022.
5. United Nations Children's Fund (UNICEF), the International Labour Organization (ILO) and the European Training Foundation (ETF), Enabling success: supporting youth in MENA in their transition from learning to decent work, 2023.

UNITED NATIONS
ESCWA

Shared Prosperity **Dignified Life**

VISION: ESCWA, an innovative catalyst for a stable, just and flourishing Arab region

MISSION: Committed to the 2030 Agenda, ESCWA's passionate team produces innovative knowledge, fosters regional consensus and delivers transformational policy advice. Together, we work for a sustainable future for all.

www.unescwa.org

2301991E