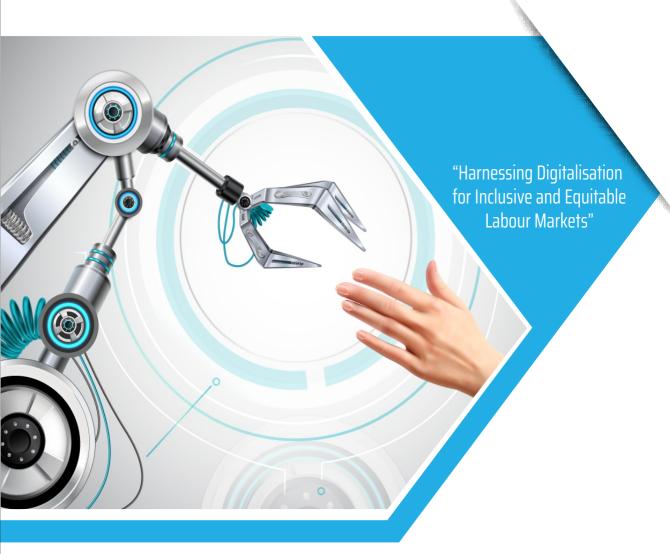
OIC LABOUR MARKET REPORT 2025





ORGANISATION OF ISLAMIC COOPERATION

STATISTICAL, ECONOMIC AND SOCIAL RESEARCH AND TRAINING CENTRE FOR ISLAMIC COUNTRIES



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Harnessing Digitalisation for Inclusive and Equitable Labour Markets





ORGANISATION OF ISLAMIC COOPERATION

STATISTICAL, ECONOMIC AND SOCIAL RESEARCH AND TRAINING CENTRE FOR ISLAMIC COUNTRIES



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ACRONYMS

AI Artificial Intelligence

ALMP Active Labour Market Policy

DSGI Digital Skills Gap Index

EPR Employment-to-Population Ratio

ECA Europe and Central Asia
GDP Gross Domestic Product

ICLM Islamic Conference of Labour Ministers
ICLS The Conference of Labour Statisticians

ICT Information and Communication Technologies

ILO International Labour Organization

ISCO International Standard Classification of Occupations

JGR Job Gap Rate

KPI Key Performance Indicator

LFPR Labour Force Participation Rate

LMP Labour Market Policy

LMS Labour Market Strategy

LFS Labour Force Survey

MENA Middle East and North Africa

NEET Not in Education, Employment or Training

OECD Organization of Economic Cooperation and Development

OIC Organization of Islamic Cooperation
OSH Occupational Safety and Health
PES Public Employment Services
PPP Purchasing Power Parity

SME Small- and Medium-sized Enterprise

SSA Sub-Saharan Africa

STEM Science, Technology, Engineering and Mathematics

TA Thematic Area

TVET Technical and Vocational Education and Training

UAE United Arab Emirates

WB World Bank

WEF World Economic Forum

FOREWORD

The global labour market is undergoing a rapid and profound transformation. Driven by digitalisation, automation, and changing patterns of work, the very nature of employment is being reshaped. These shifts offer significant opportunities to boost innovation, increase productivity, and open new avenues for economic growth. At the same time, they pose urgent challenges, particularly in ensuring that the benefits of this transformation are shared broadly and equitably.

The 2025 edition of the OIC Labour Market Report: Harnessing Digitalisation for Building Inclusive and Equitable Labour Markets explores how digital transformation can serve as a powerful engine for inclusion, empowerment, and sustainable development across OIC member countries. It reflects on the current state of labour markets within the OIC group in a comparative perspective, assesses ongoing trends, and offers forward-looking insights and policy recommendations.

One of the report's key findings underlines trends in labour force participation. While OIC countries account for a growing share of the global labour force, participation rates within the group, especially among women and youth, remain persistently low. Addressing this gap is not only a matter of social justice, but also a strategic opportunity to unlock untapped potential, boost productivity, and strengthen social cohesion.

Digital technologies, platforms, and remote work models offer promising tools to reduce longstanding barriers to labour market access. These innovations can enable greater inclusion of women, youth, and other marginalised groups by providing more flexible and accessible employment pathways. However, realising this potential requires more than access to technology; it demands a comprehensive strategy to overcome digital divides and ensure equitable participation.

A central focus of this report is the dual impact of digitalisation and automation on jobs, skills, and tasks. While these technologies are creating new roles and sectors, they are also displacing others. This reality calls for urgent and sustained investment in education, skills development, and lifelong learning to ensure that the workforce is equipped for the demands of a rapidly evolving economy.

For OIC countries, the stakes are high but so too is the opportunity. If harnessed strategically, digital transformation can enable these nations to leapfrog into more diversified, innovative, and inclusive economic futures. This requires coordinated actions based on policy reforms, targeted investments in human capital, and alignment with the values rooted in the Islamic tradition of cooperation and social justice.

As the global labour market continues to evolve, the central challenge for OIC countries is to turn disruption into opportunity to build systems that are not only technologically advanced, but also fair, inclusive, and resilient. This report contributes to that goal by identifying the risks of exclusion, highlighting the opportunities for inclusive growth, and charting actionable pathways toward more equitable labour markets across the OIC countries and beyond.

Zehra Zümrüt SELÇUK Director General SESRIC

EXECUTIVE SUMMARY

This report provides an update on the current state of the labour market in OIC countries and a comprehensive assessment of the rise of digitalization and automation, as well as their impacts on labour markets.

Main findings of the report are as follows:

Labour force participation and employment

- OIC countries have steadily increased their share of the global labour force from 20.1% in 2015 to 21.5% in 2024. The increase in the share of the youth labour force is even more significant, rising from 25.9% in 2015 to 29.8% in 2024.
- Despite some fluctuations, the labour force participation rate (LFPR) in OIC countries has remained relatively stable at around 58% over the past decade, estimated at 58.7% in 2024. However, with a female participation rate of 41.2%, OIC countries significantly lag behind the global average of 48.9% in 2024.
- Youth labour force participation in OIC countries remained around 42% from 2015 to 2020. By 2023, this rate had increased to 42.8% and stabilized at the same level in 2024, compared to the global average of 41.7%.
- The global employment-to-population ratio (EPR) has been steadily declining over the past decade, falling to 57.9% in 2024 from 58.7% in 2010, and it is projected to further decrease to 57.7% by 2026. In OIC countries, the EPR was estimated at 55.6% in 2024 and is projected to slightly decline to 55.5% by 2026. In 2024, the EPR for females aged 15+ in OIC countries was 38.8%, roughly half that of males at 72.1%, while the youth EPR of 38.1% was higher than the global average and non-OIC developing countries.
- OIC countries recorded higher average unemployment rates than the global average, developed countries, and non-OIC developing countries. In 2024, the total unemployment rate averaged 5.3% in OIC countries, 4.8% in non-OIC developing countries, 4.6% in developed countries, and 5.0% globally. Female unemployment rates were the highest in OIC countries at 5.9% in 2024.
- Young people (aged 15–24) face a lack of decent job opportunities globally, with youth unemployment reaching 12.6% worldwide in 2024, a rate expected to remain stable through 2025. In 2024, the youth unemployment rate was 10.9% in OIC countries, compared to 10.7% in developed countries and 13.6% in non-OIC developing countries.
- Globally, over one-fifth (20.4%) of young people are currently not in employment, education, or training (NEET). In 2024, an estimated 26.3% of youth in OIC countries were in NEET status, compared to 19.2% in non-OIC developing countries and 9.7% in developed countries.

Labour productivity, income and social protection

- The educational level of the labour force in OIC countries is relatively low. Approximately 24.8% of the labour force is estimated to have less than basic education, compared to 19.2% in non-OIC developing countries and only 0.7% in developed countries. Moreover, 30.9% of the OIC labour force has only a basic level of education. The shares of the labour force with intermediate and advanced education in OIC countries are 28.2% and 14%, respectively.
- The level of skills and qualifications of a person is a critical factor in enhancing employability in the labour market and promoting productivity. The share of workers with low skills is 12.7% in OIC countries, lower than the average of non-OIC developing countries (19.9%). Compared to other country groups, OIC countries have a smaller share of high-skilled employees (16.2%) than developed countries (44.9%), but a similar share to non-OIC developing countries (14.2%). Moreover, the skills match rate was only 38.1% in OIC countries, compared to 57% in developed countries and 48% in non-OIC developing countries.
- When total employment is disaggregated into three broad sectors—agriculture, industry, and services—the share of employment in agriculture in OIC countries was estimated at 30.5%, industry at 21.6%, and services at 47.9% in 2023.
- At the global level, labour productivity continues to show an increasing trend over time. Output per worker in OIC countries increased from US\$28,996 in 2015 to US\$32,267 in 2024, measured in constant international prices based on purchasing power parity (PPP). However, in 2024, an average worker in OIC countries produced only 25.8% of the output of an average worker in developed countries.
- Regarding income levels, the share of the "extremely poor" in OIC countries decreased from 17.2% in 2010 to 10.4% in 2024. The share of the "moderately poor" employed also showed a declining trend, estimated to reach 18% in 2024 compared to 25% in 2010. The average income share of workers in OIC countries was around 40.0% in 2024, compared to 55.1% in developed countries and 46.1% in non-OIC developing countries.
- In OIC countries, 44% of employed people were wage and salary workers, 39% own-account workers, 11% contributing family workers, and 6% employers in 2023. With the increasing shares of wage and salary workers and employers in OIC countries, the share of vulnerable employment has steadily declined, reaching 49.8% in 2023 compared to 54.4% in 2010. However, the level of vulnerability among female employed workers remained high at 61.4% compared to male employed workers (43.5%).
- Social protection measures are crucial for workers, providing a safety net to ensure their well-being and safeguard against risks. The proportion of the population covered by at least one social protection benefit is lower than the global average of 52.4% in 43 OIC countries, with less than 10% of the population covered in 10 OIC countries.

Automation, Sectoral Transformation and Changing Nature of World

- The impact of digitalization on jobs is complex and varies across industries. Instead of eliminating human labour outright, new technologies are reshaping occupations by changing task profiles, replacing some activities while creating new ones. Generative AI has expanded automation beyond manual and routine tasks to cognitive and creative work, further diversifying the impact.
- Digitalization and automation bring both opportunities and risks. On one hand, they can increase productivity, create new, higher value-added employment, and improve working conditions by reducing repetitive or hazardous tasks. On the other hand, they raise concerns about structural unemployment, wage polarization, and skills mismatches, especially in labour markets relying on routine, low-skilled work.
- Evidence shows that while aggregate net job destruction has not occurred, structural labour-market churn remains significant. Automation risks are concentrated in routine-intensive occupations, while jobs in healthcare, education, and knowledge services are more likely to be augmented rather than replaced. Workers in emerging markets often view automation more positively than those in advanced economies, but disparities persist, particularly for older, lower-income, and lower-skilled workers.
- The demand for digital and cognitive skills is increasing rapidly. Skills such as analytical thinking, creative thinking, resilience, and technological literacy rank highest among employers, while manual dexterity, basic data entry, and routine tasks are in decline. Employers across surveyed countries prioritize upskilling (85%), accelerating automation (73%), and hiring staff with new skills (70%) as key responses.
- OIC countries show diverse levels of labour-market churn. Bahrain (33%), Uzbekistan (30%), Türkiye (29%), and Morocco (27%) are projected to face above-average reallocation, compared to the global average of 22%. Meanwhile, Egypt (48%), Türkiye (44%) and Bahrain (42%) are among those with the highest expected skills disruption, against a global average of 39%.
- Despite these pressures, firms in OIC countries lag in workforce training. On average, only 21.3% of firms offer formal training, compared to 32.7% globally and 47.1% in developed economies. Countries such as Albania (46.2%) and Jordan (42.2%) show stronger efforts, while others including Saudi Arabia (3.9%) and Pakistan (5.9%), remain far below the global benchmark.
- Addressing these challenges requires scaling up reskilling and digital upskilling initiatives, aligning education with future labour-market needs, and strengthening public-private partnerships. Best practices from within the OIC, such as Saudi Arabia and the UAE's large-scale AI investments, demonstrate how national strategies can integrate automation, innovation, and workforce transformation to drive sustainable economic diversification.

Planning for the Next Generation of Jobs and Employment

- In the light of significant transformations and disruptions that emerging technologies and automation bring to the job market, it is imperative for the OIC countries to prepare for the future of work. They can mitigate the potential negative impacts of these changes and harness the opportunities they present by proactively equipping individuals with the necessary skills and capabilities, developing regulatory and supportive mechanisms and designing investment decisions to drive technological adoption and innovation.
- Getting prepared for the next generation of work is also crucial for overall economic growth
 and societal well-being. Countries that prioritize the development of skills and adapt their
 labour markets to technological advancements will be better positioned to attract
 investments, foster innovation, and remain competitive in the global economy.
- OIC countries face challenges such as the digital divide, skills gaps, job displacement, limited fiscal space, regulatory environment, and cybersecurity concerns, hindering their adaptation to rising digitalization. The recent shift in global trade dynamics which has increased trade uncertainty, is a major driver of slower labour market prospect. Addressing these challenges requires investments in digital infrastructure, education and skills development, policy reforms, public-private partnerships, and targeted support for vulnerable populations, international cooperation and knowledge-sharing as well as strengthening trade relationships or exploring alternative trading partners.
- OIC countries have the opportunity to leapfrog traditional infrastructure development and adopt advanced technologies, enabling faster implementation of digital solutions and greater efficiency. This requires investment in mobile and internet technologies, digital skills, innovation, and a favourable policy environment. However, leapfrogging should be followed by regulatory frameworks to avoid the negative spillover effects of adopting new technologies.
- Digitalization offers opportunities for economic growth, industrial upgrading, and economic
 diversification in OIC countries. It can enhance access to education, healthcare, financial
 services, and information, improve government efficiency and social services, and drive
 innovation and competitiveness in global markets.
- To fully leverage the benefits of advance technologies in the labour markets, OIC member countries should prioritize strategic workforce planning, skills development, sector-specific strategies, regulatory policies, innovation, and collaboration to prepare for the future of work.
- Key recommendations include understanding workforce trends, promoting digital literacy and STEM education, diversifying the economy and forging formidable trade relationship with major trading partners, implementing flexible regulations, fostering innovation and entrepreneurship, strengthening social protection, improving digital infrastructure, empowering youth, and fostering collaboration and partnerships.

Overall, the report finds that the labour force participation rate, employment-to-population ratio, and the share of the labour force with tertiary education are lower in OIC countries compared to other developing and developed countries, while the female unemployment rate, the share of vulnerable employment, the share of employment in agriculture, the inactivity rate, and the share of the labour force with primary education are higher.

As a long-standing challenge in OIC countries, inactivity creates significant economic problems by hampering economic growth and poverty alleviation, increasing economic dependency, and placing greater pressure on public resources. Addressing this challenge would contribute to achieving a more inclusive and productive economy across OIC member countries. In addition to its significant potential to enhance economic development, reducing economic inactivity will also help address diverse social issues.

The implementation of a comprehensive framework will be influenced by a wide range of factors, including macroeconomic conditions, the economy's ability to create new jobs, fiscal capacity to support skills development and targeted incentives, and the labour market's ability to integrate the long-term unemployed or inexperienced workforce. Country-specific strategies should be designed to account for these diverse factors. Allocating limited resources efficiently across priority areas in different sectors is often challenging but essential for achieving developmental goals.

The future of work is expected to undergo profound transformations due to factors such as climate change, technological advancements, trade uncertainty, the lingering effects of the pandemic, and the need to address social tensions and inequality. These changes will have significant implications for both formal and informal workers, necessitating a shift in policies toward a new paradigm of inclusive and sustainable development.

Chapter 1

LABOUR MARKET PARTICIPATION AND UNEMPLOYMENT

Behind every economy lies a demographic story that shapes labour supply, consumption patterns, savings, and long-term growth potential. Demographics are a fundamental driver of economic performance, influencing who works, who spends, and who drives future growth.

In OIC countries, 2024 data reveal a predominantly young population: over 42% are under 20 years old, and more than 59% are below 30. Younger age groups typically invest in human capital through education, training, and skills development while driving demand for housing, goods, and services. With age cohorts 0–24 accounting for over 51% of the OIC population, the region has the potential for a demographic dividend. Realizing this potential, however, requires effective investments in education, health, and skills to transform this large youth base into a productive labour force¹.

Key demographic indicators vary widely across the group. Fertility rates remain among the highest globally in countries such as Chad (6.03), Somalia (6.01), Niger (5.94), and Mali (5.51), leading to young age structures and rapid population growth that strain education, healthcare, infrastructure, and labour markets. In contrast, countries like the United Arab Emirates (UAE) (1.21), Morocco (1.34), and Türkiye (1.62) have fertility rates below replacement level, signalling more stable or aging populations in the near future. Life expectancy also varies significantly, ranging from over 83 years in the UAE, Qatar, and Algeria to below 55 years in Nigeria, reflecting persistent health and mortality challenges.

Migration further shapes demographic and labour market dynamics. Oman experiences significant net immigration (+29.2 per 1,000 population), which could expand labour supply if effectively integrated. Conversely, Jordan (–13.5 per 1,000 population) and Sudan (–10.8 per 1,000 population) face substantial emigration, often linked to conflict and limited opportunities, contributing to brain drain and lost potential from their youthful populations.

From an economic perspective, youth cohorts (ages 15–24, approximately 18% of the population) are crucial for labour market outcomes. Their entry into the labour force can boost productivity

 $^{^{1}}$ Key demographic indicators and population data taken from United Nations, Department of Economic and Social Affairs, Population Division (2024). World Population Prospects 2024, Online Edition.

and household income, but high youth unemployment and underemployment in many OIC countries hinder this potential. On average, 62% of the OIC population falls within the working-age group (15–64 years), while older populations (65+) account for only about 5%. This indicates that aging is not currently a pressing issue, though long-term planning for pensions, healthcare, and elderly services is essential.

Labour market structures in OIC countries reflect persistent challenges: high unemployment, low skill levels, widespread informality, and mismatches between education and job requirements. These constraints undermine inclusive growth and human capital development. The rise of digitalization and automation add complexity, reshaping the future of work not only in OIC countries but globally.

To address demographic pressures and rising dependency ratios, it is vital to increase the participation of underrepresented groups, particularly women, older workers, youth, persons with disabilities, and migrants and refugees. Older workers bring valuable skills and experience but require supportive policies to remain active in productive, well-paying jobs. Women's participation is limited by the unequal distribution of unpaid care work and inadequate childcare and eldercare services. Persons with disabilities face higher inactivity and unemployment rates, though digitalization, artificial intelligence, and telework offer new opportunities for inclusion. High youth unemployment and NEET (not in employment, education, or training) rates require urgent attention, while skilled youth emigration underscores the need for policies to encourage retention or the return of talent. Migrant workers and refugees can help address labour shortages, but their integration depends on inclusive labour market policies and decent working conditions (De Gobbi et al., 2025)

Productivity growth remains critical, underpinning higher wages, sustainable development, and resilience against technological change and climate pressures. However, recent productivity growth in OIC countries has been weak, posing a threat to inclusive development. Ensuring that productivity gains are shared equitably, particularly with vulnerable and marginalized groups, is essential for economic and social stability.

To succeed in this changing landscape, individuals and societies need to develop skills such as critical thinking, problem-solving, creativity, adaptability, emotional intelligence, and digital literacy. Technical expertise in data analysis, artificial intelligence, machine learning, robotics, and cybersecurity is becoming increasingly vital. Digitalization is also expanding non-traditional employment, such as ICT-based mobile work and self-employment, which offer flexibility but require new forms of social protection.

Against this background, Chapter 1 provides a detailed account of labour market conditions in OIC countries, focusing on labour force participation, employment-to-population ratio, and unemployment rate. Data are primarily sourced from the International Labour Organization (ILO) Modelled Estimates database for consistency and completeness. Box 1.1 outlines the advantages and disadvantages of this database.



BOX 1.1: ILO Modelled Estimates

The statistics presented in this report are primarily based on the ILO modelled estimates. The ILO modelled estimates series offers a complete set of internationally comparable labour statistics, including both nationally-reported observations and imputed data for countries with missing information. The imputations are generated through a series of econometric models maintained by the ILO. The purpose of estimating labour market indicators for countries with missing data is to obtain a balanced panel data set so that, every year, regional and global aggregates with consistent country coverage can be computed. These allow the ILO to analyse global and regional estimates of key labour market indicators and related trends. Moreover, the resulting country-level data, combining both reported and imputed observations, constitute a unique, internationally comparable data set on labour market indicators. Estimates for countries with very limited labour market information carry a high level of uncertainty. Therefore, estimates of labour market indicators for countries with limited nationally reported data should not be considered as "observed" data, and great care needs to be applied when using these data for analysis, especially at the country level.

For more information, please visit, https://ilostat.ilo.org/resources/methods/ilo-modelled-estimates/

1.1 Labour Force Participation

The labour force participation rate (LFPR) is a measure of the proportion of a country's working-age population that actively engages in the labour market, either by working or looking for work. It provides an indication of the size of the labour supply available to engage in the production of goods and services, relative to the working age population. The breakdown of the labour force (formerly known as the economically active population) by sex and age group gives a profile of the distribution of the labour force within a country².

Several factors influence LFPR, including demographics, economic trends, and technological changes. In many developed countries, aging populations reduce the labour supply, posing a significant challenge. Economic trends affect labour demand globally: slowdowns in economic activity can lower demand and discourage participation. For instance, many countries experienced sharp LFPR declines during the COVID-19 pandemic due to weakened economic activity and reduced labour demand. Technological advancements play a dual role: automation may displace certain jobs, reducing demand for specific types of labour, while creating opportunities in emerging sectors.

As of 2024, the total labour force in OIC countries exceeded 804 million, with approximately 80% adults (ages 25+) and 20% youth (ages 15–24). The total labour force has grown at an average annual rate of 2% since 2010 (Figure 1.1, right). Even during the COVID-19 pandemic, growth remained positive, though minimal. Growth is expected to stabilize at around 2.1% during 2024–2025.

² ILO, https://ilostat.ilo.org/category/resource/methods/database-description/

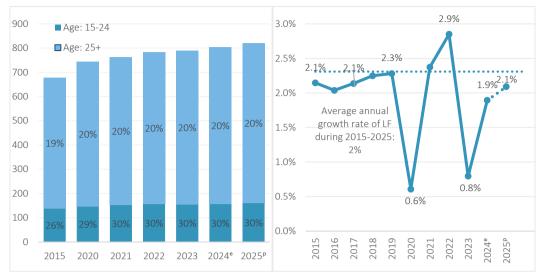


Figure 1.1: Growth in Total Labour Force (Left) and Percentage Change (Right) in OIC Countries

Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024. e: estimated, p: projected. Percentages in the left figure show the share of OIC countries in global labour force by age group.

The global labour force only grew by 10.8% from 2015 to 2024, increasing the OIC countries' share from 20.1% in 2015 to 21.5% in 2024 (Figure 1.2). However, lower female participation results in a smaller share of the global female labour force (18.6% in 2024) compared to the male labour force (23.4%). While women account for nearly 40% of the global labour force, their share in OIC countries is approximately 35% (Figure 1.2, right).

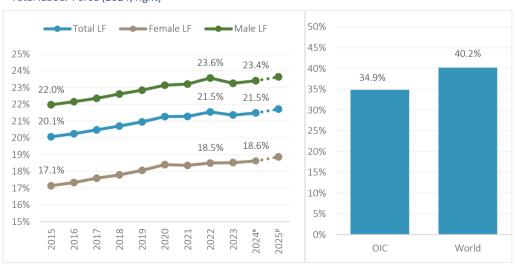
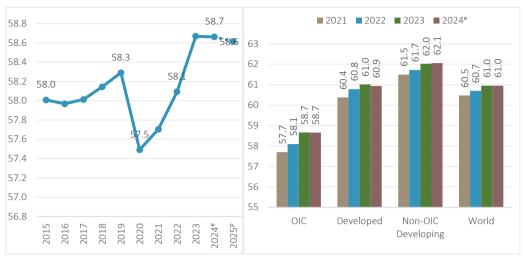


Figure 1.2: Share of OIC Countries in Global Labour Force (2015-2025, left) and Share of Women in Total labour Force (2024, right)

Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024. e: estimated, p: projected.

Figure 1.3: LFPR in OIC Countries

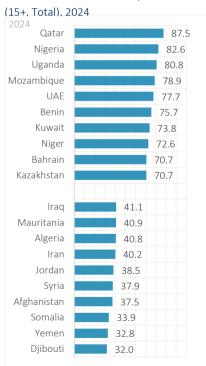
Figure 1.4: LFPR in Comparison by years



Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024. e: estimated, p: projected.

Despite the growing share of OIC countries in the global labour force, their LFPR has remained stagnant. As shown in Figure 1.3, the average LFPR in OIC countries has fluctuated around 58%

Figure 1.5: OIC Countries with Highest and Lowest Labour Force Participation Rates



Source: ILO Modelled Estimates, November 2024.

since 2015, reaching 58.7% in 2024, with projections indicating stabilization at 58.6% through 2025. This rate is notably lower than the averages for developed countries (60.9%), non-OIC developing countries (62.1%), and the global average (61.0%) in 2024.

Based on ILO Modelled Estimates for November 2024, Qatar leads globally with the highest LFPR at 87.5%, followed closely by Nigeria at 82.6%. In stark contrast, Djibouti records the lowest LFPR at 32.0%, followed by Yemen (32.8%) and Somalia (33.9%) (Figure 1.5). Notably, 15 of the 20 countries with the lowest LFPRs worldwide are members of the OIC, underscoring significant labor market participation challenges within this group.

Female labour force participation is the lowest in OIC countries

The male LFPR in OIC countries (75.8%) is comparable to that in non-OIC developing countries (73.7%) and higher than in developed countries (66.9%) in 2024 (Figure 1.6).

However, the female LFPR remained significantly lower at 41.2%, with a slight projected increase to 41.3% in 2025. This is well below the rates in non-OIC developing countries (50.4%), developed countries (55.2%), and the global average (48.9%) in 2024. Globally, male LFPR has declined from 74.1% in 2018 to below 73% in 2024, while female LFPR has slightly increased from 48.4% to 48.9% (Figure 1.6).

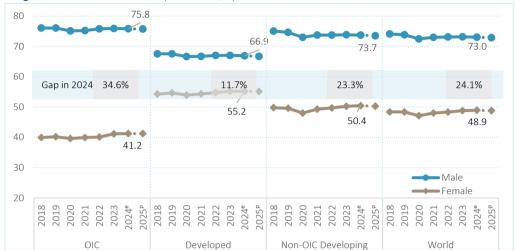


Figure 1.6: Labour Force Participation Rate, by Gender

Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024.

Youth labour force participation is falling in many parts of the world

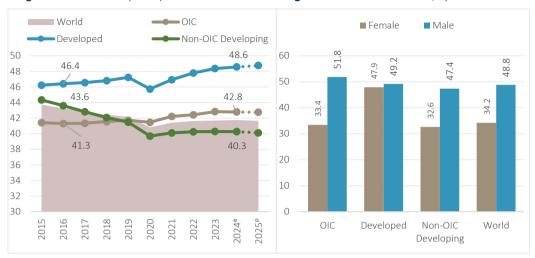
The youth LFPR (ages 15–24) in OIC countries has remained relatively stable, increasing modestly from 41.4% in 2015 to 42.8% in 2024, with a projected decrease to 42.7% in 2025. In contrast, developed countries saw a stronger increase from 46.2% in 2015 to 48.6% in 2024, while non-OIC developing countries experienced a decline from 44.3% to 40.3% in the same period. Globally, youth LFPR decreased from 43.7% in 2015 to 41.7% in 2024, driven by increased education enrolment, extended schooling, restrictive labour regulations for youth, and the lasting impact of the COVID-19 pandemic (Figure 1.7).

In 2024, the youth labor force participation rate for females in OIC countries stood at 33.4%, notably lower than the male rate of 51.8%, resulting in a significant gender gap of 18.4 percentage points, the largest among all groups.

In contrast, developed countries exhibited the smallest gender gap, with female and male youth LFPRs at 47.9% and 49.2%, respectively, a difference of just 1.3 percentage points. Globally, the female youth LFPR was 34.2%, compared to 48.8% for males, reflecting a 14.6-point gap. While the male youth LFPR in OIC countries (51.8%) closely aligns with the global average (48.8%), the female youth LFPR (33.4%) surpasses that of non-OIC developing countries (32.6%) but remains significantly below developed countries (47.9%). Over the past decade, global youth LFPR has slightly declined from 43.7% in 2015 to 41.7% in 2024, with projecti ons holding steady at 41.7% for 2025 (Figure 1.8).

Figure 1.7: Youth LFPR (15-24)

Figure 1.8: Youth LFPR in 2024, by Gender

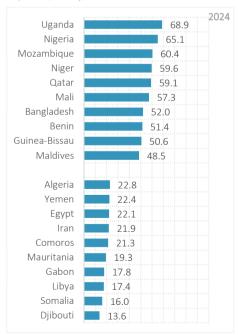


Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024. e: estimated, p: projected.

Source: SESRIC staff calculations based on ILO Modelled Estimates. November 2024.

At the country level, Uganda (68.9%), and Nigeria (65.1%) reported the highest youth LFPRs, while Djibouti (13.6%), and Somalia (16.0%), had the lowest LFPRs (Figure 1.9).

Figure 1.9: OIC Countries with Highest and Lowest Labour Force Participation Rates (15-24, Total), 2024



Source: ILO Modelled Estimates, November 2024.

Inactivity remain a major concern in OIC countries

Inactivity rates reflect individuals who are not participating in the labor force for reasons such as caregiving, retirement, sickness, education, lack of suitable jobs, or unwillingness to work. High inactivity rates hinder economic growth, poverty alleviation, and increase dependency on public resources, indicating a structural issue rather than a cyclical one. The inactivity rate is calculated as 100 minus the LFPR. For adults (ages 25+), the inactivity rate in OIC countries, which was stable at around 35.4% before the pandemic, increased to 36.4% in 2020 before returning to 35.5% in 2024, with a projected rise to 35.6% in 2025. Youth inactivity (ages 15-24) declined slightly from 58.6% in 2015 to 57.2% in 2024, with a projected slight increase to 57.3% in 2025 (Figure 1.10).

The overall inactivity rate (ages 15+) decreased from 42.0% in 2015 to 41.3% in 2024, with a slight uptick to 41.4% projected for 2025.

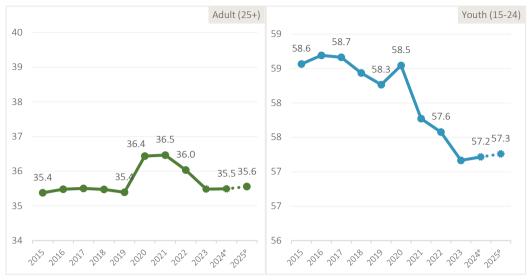


Figure 1.10: Inactivity Rate in OIC Countries (%), by Age Groups

Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024.

There are significant disparity across OIC regions

Labour market dynamics vary significantly across OIC regions (see Annex 1 for country classification). In 2024, OIC-African countries had the highest average LFPR at 73.5%, while the OIC-Arab region recorded the lowest at 45.3%, a consistent trend since 2015. For the same year, male LFPR was highest in African OIC countries (78.4%) and lowest in the Arab region (70.0%). Meanwhile, female LFPR showed stark disparities, with OIC-Africa at 68.6% and the Arab region at 18.1%, highlighting a significant gender gap (Figure 1.11).

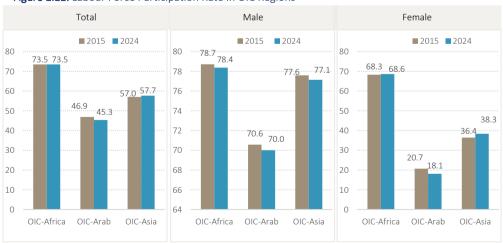


Figure 1.11: Labour Force Participation Rate in OIC Regions

Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024.

Youth LFPR (ages 15–24) followed a similar pattern, with OIC-Africa at 54.5% and the Arab region at 24.1% in 2024, driven largely by low female youth participation (9.7%) in the Arab region (Figure 1.12).

These trends indicate higher inactivity rates in OIC countries compared to other groups, particularly among women and youth, with serious implications for social inclusion, economic productivity, and achieving developmental goals.

Addressing these challenges requires a comprehensive strategy, including:

- Targeted policy incentives to promote labour market inclusion,
- Skills development and education programs tailored to market needs,
- Job creation initiatives, especially for youth and women, and
- Efforts to reduce gender disparities in workforce access and participation.

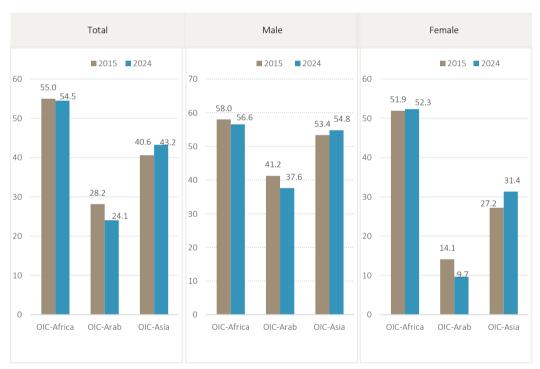


Figure 1.12: Youth Labour Force Participation Rate in OIC Countries, by Region

Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024.

1.2 Employment to Population

The employment-to-population ratio (EPR) is defined by the ILO as the proportion of a country's working-age population that is employed. A high EPR indicates a large share of the population is employed, while a low EPR reflects unemployment or labour force non-participation. Globally, the EPR declined from 58.7% in 2010 to 55.8% in 2020 due to the pandemic, recovering to 57.9% in 2024, with projections stabilizing at 57.8% by 2025. In OIC countries, the EPR was 55.0% in

2010, dipped to 53.6% during pandemic, and improved to 55.6% in 2024, with a slight decline projected to 55.5% in 2025. As a group, OIC countries consistently lag behind the global and other groups averages, highlighting structural labour market challenges (Figure 1.13).

Within OIC countries, Qatar recorded the highest EPR at 87.4% in 2024, followed by Nigeria (80.1%). Conversely, Djibouti had the lowest EPR at 23.7%, followed by Yemen (27.2%) (Figure 1.14).

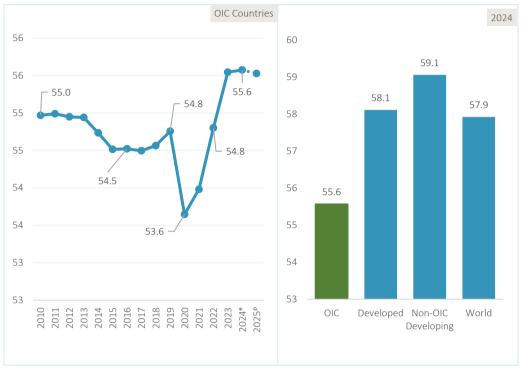


Figure 1.13: Employment to Population Ratio

 $\textit{Source}: \textit{SESRIC staff calculations based on ILO Modelled Estimates}, November 2024. \ e: estimated, p: projected.$

Low EPRs in these countries result from low LFPR and/or high unemployment, necessitating simultaneous action on both fronts. Investment in skills through education is critical for supporting active and productive labour force participation.

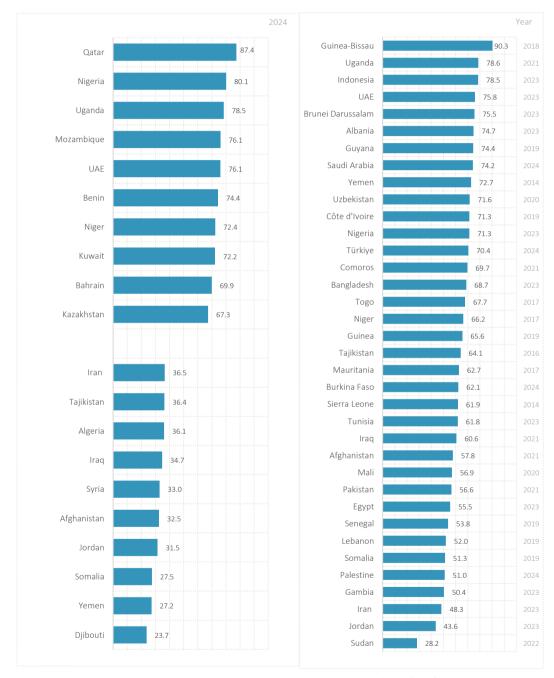
Many OIC countries achieved high EPRs for individuals with advanced education³, such as Guinea-Bissau (90.3%), Uganda (78.6%), and Indonesia (78.5%). However, in some OIC countries, participation remained a challenge even for those with advanced education. For example, Sudan's EPR for individuals with advanced education was only 28.2% (Figure 1.15). This suggests insufficient job creation, skills mismatches, or both, requiring policies to enhance economic participation for skilled individuals.

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³ This report primarily utilizes ILO modelled estimates for data consistency and comparability across countries. In cases where ILO modelled estimates are unavailable, national data from ILO sources are used.

Figure 1.14: OIC Countries with Highest and Lowest Employment to Population Ratios (15+, Total), 2024.

Figure 1.15: Employment to Population Ratio for People with Advanced Education (15+, Total, LYA)



Source: ILO Modelled Estimates, November 2024.

Source: ILOStat database collated from national employment surveys, latest year available after 2014, as of August 2025.

In OIC countries, the female EPR is significantly lower than the male EPR, at 38.8% compared to 72.1% in 2024, resulting in a 33.3% gender gap. This gap is higher that that of non-OIC developing countries (22.3%) and developed countries (11.2%) (Figure 1.16).

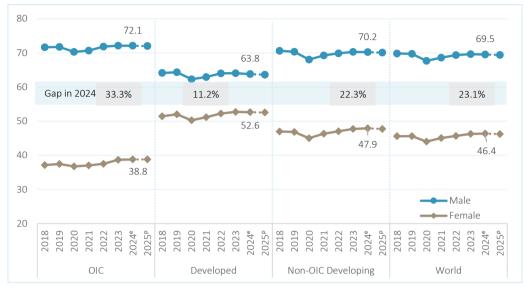


Figure 1.16: Employment to Population Ratio, by Gender

Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024. e: estimated, p: projected.

The youth EPR (ages 15–24) in OIC countries declined from 37.6% in 2011 to 35.7% in 2020, before recovering to 38.1% in 2024. In contrast, non-OIC developing countries saw a sharper decline from 40.7% to 34.8%, while developed countries increased to 43.4% in 2024 (Figure 1.17).



Figure 1.17: Employment to Population Ratio, Youth (15-24)

Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024. e: estimated, p: projected.

At the regional level, OIC-African countries have the highest EPR (60.8%), surpassing developed countries, followed by OIC-Asian countries (52.8%) and OIC-Arab countries (47.1%) in 2024. Compared to 2015, EPR increased in the Arab and Asian regions but declined in the African region. The male EPRs are similar across regions, but female EPR is notably higher in OIC-African countries (54.3%), exceeding developed countries. In contrast, female EPR remained low in the Arab region (24.6%), largely due to sociocultural norms rather than educational, legal, or economic restrictions (Figure 1.18).

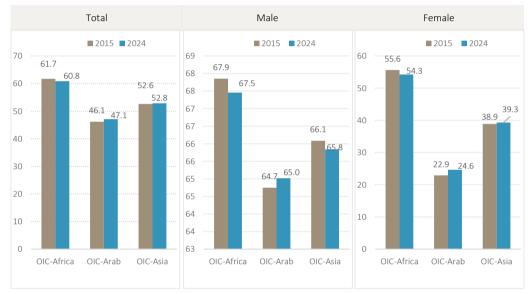


Figure 1.18: Employment to Population Ratio in OIC Countries, by Region

Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024.

1.3 Unemployment

Global labour markets are undergoing profound changes driven by demographic shifts, economic shocks, and migration pressures, necessitating adaptive and inclusive policy responses. Population aging is a critical issue affecting labour markets and broader development goals. International migration and displacement are also significant, with the global population of legal migrants and refugees reaching 304 million in 2024 (3.7% of the world's population), nearly double the 1995 figure, according to the IMF (2025). Approximately 40% of migrants and 75% of refugees live in emerging markets and developing economies, straining labour markets and social systems.

The COVID-19 pandemic disrupted employment, income, and productivity, pushing millions of workers and enterprises into vulnerability. Global labour market recovery is hindered by high inflation, high interest rates, and debt distress, particularly in low- and middle-income countries.

The global jobs gap rate (JGR), an indicator recently developed by the ILO, shows the jobs gap to be an important complement to the unemployment rate. The indicator is particularly relevant to assess the difficulties that women face in finding a job and highlights job creation challenges in the developing world. Unemployment is the best-known and most widely used measure of labour underutilization, but it is also the most restrictive one. To be considered unemployed, jobless people need to be available to take up employment at very short notice (typically a week) and to have been recently searching for a job. While this metric is a critical measure for policy makers, a vast number of people do not fulfil these strict conditions but nevertheless have an unmet need for a job.

The 19th International Conference of Labour Statisticians (ICLS) emphasized the importance of looking beyond unemployment when measuring labour underutilization. It introduced broader categories to capture those without a job but not officially classified as unemployed. These categories include the potential labour force—people who are either searching for work but unavailable to work, or available to work but not actively searching—and willing non-job seekers, who want to work but do not meet either condition.

Within addition to the unemployed, these groups reflect varying degrees of attachment to the labour market and differing chances of finding employment, with the unemployed being the most likely and willing non-job seekers the least likely. Recognizing these distinctions is crucial for designing effective economic and labour policies, especially since availability and job-search behavior vary across demographic and economic contexts.

For example, women are less likely to meet unemployment criteria due to unpaid care responsibilities, and in low-income countries, informal work and subsistence activities creat additional barriers. To better address these dynamics, the ILO developed the jobs gap indicator.

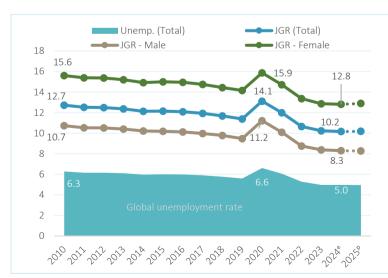


Figure 1.19: Global Unemployment and Job Gap Rates (%)

Source: ILOStat. JGR: Job gap rate, November 2024.

This measure captures all individuals who want work but do not currently have a job, offering a more complete picture of labour market slack across gender and income groups (ILO, 2024c).

The ILO's modelled estimates for November 2024 show a gradual decline in global JGR over the years. From a high of

12.7% in 2010, the total JGR has decreased to an estimated 10.2% in 2024 and is projected to slightly improve to 10.1% by 2026. Notably, the jobs gap rate for females has consistently remained higher than for males, reflecting ongoing disparities in labour market access.

In 2024, the female JGR was 12.8%, compared to 8.3% for males. Unemployment rates have also declined, from 6.3% in 2010 to a projected 5% in 2025. However, the jobs gap remains a broader indicator, encompassing individuals outside the labor force who want to work but are not actively seeking employment. These trends indicate modest improvement but underscore persistent gender disparities and a slow recovery from the 2020 spike caused by the COVID-19 pandemic (Figure 1.19).

The unemployment rate in OIC countries followed an upward trend between 2010 and 2020, rising from 5.7% in 2010 to 6.7% during that period. Following a partial recovery in the post-pandemic period, the average unemployment rate declined to 5.3% in 2024 and is projected to decrease slightly to 5.2% by 2025. As of 2024, OIC countries have on average a higher unemployment rate than developed (4.6%) and non-OIC developing countries (4.8%) (Figure 1.20).

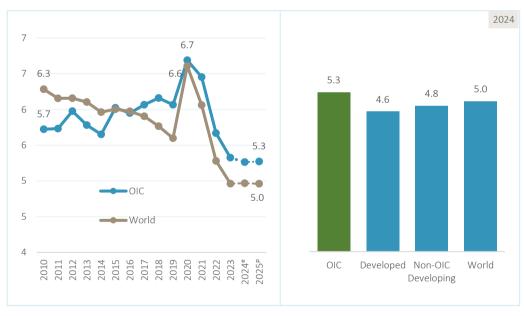
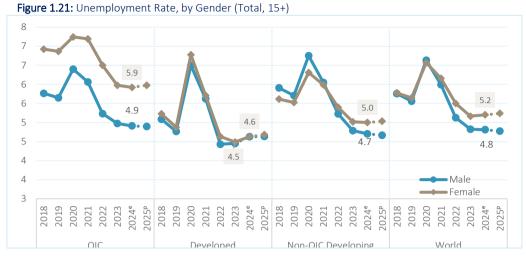


Figure 1.20: Unemployment Rate, Total (15+)

Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024. e: estimated, p: projected.

There are several reasons for the persistently high unemployment rates in OIC countries, including population growth, skills mismatch, limited job opportunities and weak labour market institutions. Moreover, some OIC countries are facing complex crises, such as the recent major earthquakes hitting Türkiye and Syria as well as economic and geopolitical distress in other OIC countries, which interact with global challenges and further impact labour markets.

The female unemployment rate in OIC countries (5.9%) exceeds the male rate (4.9%) in 2024, surpassing global and other group averages (Figure 1.21).



Source: SESRIC staff calculations based on ILO Modelled Estimates. November 2024. e: estimated. p: proiected.

At the individual country level, unemployment rates greatly varied among OIC countries. The unemployed people constituted less than 1% of the total labour force in Qatar (0.1%) and Niger (0.4%). However, unemployment remained a serious concern in Djibouti (25.9%), and Gabon (20.1%) (Figure 1.22).

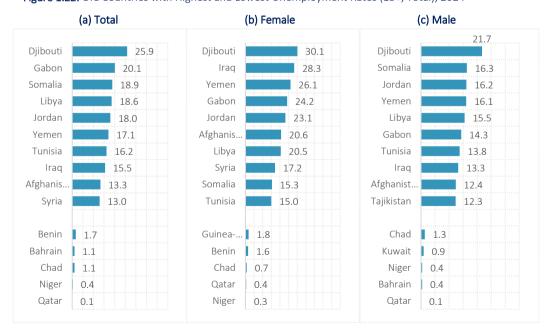


Figure 1.22: OIC Countries with Highest and Lowest Unemployment Rates (15+, Total), 2024

Source: ILO Modelled Estimates, November 2024.

When data disaggregated by sex, significant heterogeneity across the OIC group continues to persist. There are 22 OIC countries where the female unemployment rate is below 5%, but there are also 23 OIC countries where the rate is above 10%. In the case of male unemployment, rates are significantly lower with 32 OIC countries having unemployment rate below 5% and 12 countries having a rate above 10% (Figure 1.22).

Labour underutilization

While the unemployment rate is a widely recognized indicator of labour market performance, it presents an incomplete picture, especially when used alone. As Ajilore (2025) argues, focusing solely on unemployment overlooks many individuals who are underutilized, such as discouraged workers, those marginally attached to the labour force, and part-time workers seeking full-time employment.

This broader concept of labour underutilization offers a more accurate understanding of labour market slack, particularly among vulnerable groups and sectors like hospitality, retail, and informal employment. Labour underutilization, as defined by the ILO, includes not only the unemployed but also those in time-related underemployment and the potential labour force, people willing to work but unable to meet traditional job search or availability criteria. These categories highlight the mismatch between labour supply and demand and the unmet need for decent work. For example, while Iran's unemployment rate in 2023 was 6.5%, the composite labour underutilization rate reached 36.0%.

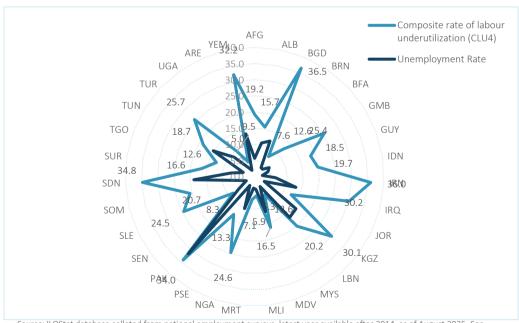


Figure 1.23: Labour Underutilization vs Unemployment in OIC Countries, Total (15+)

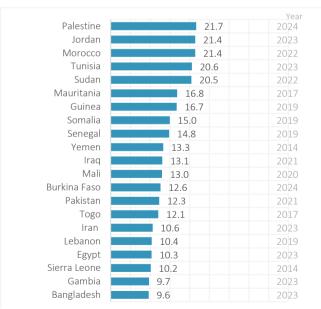
Source: ILOStat database collated from national employment surveys, latest year available after 2014, as of August 2025. See the annex for country codes.

Similarly, Bangladesh recorded an unemployment rate of 12.0% in 2017, yet had a 36.5% labour underutilization rate, revealing the extent of hidden labour market slack. Such disparities are often rooted in structural challenges. In many developing countries, the lack of unemployment insurance, inefficient employment services, and widespread informality force people into any form of work to survive, even if it's inadequate or unrelated to their skills. Women, in particular, face additional constraints due to unpaid care responsibilities, limited access to education or training, and occupational segregation. These factors contribute to both quantitative and qualitative labour underutilization, where people are not only underemployed in hours but also in terms of skills and job quality.

Moreover, while unemployment remains a valuable indicator in tracking business cycles and identifying vulnerable groups, it should not be interpreted as a measure of economic well-being. It doesn't capture income levels, household conditions, or whether the jobless are engaged in informal or precarious work.

In fact, low unemployment can exist alongside high poverty in situations where people cannot afford to be without job and resort to low-productivity or informal work instead. International comparisons of unemployment rates also face challenges due to variations in survey methods, definitions, geographic coverage, and frequency of data collection.

Figure 1.24: Unemployment Rate for Persons with Advanced Education (25+, Total)



Source: SESRIC staff calculations based on ILOStat database collated from national employment surveys, latest year available after 2014, as of August 2025. OIC countries with unemployment rate above 10%.

Even adherence ILO standards fully cannot eliminate inconsistencies different across national contexts. Ultimately, while the unemployment rate remains a useful tool particularly when consistently monitored over time. it should complemented by broader indicators like labour

underutilization to form a more comprehensive and inclusive assessment of labour market dynamics. These metrics are vital for designing effective labour policies that address not just job creation, but also job quality, equity, and long-term economic resilience.

Insufficient job creation and skills mismatches result in high unemployment rates for individuals with advanced education in some OIC countries, such as Palestine (21.7%), Jordan and Morocco (21.4%) (Figure 1.24). In 21 OIC countries, this rate exceeds 10%.

At the regional level, African OIC countries have a low unemployment rate (3.0% in 2024, down from 3.6% in 2015), followed by Asian OIC countries (5.2%). In the Arab OIC countries unemployment rate improved from 11.1% in 2015 to 9.5% in 2024 but remained relatively high, with female unemployment at 20.2% compared to male rates (Figure 1.25).

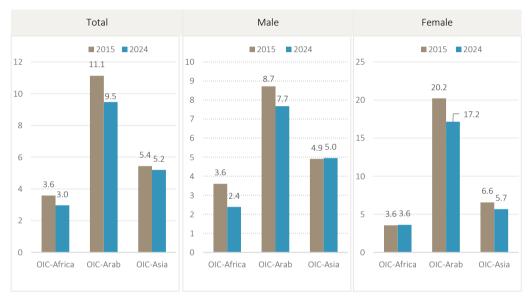


Figure 1.25: Unemployment Rate in OIC Regions (Total, 15+)

Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024.

Youth unemployment

Engaging youth in the labour market enhances economic growth and social cohesion. By improving their skills, expanding employment opportunities, and implementing supportive social policies, we enable youth to realize their full potential and secure promising career futures. The youth unemployment rate refers to the number of unemployed 15–24-year-olds. Youth continue to suffer from a lack of decent job opportunities across the globe. Globally, they are three times as likely as adults to be unemployed, with the global youth unemployment rate at 12.6% in 2024. This translates to almost 67 million young people who were looking for a job but unable to find one. Considering the total number of youths who are not in employment, education or training (259 million globally), youth unemployment appears to be only one of the multiple problems faced by young people in the labour market. In fact, according to the ILO, two thirds of the global youth labour force remain without a basic set of skills, a circumstance that restricts their labour market opportunities and easily pushes them into lower-quality forms of employment (ILO, 2023a).

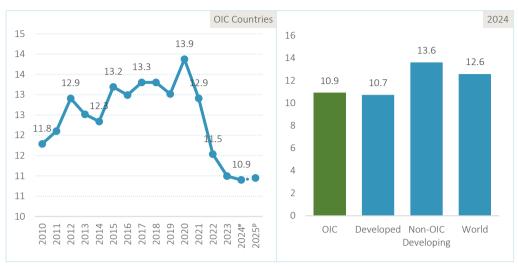


Figure 1.26: Unemployment Rate, Youth (15-24)

Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024. e: estimated, p: projected.

OIC countries have been facing high level of youth unemployment, with rates above 12% from 2011 to 2021. The unemployment rate peaked at 13.9% in 2020 and has since declined to 10.9% in 2024. It is projected to remain stable through 2025 (Figure 1.26).

In 2024, the youth unemployment rate (ages 15-24) in OIC countries was 10.9%, lower than the global average of 12.6% and non-OIC developing countries at 13.6%. Female youth unemployment in OIC countries decreased from 14.4% in 2020 to 10.8% in 2024, falling below the global average of 12.4% and non-OIC developing countries at 13.7%. Menwhile, male youth unemployment rate of 11.0% in OIC countries, at, was also below the global average of 12.7%.

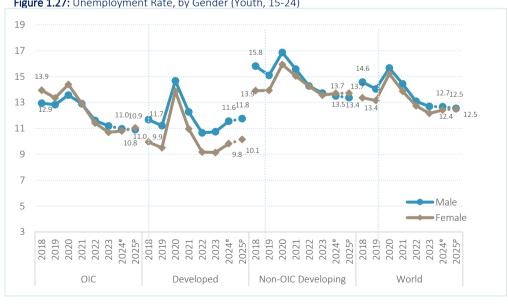
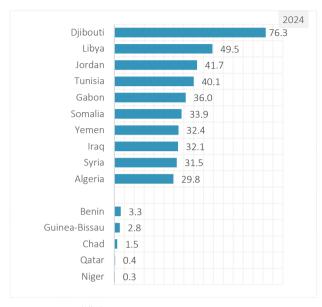


Figure 1.27: Unemployment Rate, by Gender (Youth, 15-24)

Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024. e: estimated, p: projected.

Figure 1.28: OIC Countries with Highest and Lowest Youth Unemployment Rates (15-24, Total), 2024



Source: ILO modelled estimates, Nov. 2024.

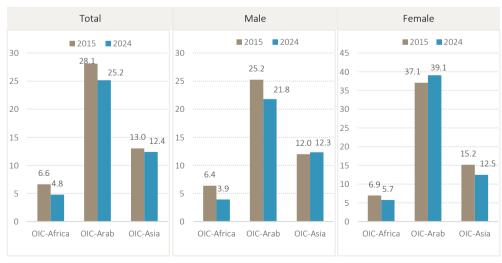
Youth unemployment rates continue to vary significantly across OIC countries. According to ILO modelled estimates (Nov.2024), Niger (0.3%), and Qatar (0.4%) reported the lowest youth unemployment rates in the group. In stark contrast, several OIC countries face alarmingly high youth umeployment rates. Diibouti recorded the highest rate in the OIC, and the highest globally. It was followed by Libya (49.5%), and Jordan (41.7%) (Figure 1.28).

Overall, youth unemployment exceeded 20% in 18 OIC countries and surpassed the global average of 12.6% in 28 member countries, highlighting a critical challenge for the OIC labour markets

As in the case of total

unemployment, a regional comparison of youth unemployment within the OIC reveals that African countries perform fairly well, even better than the world average, in total as well as male and female unemployment rates. Asian OIC countries also have youth unemployment rates that were close to the world average. On the other hand, both male and female unemployment rates in the Arab region were significantly high at 21.8% and 39.1%, respectively (Figure 1.29).

Figure 1.29: Youth Unemployment Rate in OIC Regions (Youth, 15-24)



Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024.

High youth unemployment is partly attributed to young people's limited work experience, placing them at a disadvantage when competing for entry-level positions. Additionally, youth tend to have a higher job turnover as they search for better opportunities. Some may even opt to remain unemployed while looking for jobs that align with their career goals, especially if they have financial support from their families (ILO, 2020; UNDESA, 2018). Moreover, many young people lack access to reliable labour market information and have limited job search experience. In contrast, adults often benefit from professional networks or references from previous employers, giving them a compititive edge in securing employment.

Overall, despite the varying degrees to which OIC economies are impacted by global economic, political, and health crises, it is evident that unemployment, both among youth and adults, remained one of the most pressing economic and social challenges across many member countries, demanding urgent and coordinated action. Moreover, official unemployment figures often fail to capture the full scope of youth labour market challenges. Many young people are employed but earn too little to escape poverty. Even more concerning is the substantial number of youths who are neither in employment, education, nor training (NEET) and are not actively seeking work. Addressing these issues requires a stronger focus on youth, including policies that promote their active participation in the labour market, equip them with relevant skills, and support their access to decent and sustainable employment opportunities.

Youth not in employment, education or training (NEET)

Globally, 20.4% of young people are currently not in employment, education or training (NEET), meaning they are not gaining experience in the labour market, earning income from work, or enhancing their education and skills. Clearly, their full potential is not being realized, although many may be contributing to the economy through unpaid work.

Moreover, young women are twice as likely as young men to have NEET status. According to the ILO, the youth NEET rate has not significantly decreased in any region worldwide since 2005. This indicates that the goal of substantial reduction in the proportion of NEET youth by 2020, as outlined in SDGs target 8.6, has not been achieved. While progress has been seen in most advanced countries, the situation for NEET young people in many developing countries, including OIC countries, has worsened over the past decade. All these forms of labour underutilization in the early stages of a young person's career can reduce the prospects for future employment and earnings.

OIC countries, as a group, continue to show the highest rates of NEET. The NEET rate in OIC countries was 26.5% in 2015 and, despite some fluctuations, only slightly declined to 26.3% by 2024, after peaking at 27.9% during the COVID-19 pandemic in 2020. In contrast, the NEET rate in developed countries steadily decreased from 11.4% in 2015 to 9.7% in 2024, while non-OIC developing countries saw a decline from 20.7% to 19.2% over the same period. Meanwhile, the global average fell from 21.3% in 2015 to 20.4% in 2024 (Figure 1.30).

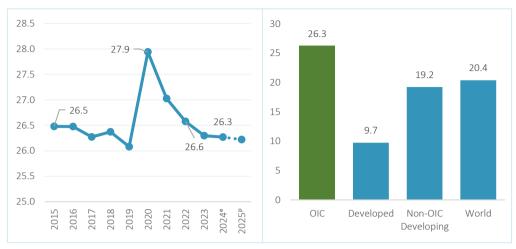


Figure 1.30: Youth Not in Employment, Education or Training (NEET)

Source: SESRIC staff calculations based on ILO Modelled Estimates, August 2024. e: estimated.

The NEET status of the female population is more than two times higher than that of the male population, reaching 37.3% compared to 15.6% for males in OIC countries. A similar trend can be observed in non-OIC developing countries and the world average, while NEET rates for males and females were nearly equal in developed countries (Figure 1.31). Clearly, high youth NEET rates are primarily due to the inactivity of female youth in developing countries.



Figure 1.31: Youth Not in Employment, Education or Training (NEET), by Gender

Source: SESRIC staff calculations based on ILO Modelled Estimates, August 2024. e: estimated.





The Vocational Education and Training Programme for the Member States of the Organization of Islamic Cooperation (OIC-VET) is a programme developed by the SESRIC in order to support and supplement the OIC Member States' efforts to overcome the current challenges and limitations faced in the area of technical and vocational education and training (TVET).

The programme also aims to enhance the quality of TVET systems in the OIC Member States, and thus to contribute to the development and competitiveness of their economies.

The OIC-VET Programme, operating within the framework of its mission, seeks to elevate the quality of Technical and Vocational Education and Training (TVET) systems in the OIC Member States. The main objectives of the OIC-VET Programme are as follows:

- to enhance the quality and innovation capacity of the OIC Member States' TVET systems and to facilitate the transfer of innovative practices, knowledge and experiences from one country to another;
- to strengthen cooperation among TVET institutions, enterprises, social partners and other relevant bodies throughout the OIC Member States;
- to expand the transparency and recognition of qualifications and competencies, including those acquired through formal and informal learning among the OIC Member States;
- to support the development of innovative Information and Communication Technology (ICT) based content, services, pedagogies and practice for lifelong learning; and
- to facilitate the participants' personal development and employability by acquiring and using knowledge, skills and qualifications.

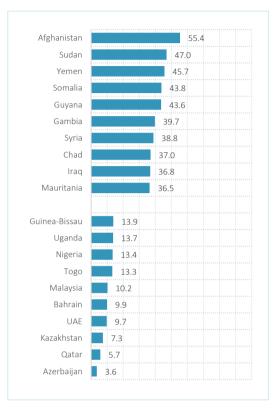
Additionally, it addresses the enhancement of TVET teacher education, the development of occupational standards and qualification systems, and the implementation of rigorous quality assurance measures. Furthermore, the programme emphasizes the creation of certification processes and modular training programmes, aiming to elevate the standards and effectiveness of TVET systems across OIC Member States. To successfully promote its goals for vocational education and training among member nations, the OIC_VET Programme uses a variety of modalities, including training of trainers (ToT) courses, training courses, workshops, seminars, and so on. These methods support empowering people and organizations engaged in vocational education and training within the OIC community by facilitating knowledge diffusion, capacity building, and skill upgrading.

As the Executing Organ of the OIC-VET Programme, SESRIC is considering exploring some new ways and means of improving the overall quality and impact of the programme to increase its contribution to improving the TVET systems of OIC member countries. SESRIC organized a series of workshops and working group meetings to assess the current needs of the OIC member countries' technical and vocational education systems and developed the OIC-TVET Strategic Roadmap 2020-2025 in close collaboration with the National Focal Points of the OIC-VET Programme and ISESCO.

broad As measure of vouth underutilization, the NEET rate reflects various challenges faced by young people, including early school leaving, discouragement, and unemployment. When youth are not in employment, education, or training, they miss out on developing skills that are valued in the labour market undermining their future employment prospects and, over time, weakening national economic growth potential and social cohesion (ILO, 2017).

This issue is particularly severe in several OIC countries, such as Afganistan (55.4%), Sudan (47.0%), and Yemen (45.7%). Many other OIC members in Sub-Saharan Africa and conflict-affected regions also reported significantly higher NEET rates. On the other hand, only five OIC countries have NEET rates below 10%, Azerbaijan (3.6%), Qatar (5.7%), and Kazakhstan (7.3%), all performing better than the average of developed countries (9.7%) (Figure 1.32).

Figure 1.32: OIC Countries with Highest and Lowest NEET Rates, 2024



Source: ILO Modelled Estimates, Aug. 2024

Although the youth population is a key strength of the OIC group, the rising number of young people who are NEET poses significant socio-economic challenges. Addressing high NEET rates requires a comprehensive strategy that includes improving education systems, strengthening vocational training, expanding job opportunities, promoting entrepreneurship, offering career guidance and support, and overcoming social and cultural barriers. It is crucial to empower young individuals by equiping them with relevant skills and fostering an environment that supports their successful transition into education, employment, or training.

Chapter 2

SKILLS, PRODUCTIVITY, INCOME AND SOCIAL PROTECTION

Skills and qualifications are crucial factors in determining employability and productivity in today's job market. Individuals with relevant competencies are more likely to attract employer interest, secure decent jobs, and retain them over time. Enhancing the capabilities of workers with limited qualifications can significantly boost productivity, improving the competitiveness of firms and industries in a globalized economy. Higher skill levels and robust training are closely linked to better wages and improved living standards. Therefore, investing in continuous workforce development is essential to meet the evolving demands of the labour market.

Workforce training is critical for enhancing employability, increasing productivity, aligning skills with labor market needs, and adapting to technological advancements and changing market conditions. Anticipating future skills needs and tailoring strategies for groups like youth, older workers, and rural populations is vital. As technology advances and economies change, certain skills become obsolete while new ones emerge. By recognizing trends and forecasting needs, policymakers, educational institutions, and employers can ensure that the workforce possesses relevant, forward-thinking competencies. Increasing access to vocational education and training for young people is particularly important for bridging skills gaps, easing school-to-work transitions, and fostering inclusive economic growth.

Skills development and lifelong learning are investments in the future. Global trends, including technological innovation, climate change, shifting globalization patterns, demographic changes, and crises like the COVID-19 pandemic, are reshaping economies and workplaces. While these changes create opportunities, they can also cause disruptions, such as unemployment, underemployment, skills mismatches, and growing inequalities. Effective and inclusive skills development systems enhance responsiveness to current and future labour market needs, supporting human development, full employment, and decent work, as outlined in Sustainable Development Goals (SDGs) 4, 5, and 8 (ILO, 2023b).

Employment shocks, like those caused by the COVID-19 pandemic, often result in decrease in job opportunities and an increase in unemployment. Prolonged unemployment can lead to skill erosion, making it difficult to re-enter the labour market. Therefore, it is crucial to implement measures to maintain and enhance skills during crises in order to prevent long-term negative impacts. Strengthening workforce capabilities through capacity-building initiatives is a key step towards ensuring a rapid labour market recovery.

Against this backdrop, Chapter 2 examines educational attainment, skill levels, labour productivity, sectoral employment distribution, income levels, and social protection measures in OIC countries compared to non-OIC developing countries, developed countries, and global averages.

2.1 Skills and Occupations

This section discusses the educational attainment, skill levels, and occupations of the employed population. Educational attainment is an important indicator of skill level and productivity and it is strongly linked to the income status of employed individuals.

Employment by Educational Attainment and Skills

Formal education is a cornerstone of economic and social progress, as it directly enhances a society's productive capacity. By equipping individuals with knowledge and skills, education strengthens the production process in several ways. Skilled and educated workers can perform complex tasks, operate advanced technologies, and contribute to the development of more sophisticated products and services. In developing countries, in particular, a better-educated workforce increases the economy's absorptive capacity, enabling it to adopt, adapt, and effectively use rapid technological advances. This ability is fundamental for achieving economic diversification, sustaining development, and maintaining competitiveness in an increasingly interconnected global marketplace.

The skill profile of the employed population is often measured by educational attainment. As the proportion of workers with intermediate and higher levels of education increases, their capacity to acquire new skills and absorb emerging knowledge also grows. This fosters innovation and adaptability while improving resilience to economic shocks and labour market disruptions. Moreover, education enhances social mobility, reduces inequality, and empowers individuals to participate more effectively in civic and economic life.

Lifelong learning and continuous training are equally important complements to formal education, ensuring that the workforce remains agile in the face of technological change, demographic transitions, and shifting global demand. A strong emphasis on education and skills development, therefore, serves as both an economic imperative and a social necessity, laying the foundation for inclusive growth, sustainable development, and decent work opportunities for all.

According to the latest available data, the educational level of the employed population in OIC countries is relatively low. Approximately 24.8% of the employed population is estimated to have less than basic education, compared to 19.2% in non-OIC developing countries and only 0.7% in developed countries. Moreover, 30.9% of the employed population in OIC countries has only a basic level of education, meaning that 55.7% have basic or less than basic education. This reflects the development challenges faced by OIC countries in promoting learning, innovation, and productivity.

fThe shares of the employed population with intermediate and advanced education are only 28.2% and 14%, respectively. Non-OIC developing countries present a slightly better picture, with shares of the employed population with intermediate and advanced education at 22.9% and 19.3%, respectively. Developed countries, on the other hand, are well-endowed with skilled workers, with 39.4% of the employed population having completed an intermediate level of education and another 50% having completed an advanced level of education. Approximately 9% of the employed population has completed a primary level of education, and only 0.7% lack a primary level of education (Figure 2.1).

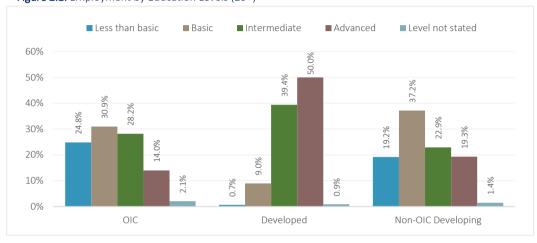


Figure 2.1: Employment by Education Levels (25+)

Source: SESRIC staff calculations based on ILOStat database collated from national employment surveys, latest year available as of 2025. Data includes 47 OIC, 39 developed and 84 non-OIC developing countries.

Figures 2.2 and 2.3 present the distribution of the employed population by education level in OIC countries. The highest share of the employed population with less than basic education were primarily observed in sub-Saharan African OIC countries, reaching 82.8% in Niger, 78.7% in Burkina Faso, and 76.7% in Mauritania. In 17 OIC countries, more than half of the employed population has not completed basic education, underscoring the challenges these countries face in increasing labour productivity and achieving economic diversification.

The share of the employed population with basic education was highest in the Maldives (58.6%), followed by Guyana (50.8%) and Togo (49.1%). At the intermediate level, Central and South-Eastern Asian countries stand out, with Uzbekistan (77.1%), Kyrgyzstan (70.5%), and Azerbaijan (66.4%) ranking at the top.

Figure 2.3 illustrates the share of the employed population with advanced education across OIC countries with available data. The differences are striking while the UAE reported 38%, Niger has just above 1%, and Sierra Leone slightly over 2%. In total, 10 OIC countries have more than 25% of their workforce with advanced education, while 24 countries report shares below 10%. These disparities in educational attainment closely mirror productivity levels and broader development outcomes across the OIC group.

Intermediate Uzbekistan 77.1% UAF 38.0% Kyrgyzstan 70.5% 2018 Lebanon 33.6% Palestine 33.0% Azerbaijan 66.4% Türkive 31 7% Tajikistan 59.6% Iran 29.7% 59.2% Taiikistan 28.1% Nigeria Azerbaijan 27.2% Brunei Darussalam 48 7% Brunei Darussalam 26.6% .5% 26.5% Iraq Kyrgyzstan 25.2% Malaysia 40.6% Albania 24.5% Alhania 35.2% Malaysia 23 3% Algeria 23.1% Tunisia 34.1% Uzbekistan 21.8% Basic Jordan 21.5% Egypt 21.5% Maldives 58.6% Tunisia 21.3% Guyana 50.8% Djibouti 15.3% Maldives 15 3% Togo 49 1% Comoros 14.1% Uganda 48.6% Somalia 14.1% Indonesia Indonesia 44.9% Guinea 9.8% Lebanon 41.0% Pakistan 9.7% 40.9% Yemen 9.7% Iran 9 7% Gambia Palestine 40.7% Suriname 9.4% Türkive 40.4% Sudan 9.3% Uganda 9.3% Albania 39.8% Bangladesh 9.0% Less than Basic Guyana 8.4% Nigeria 8 4% 82.8% Niger Morocco 6.3% Burkina Faso 78.7% Afghanistan 6.2% Togo 6.2% Mauritania 76.7% Guinea-Bissau 6.2% Chad 72.3% Côte d'Ivoire 6 1% Senegal 5.9% Afghanistan 69.8% Benin 4.3% Mali 69 3% Mali 4.2% Mauritania

64.6%

62.8%

62.6%

61.8%

Figure 2.2: OIC Countries with Highest Level of Education, by Level

Figure 2.3: Share of Workers with Advanced Level of Education

Source: SESRIC staff calculations based on ILOStat database collated from national employment surveys, latest year available as of 2024.

Source: SESRIC staff calculations based on ILOStat database collated from national employment surveys, latest year available as of 2024.

4 2%

3.5%

2.7%

2.6%

2 2%

1.1%

Chad

Niger

Burkina Faso

Mozambique

Sierra Leone

2014

Employment by Skills Levels and Occupation

Sierra Leone

Benin

Diibouti

Senegal

An individual's level of skills and qualifications is a decisive factor in improving employability and driving productivity in the labour market. To remain competitive and resilient in a rapidly changing era, it is essential to continuously maintain, upgrade, and adapt the skills and competencies of the workforce. Such efforts are vital not only for employees seeking to secure and retain quality jobs but also for employers aiming to boost efficiency and innovation, and for economies aiming to sustain growth, diversification, and global competitiveness.

Non-OIC

Developing

Figure 2.4 shows the distribution of the employed population in OIC countries by skill level based on their occupations, categorized into three groups: low skills, medium skills, and high skills. According to the latest available data, the share of the employed population with low skills is

12.7% in OIC countries. which is lower than the average for non-OIC developing countries (19.9%).Compared other country groups, OIC countries have a smaller share of high-skilled employees (16.2%) than developed countries (44.9%) but similar shares to non-OIC developing countries (14.2%). To narrow the productivity gap with developed countries. OIC countries need to increase efforts to expand the share of occupations requiring high skills.

■Low ■Medium ■ High

100%
90% 16.2% 14.2%

80%
70%
60%
50% 71.1%
40%
30% 45.1%

10.0%

19.9%
0%

Figure 2.4: Employment by Skills Level in OIC Countries

Source: SESRIC staff calculations based on ILOStat database collated from national employment surveys, latest year available as of 2025. Data consists of 37 OIC, 15 developed and 65 non-OIC developing countries.

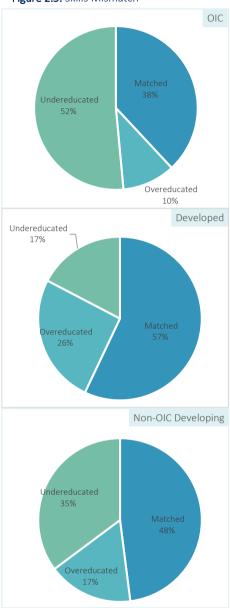
Developed

Insufficient investment in human capital development and a lack of economic sophistication hinder the promotion of skills upgrading necessary for jobs that involve complex technical and practical knowledge and tasks. A lack of coordination between educational institutions, employers, and policymakers often leads to skills mismatches, where the competencies of the employed population do not align with the needs of the labor market. This misalignment can hinder economic growth, reduce productivity, and limit employment opportunities for individuals.

OIC

Several factors contribute to this challenge. Rapid technological advancements, for instance, can render certain skills obsolete while creating demand for new technical and digital competencies, widening the gap between what the employed population can offer and what employers require. Weaknesses within education and training systems further exacerbate the problem. Outdated curricula, limited access to quality education, and insufficient practical or workplace-oriented training can leave graduates inadequately prepared for the demands of modern jobs. Moreover, insufficient labor market information, such as data on emerging sectors, skill shortages, or regional employment trends, can prevent students and workers from making informed decisions about career paths or skill development.





Source: SESRIC staff calculations based on ILOStat database collated from national employment surveys, latest year available as of 2025. Data includes 40 OIC, 78 non-OIC developing and 32 developed countries. Demographic changes, including population aging, urbanization, and shifts in migration patterns, also influence the supply and demand for skills, sometimes creating regional or sectoral imbalances.

Equally important is the role of individuals in maintaining the relevance of their skills. Failure to engage in lifelong learning, upskilling, or reskilling can lead to a gradual detachment from the evolving requirements of the job market, leaving individuals vulnerable to unemployment or underemployment.

skills mismatches Addressing requires coordinated, multi-stakeholder approach. educational Policymakers, institutions, employers must collaborate to align curricula, training programs, and career guidance with current and projected labour market needs. Investing in continuous learning opportunities, improving access to quality vocational and higher education, and strengthening labour market information systems are crucial steps. By fostering such collaboration and adaptability, countries can enhance workforce employability, drive innovation and productivity, and ensure that economic development is inclusive and sustainable.

According to the latest data, the skills match rate is only 38.1% in OIC countries, compared to an estimated 57% in developed countries and 48% in non-OIC developing countries. In OIC countries, 10.5% of the employed population is overeducated, while the remaining 51.4% is considered undereducated (Figure 2.5).

This reflects the extent of the skills gap that needs to be addressed to improve productivity and competitiveness in OIC countries. Over education is

another aspect of skills mismatch, where the available skills and competencies of the employed population are not effectively utilized. This issue is more pronounced in developed countries (25.6%), but non-OIC developing countries also face challenges with overeducated workers.

Over the past decade, significant shifts have occurred in the occupational composition of the world's employed population, driven partly by changing skill requirements and technological advancements (ILO, 2025).

Disaggregation of employment by occupation in OIC countries highlights a pronounced concentration in lower-skill categories. Elementary occupations and skilled agricultural, forestry, and fishery workers account for the largest share, representing 39.4% of the total employed population (Figure 2.6). This is followed by service and sales workers (19.5%) and craft and related trade workers (13.2%).

In contrast, occupations requiring relatively higher skills—managers (5.0%), professionals (7.8%), and technicians and associate professionals (4.5%)—collectively make up only 17.3% of the employed population in OIC countries. Globally, the share of these three higher-skilled occupations is considerably higher, at 20%. Other occupational groups in OIC countries include plant and machine operators and assemblers (7.5%) and clerical support workers (3.1%).

The data underscore a structural characteristic of OIC labour markets: a substantial portion of the employed population is concentrated in low- to medium-skill occupations, while high-skill jobs remain relatively limited. In comparison, developed countries exhibit much higher shares of managers (7.9%), professionals (21.4%), and technicians and associate professionals (15.9%), reflecting more diversified and skill-intensive labour markets (Figure 2.6).

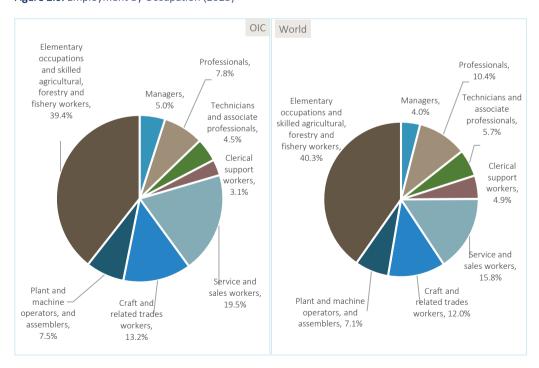


Figure 2.6: Employment by Occupation (2023)

Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024.

The occupational distribution in OIC countries has significant implications for employment development and economic policy. A high share of low- and medium-skill employment underscores the urgent need for targeted education, vocational training, and upskilling programs to prepare the employed population for the demands of a rapidly evolving global economy. By increasing the proportion of the employed population in high-skill occupations, OIC countries can boost productivity, foster innovation, and achieve sustainable economic growth.

Tracking changes in the distribution of the employed population across occupations with varying skill requirements is essential for evaluating progress toward inclusive and resilient labour markets. As economies transform, shifts in the composition of the employed population reflect broader structural changes driven by technological advancements, demographic shifts, expanded education, globalization, and evolving labour market demands.

Employment by Sector

As a result of economic development and rising living standards, a shift in employment from agriculture to the industry and services sectors is observed in OIC countries. This shift has led to an increase in wage and salary employees and a decrease in self-employed and contributing family workers. When the total employed population is disaggregated into three broad sectors—agriculture, industry, and services—a noticeable decrease in the share of agriculture is evident, droping from 38.1% in 2010 to 30.5% in 2023.

The industry sector's share, on the other hand, increased from 19.0% to 21.6% during the same period. This growth was fueld by increase in all major subcategories: the construction sector's share rose from 6.3% to 7.2%, manufacturing from 11.1% to 12.7%, and mining, quarrying, electricity, gas, and water supply from 1.6% to 1.7%. The most significant growth occurred in the services sector, with its share of the total employed population increasing from 42.8% in 2010 to 47.9% in 2023.

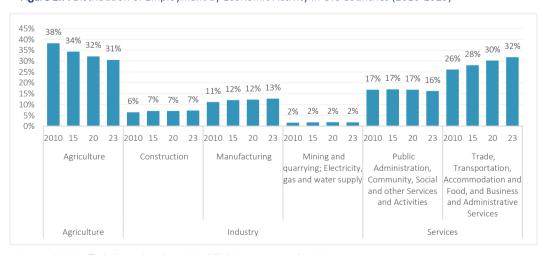


Figure 2.7: Distribution of Employment by Economic Activity in OIC Countries (2010-2023)

Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024.

This growth was mainly driven by an increase in employment in trade, transportation, accommodation and food services, and business and administrative services, which grew from 26.1% to 31.8%. Meanwhile public administration, community, social, and other services remained relatively stable, decreasing slightly from 16.8% to 16.2% (Figure 2.7).

When compared to other country groups, the share of employment in agriculture in OIC countries (30.5%) was nearly identical to that in non-OIC developing countries (30.4%), while only 2.4% of the total employed population in developed countries was engaged in agricultural activities as of 2023.

The industry sector in non-OIC developing countries accounted for a higher share of employment (25.0%) compared to OIC countries (21.6%) and developed countries (21.5%), driven by a more robust manufacturing sector. The services sector dominates in developed countries, with 76.2% of total employment, compared to 47.9% in OIC countries and 44.6% in non-OIC developing countries (Figure 2.8).

Overall, while the share of agriculture in total employment is declining in OIC and other developing countries, the shares of the industry and services sectors are rising.

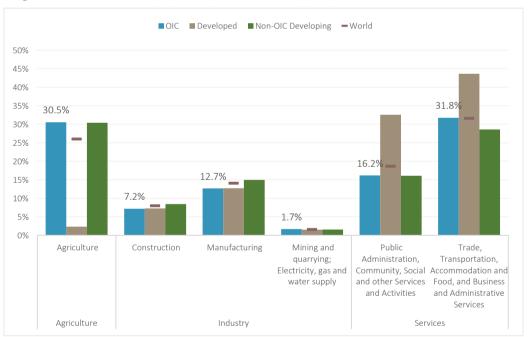
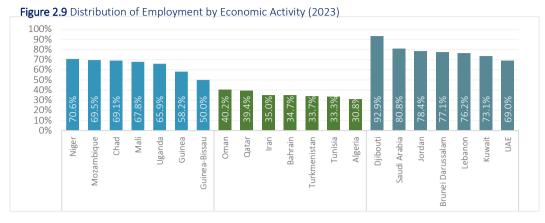


Figure 2.8: Distribution of Employment by Economic Activity (2023)

 $\textit{Source:} \ \mathsf{SESRIC} \ \mathsf{staff} \ \mathsf{calculations} \ \mathsf{based} \ \mathsf{on} \ \mathsf{ILO} \ \mathsf{Modelled} \ \mathsf{Estimates}, \ \mathsf{November} \ \mathsf{2024}.$

At the country level, the highest share of employment in agriculture was recorded in Niger (70.6%) followed by Mozambique (69.5%), and Chad (69.1%) (Figure 2.9). The share of employment in industry was highest in Oman (40.2%) followed by Qatar (39.4%), and Iran (35%). Incontrast, the services sector accounted for the majority of employment in Djibouti (92.9%), Saudi Arabia (80.8%), and Jordan (78.4%) in 2023.



Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024.

Another disaggregation of employment is between the public and private sectors. According to the most recent data, the share of employment in the public sector is highest in Albania (37.4%), followed by Türkiye (35.1%), Togo (30.9%), and Palestine (26.8%). This share is below 5% in 10 OIC countries (Figure 2.10).

A high share of public sector employment can have significant economic implications. It can exert fiscal pressure on governments, as public sector salaries and benefits contribute to government spending, potentially leading to fiscal deficits. This can strain public budgets and limit the government's ability to allocate funds to other critical sectors.

A large public sector may also crowd out opportunities for private sector growth, indicating a larger role of the state in the economy, which can hinder job creation and entrepreneurial activity in the private sector.

This, in turn, can impact economic dynamism, innovation, and productivity. Additionally, high reliance on public sector jobs can lead to limited job flexibility and dependency on government employment, making it challenging for individuals to transition to other sectors or adapt to changing economic needs. Striking a balance between the public and private sectors and ensuring efficient resource allocation are crucial for sustainable economic growth and a diverse labour market.

Figure 2.10: Share of Employment in Public

Sector		
		Year
Albania	37.4%	2023
Türkiye	35.1%	2024
Togo	30.9%	2022
Palestine	26.8%	2024
Nigeria	22.1%	2023
Mauritania	22.0%	2019
Tunisia	21.3%	2019
Senegal	21.3%	2022
Comoros	20.5%	2021
Bangladesh	19.3%	2023
Sudan	17.9%	2022
Somalia	16.9%	2019
Sierra Leone	15.3%	2018
Mali	15.2%	2022
Indonesia	15.1%	2023
Maldives	14.5%	2019
Afghanistan	14.1%	2021
Brunei Darussalam	12.1%	2023
Iraq	9.9%	2021
Uganda	8.9%	2021
Benin	8.9%	2022
Iran	8.4%	2023
Kyrgyzstan	8.0%	2023
Suriname	7.7%	2016
Jordan	7.3%	2023
Guyana	6.5%	2019
Lebanon	6.2%	2019
Gambia	5.4%	2023
Egypt	4.6%	2023
Mozambique	4.4%	2022
Tajikistan	4.2%	2016
Guinea-Bissau	3.7%	2022
Pakistan	3.6%	2021
Burkina Faso	3.6%	2023
Chad	3.4%	2018
Niger	3.4%	2017
UAE	3.0%	2023
Côte d'Ivoire	2.3%	2019

Source: SESRIC staff calculations based on ILOStat database collated from national employment surveys, latest year available as of 2025.

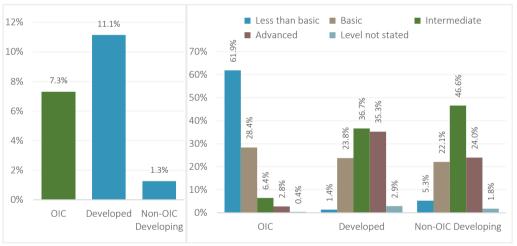
Employment by Citizenship

International migration is a key aspect of globalization, offering significant opportunities for development. Greater economic integration and increasing liberalization of goods and services have facilitated labour mobility. The primary motivation for most migrants is to find work abroad and access better economic opportunities. Conflicts and disasters also contribute to increased cross-border movement of people seeking safer places to live.

However, migrant workers often face significant challenges in accessing social protection measures, such as healthcare and income security, making them more vulnerable than local workers to socio-economic shocks like COVID-19 pandemic (ILO, 2020a). Migrant workers represent a considerable share of employment in major high-income countries and make important contributions to societies and economies. Approximately 11% of total employment in developed countries consists of foreign citizens, compared to 7.3% in OIC countries and only 1.3% in non-OIC developing countries (Figure 2.11).

Figure 2.11: Share of Foreign Workers in Total Employment

Figure 2.12: Education Levels of Foreign Employed Citizens



Source: SESRIC staff calculations based on ILOStat database collated from national employment surveys, latest year available as of 2025. Data includes 30 OIC, 28 developed and 44 non-OIC developing countries.

The economic impacts on countries of origin are mainly through remittances. Migrant workers also contribute to destination countries by providing needed skills for their labour markets. While migrants with higher education and skills benefit host countries, this often implies a brain drain for origin countries.

In OIC countries, nearly 62% of migrant workers lack basic education, and only 2.8% have advanced education. In contrast, 35.3% of migrant workers in developed countries and 24.0% in non-OIC developing countries have advanced education (Figure 2.12). Clearly, OIC countries face challenges in attracting a skilled workforce with advanced education.

BOX 2.1: Public Employment Services Capacity Building Programme (PES-CaB)



The OIC-2025 Programme of Action acknowledges the pivotal role of labour markets in improving the quality of life, fostering productive employment, and establishing comprehensive social protection for the people of OIC nations. This involves enhancing workforce competitiveness, cultivating an inclusive and forward-looking work environment, and advocating for equitable employment opportunities.

In pursuit of these objectives, it is imperative for OIC Member States to collaborate closely, facilitating the exchange of expertise across various domains essential for national strategies aimed at reducing unemployment. This collaboration encompasses capacity-building support, strategy formulation, project and programme development, resource mobilization, and mentorship capabilities.

In this context, SESRIC initiated the Public Employment Services Capacity Building Programme (PES-CaB) in 2014. This programme is designed to enhance the quality and effectiveness of public employment services within the OIC Member States. The SESRIC Public Employment Services Capacity Building Programme (PES-CaB) encompasses a comprehensive range of subjects aimed at enhancing the proficiency of public employment services across OIC Member States. These subjects cover various crucial areas, including labour market analysis, job placement and matching, combating informal employment, vocational training, unemployment insurance and employment protection, and the utilization of information and communication technologies in employment services. By offering diverse educational resources and activities in the form of training courses and workshops, SESRIC seeks to empower OIC Member States to strengthen their public employment services, ultimately promoting employment opportunities and social inclusion within their respective nations.

2.2 Labour Productivity

Productivity is crucial for economic development, as it increases real income and improves living standards by catalysing economic growth. Labour productivity is typically defined as output per unit of labour input or output per hour worked. It helps to determin the contribution of labour to a country's GDP and provides a basis for cross-country comparisons and explanations of income disparities. Globally, labour productivity has shown a consistent upward trend from 2015 to 2025. As shown in Figure 1.13, output per worker in OIC countries increased from U\$\$28,996 in 2015 to U\$\$32,899 in 2025, measured in constant 2021 international U\$\$ based on purchasing power parity (PPP), representing a 13.5% growth in labour productivity This growth was briefly interrupted in 2020 due to the COVID-19 pandemic, but productivity quickly recovered, surpassing pre-pandemic levels in 2021. However, a significant labour productivity gap persists between developed and developing countries.



Figure 2.13: Output per worker (GDP constant 2021 international \$ at PPP)

Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024.

In 2024, output per worker in developed countries was estimated at US\$124,988, compared to US\$32,267 in OIC countries and US\$35,052 in non-OIC developing countries. This means that an average worker in OIC countries produces approximately 25.8% of the output of an average worker in developed countries, while an average worker in non-OIC developing countries produces about 28.0% of the output of their counterparts in developed countries.

When evaluating performance since 2015. non-OIC developing countries have made the largest improvements in labour productivity. Using 2015 as the base year, Figure 2.14 shows non-OIC that developing countries achieved a 28% increase in labour productivity over the period 2015-2024. In contrast, workers in OIC countries increased their productivity by 11.3%, while developed countries saw a 7.8% increase, with the world average of 15.5% aggregate growth in labour productivity.

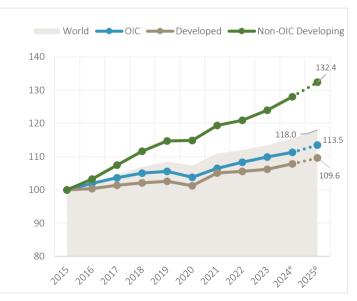
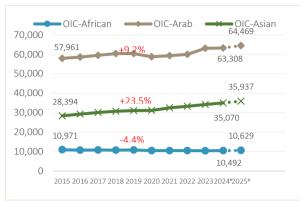


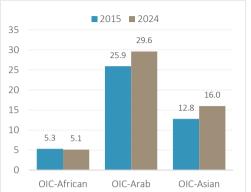
Figure 2.14: Labour Productivity Index (2015=100)

Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024.

Figure 2.15: Output per worker (GDP constant 2021 international \$ at PPP) in OIC Countries, By Regional Groups

Figure 2.16: Labour Productivity per Hour





Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024.

Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024. Output per hour worked (GDP constant 2021 international S at PPP.

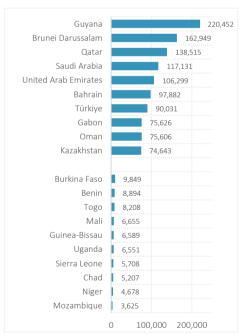
At the OIC regional group level, Arab region has the highest average labour productivity, measured at US\$63,308 in 2024. This compares to US\$35,070 for OIC countries in the Asian group and US\$10,492 for OIC countries in the African group (Figure 2.15).

Despite a significant productivity gap among the three regions, OIC-Asian countries have experienced rapid growth (23.5%) in labour productivity from 2015 to 2024, outpacing Arab region countries (9.2%) and contrasting with a decline (-4.4%) in African OIC countries.

The productivity gap is also evident in Figure 2.16, which shows labour productivity per hour worked for 2015 and 2024. OIC-Asian countries, with a 25.1% increase in productivity per hour worked, are on track to narrow the gap with OIC-Arab countries (14.3% growth), while OIC-African countries, with a -3.6% change, continue to lag behind.

At the individual country level, Guyana recorded the highest output per worker (US\$220,452) in 2024, followed by Brunei Darussalam (US\$162,494), Qatar (US\$138,515), Saudi Arabia (US\$114,216), United Arab Emirates (US\$106,299), and Bahrain (US\$97,882). Among OIC countries, the lowest labour productivity levels were recorded in Mozambique (US\$3,625), Niger (US\$4,678), and Chad (US\$5,207) (Figure 2.17).

Figure 2.17: OIC Countries with Highest and Lowest: Output per worker (GDP constant 2021 international \$ at PPP), 2024



Source: ILO Modelled Estimates, November 2024

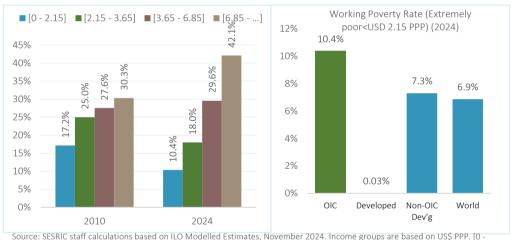
Only three OIC countries recorded output per worker higher than the average of developed countries (US\$125,980), and 19 member countries exceeded the world average (US\$48,126) in 2024.

2.3 Income

A key aspect of labour market analysis is the classification of employed individuals by income levels or economic class, which provides insights into income distribution and socio-economic disparities. The ILOcategorizes workers into four income groups based on per-capita household consumption, measured in purchasing power parity (PPP): extremely poor (below US\$2.15), moderately poor (US\$2.15 to US\$3.65), near poor (US\$3.65 to US\$6.85), and middle class and above (above US\$6.85).

Figure 2.18 (left) shows trends in OIC countries regarding the shares of different income groups in total employment. The most striking observation is the rapidly growing share of employed people with incomes above US\$6.85, classified as "middle class and above." This share increased from 30.3% in 2010 to 42.1% in 2024.

Figure 2.18: Distribution of Workers based on Income Levels in OIC Countries (left) and Comparison of Working Poverty Rate (right)



2.15]: Extremely poor; [2.15 - 3.65]: Moderately poor; [3.65 - 6.85]; near poor.

The share of employed people with incomes between US\$3.65 and US\$6.85 ("near poor") slightly increased from 27.6% to 29.6% during the same period. The shares of other income groups have declined. The share of the "extremely poor" droped from 17.2% to 10.4%, reflecting notable decrease in the working poverty rate for OIC countries. The share of the "moderately poor" also declined, reaching 18.0% in 2024 compared to 25.0% in 2010. The aggregate share of employed individuals classified as extremely poor or moderately poor (incomes below US\$3.65) fell from 42% in 2010 to 28% in 2024, showing significant improvement for OIC countries.

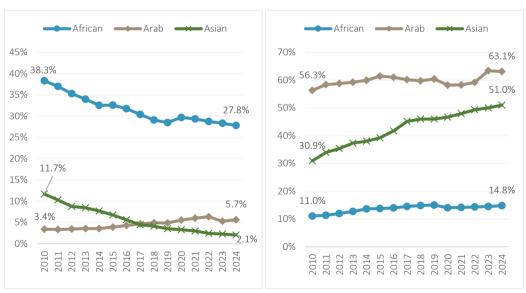
However, when compared with other country groups, the working poverty rate (percentage of employed individuals living below US\$2.15 PPP) remains significantly higher in OIC countries (Figure 2.18, right).

The working poverty rate is 7.3% in non-OIC developing countries, with the world average at 6.9%. It is nearly eliminated in developed countries. Clearly, unemployment figures do not fully capture the true extent of labour market challenges in OIC countries, as many workers earn insufficient income to escape poverty.

In 2024, the working poverty rate was remarkably low in many OIC countries, with 21 member countries reporting less than 1% of their workforce living in extreme poverty and 15 member countries have less than 1% in moderate poverty. However, approximately 213 million workers across OIC countries remained in poverty, with 78 million in extreme poverty and 136 million in moderate poverty, despite being employed. The significant proportion of workers living in households with per capita incomes below US\$2.15 PPP per day underscores the urgent need for OIC countries to prioritize improving the living conditions and economic well-being of their labour force.

At the regional level within the OIC, the working poverty rate was highest in the Africa region, despite decreasing from 38.3% in 2010 to 27.8% in 2024. Asian OIC countries are progressing towards eliminating the working poverty rate, which was measured at 2.1% in 2024 (Figure 2.19, left).

Figure 2.19: Share of Workers with Income Levels below USD 2.15 PPP (left) and above USD 6.85 PPP (right) in OIC Countries, by Region



Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024.

On the other hand, OIC countries in the Arab region experienced an increase in working poverty rates over the years, reaching 5.7% in 2024 compared to 3.4% in 2010. This is mainly due to the rise in working poverty in conflict affected countries in the region. When it comes to the share of employed persons living above the US\$ 6.85 PPP income level, Asian group again managed to significantly increase the share from 30.9% in 2010 to 51% in 2024 (Figure 2.19, right).

Between 2010 and 2024, OIC countries in the African region increased the share of workers earning at least US\$ 6.85 PPP per day by 3.8 percentage points, from 11.0% to 14.8%. Similarly, OIC Arab countries saw an increase of 6.8 percentage points, from 56.3% to 63.1%, despite challenges in conflict-affected countries in the region. These improvements demonstrate progress in enhancing the economic well-being of workers, although disparities still exist across OIC regions.



BOX 2.2: Social Security Institutions (SSI-CaB)

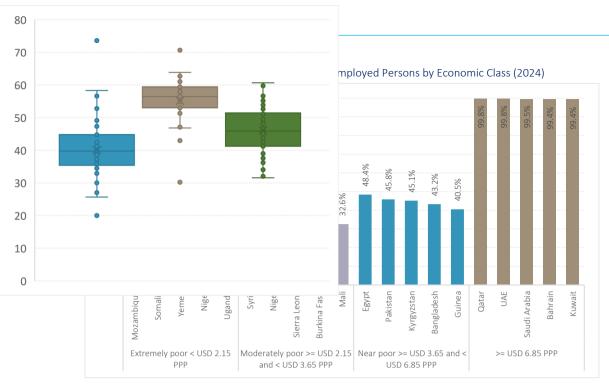


SESRIC introduced the Capacity Building Programme for Social Security Institutions (SSI-CaB) in November 2014 with the objective of bolstering both the institutional and human capabilities within OIC Member States in the critical field of social security. The programme is designed to actively promote the exchange of knowledge, sharing of experiences, and dissemination of best practices among the Social Security Institutions operating within OIC Member States.

Under this initiative, the Centre orchestrates capacity-building initiatives, employing diverse methods such as training courses, workshops, and study visits, tailored to the requirements and capabilities of the improvement of human capital within the OIC Member States. The SESRIC Capacity Building Programme for Social Security Institutions (SSI-CaB) encompasses a comprehensive array of subjects dedicated to strengthening the capacities of Social Security Institutions within OIC Member States. These subjects encompass diverse domains, including pension system management, healthcare financing, actuarial services, IT infrastructure for social security, and governance and risk management. Through a range of specialized training and knowledge-sharing activities, SESRIC aims to foster expertise and facilitate the exchange of best practices among Social Security Institutions in OIC Member States, thereby advancing their ability to provide robust and sustainable social security services to their citizens.

At the individual country level, the top OIC countries in each income group are presented in Figure 2.20. More than 70% of all employed people in Mozambique, 63.2%in Somalia and nearly half in Yemen are "extremely poor". Around 42% of all employed people in Syria and 36% in Niger fall into "moderately poor" category. In Egypt, Pakistan, and Kyrgyzstan, more than 45% of the employed people are calssified as "near poor". On the other hand, over 99% of all employed people in Qatar, United Arab Emirates, Saudi Arabia, Bahrain and Kuwait have income levels exceeding US\$ 6.85 per day, placing them in the "middle class and above" category.

The income share of labour in total GDP is relevant as it indicates the proportion of national income allocated to workers and has implications for income distribution, economic inequality, consumer demand, and social stability. A higher income share of labour suggests a more equitable income distribution, stimulates consumer spending, and fosters social cohesion. Conversely, a lower income share of labour worsen income disparities, reduces consumer demand, and result in social and economic challenges.



Source: ILO Modelled Estimates, November 2024.

As shown in Figure 2.21, the average income share of workers in OIC countries is around 40%, while this share is 55% in developed countries and 46% in non-OIC developing countries. Workers in OIC countries seem to receive a relatively lower proportion of national income compared to other country groups.

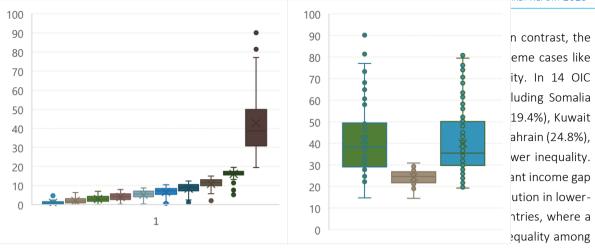
Measures that promote fair wages, labour rights, and inclusive economic growth can help ensure a more equitable distribution of income and a healthier balance between labour and capital in the overall economy.

To understand income inequality in OIC countries, examining the distribution of labour income across deciles reveals stark disparities. The poorest 10% of workers (Decile 1) in OIC countries receive, on average, approximately 0.9% of total

Figure 2.21: Income Share of Workers in Total GDP (2024)

OIC Developed Non-OIC Developing

 $Source: SESRIC\ staff\ calculations\ based\ on\ ILO\ Modelled\ Estimates,\ November\ 2024.$



employed persons.

This gap is relatively small in developed countries at around 24 percentage points and does not vary significantly among thems (Figure 2.23). In OIC countries and non-OIC developing countries, the average gap widens to around 40 percentage points, reflecting greater inequality in earnings.

Figure 2.22: Labour Income Distribution in OIC Countries, by Decile (2020)

Figure 2.23: Income Gap between Workers with Income Levels in the Lowest 10% and Highest 10% (2020)



Source: SESRIC staff calculations based on ILO Modelled Estimates. November 2022.

2.4 Vulnerable and Informal Employment

Categorization of employed people by their employment status can help in understanding both the dynamics of the labour market and the level of development of countries. In this context, the ILO distinguishes between two categories of employed people: (a) employees (wage and salaried workers) and (b) self-employed workers, with the latter further sub-divided into self-employed with employees (employers), self-employed without employees (own-account workers),

members of producers' cooperatives and contributing family workers. Own-account workers and contributing family workers together represent vulnerable employment.

In 2010, wage and salary workers in OIC countries accounted for 40%, own-account workers for 38%, contributing family workers for 16% and employers for 5%. Over the years, the shares of wage and salary workers, and employers have increased, but the share of contributing family workers has decreased. As of 2023, 44% of employed people were wage and salary workers, 39% were own-account workers, 11% were contributing family workers and 6% were employers.

A higher share of employers compared to the world (5%) indicates growing entrepreneurship in OIC countries. It is also a positive development to observe that a larger portion of the population in OIC countries are employed in regular job with wages and salaries.

However, it is important to note that 89% of the employed in developed countries are wage and salary workers. Vulnerable employment refers to working under inappropriate conditions and persons in vulnerable employment are more likely to have limited or no access to social security or stable income. According to the ILO, nearly 1.54 billion people worldwide were in vulnerable employment in 2023, accounting for almost 44% of total employment. The share of vulnerable employment in OIC countries has steadily decreased from 54.4% in 2010 to 49.8% in 2023 (Figure 2.24).

Despite this improvement, vulnerable employment in OIC countries is still significantly above the average of developed countries (7.5%). In 2023, both OIC and non-OIC developing countries had similar rates of vulnerable employment. Overall, vulnerable employment remained excessively high in developing countries.



Figure 2.24: Share of Vulnerable Employment

Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024.

The share of vulnerable employment for female workers (61.4%) in OIC countries is significantly higher than for male workers (43.5%) (Figure 2.25).

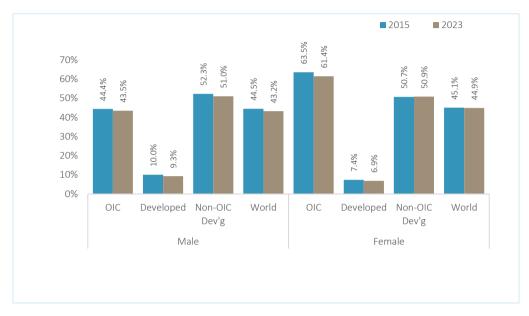


Figure 2.25: Share of Vulnerable Employment by Gender (2015 vs 2023)

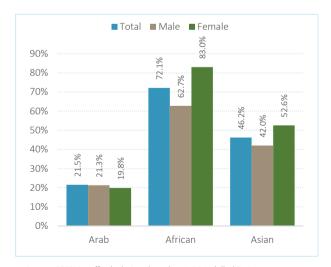
Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024.

In other country groups, male workers tend to have a slightly higher share of vulnerable employment.

Within the OIC, regional differences are stark: the Arab region has the lowest share of vulnerable employment at 21.5%, while the African region has the highest at 72.1%.

In the African and Asian OIC regions, female workers face higher vulnerability compared to their male counterparts. Converssly, in the Arab region, the share of vulnerable male workers slightly exceeds that of female workers (Figure 2.26).

Figure 2.26: Share of Vulnerable Employment in OIC Countries, by Region (2023)



Source: SESRIC staff calculations based on ILO Modelled Estimates, November 2024.

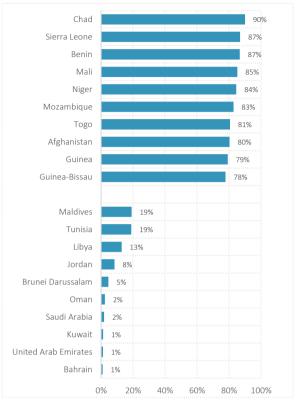
At the individual country level, sub-Saharan African nations exhibit the highest rates of vulnerable employment, with Chad reaching 90%, and Sierra Leone and Benin at 87% in 2023 (Figure 2.27).

In contrast, Gulf region countries reported significantly lower rates, with Bahrain, United Arab Emirates, and Kuwait recording just 1% vulnerable employment, followed closely by Saudi Arabia and Oman at 2%.

These Gulf nations are among the global leaders in maintaining the lowest shares of vulnerable employment.

Informal employment, characterized by the lack of formal contracts, social protection, and legal recognition, poses significant challenges for workers and economies in many OIC countries.

Figure 2.27: OIC Countries with Highest and Lowest Vulnerable Employment (2023)



Source: ILO Modelled Estimates, November 2024.

It leads to precarious working conditions, low wages, long working hours, and limited job security, perpetuating poverty and hindering upward social mobility. Informal workers are also more susceptible to exploitation and have limited opportunities for career advancement or skills development.

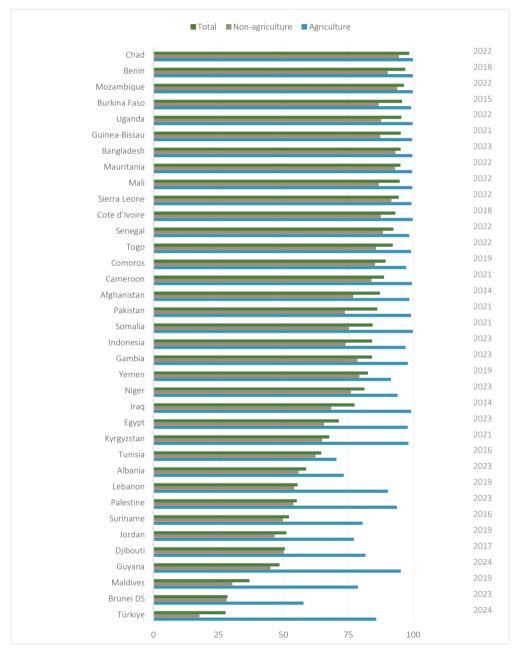
According to the latest available data, the informality rate is highest in Chad (98.5%) and Benin (96.9%). The rate exceeds 90% in 13 other OIC countries. Only four out of 36 OIC countries with available data have informality rates below 50%, with the lowest observed in Türkiye at 27.7% (Figure 2.28).

High levels of informal employment in OIC countries pose numerous challenges. Informal employment often constitutes a substantial portion of the economy where formal job opportunities are limited. Its prevalence can hinder economic growth and productivity, as it is associated with lower efficiency and discourages investment and innovation.

Additionally, the lack of tax contributions from the informal sector reduces government revenues, limiting funds for essential services and social welfare programs. OIC countries need policies and interventions to promote the transition from informal to formal employment.

Formalizing the informal sector can improve labour standards, enhance worker protections, and provide better access to social benefits. As discussed in the next subsection, social protection systems already have lower coverage in OIC countries.

Figure 2.28: Proportion of Informal Employment in Total Employment, by Sector (%)



Source: ILO SDG Labour Market Indicators Database (SDG 8.3.1).

2.5 Occupational Safety and Health, and Social Protection

Occupational safety and health (OSH) is a multidisciplinary field dedicated to promoting and maintaining the highest degree of physical, mental, and social well-being for workers across all occupations. This is achieved by preventing workplace hazards, injuries, and illnesses while fostering safe and healthy work environments. The objectives of OSH, as outlined by the World Health Organization (WHO), include maintaining and enhancing workers' health and working capacity, improving workplace conditions to ensure safety, and developing work organizations and cultures that incorporate effective management systems, personnel policies, participatory principles, and voluntary quality-related practices to bolster occupational safety (WHO, 2023).

This field integrates disciplines such as occupational medicine, nursing, ergonomics, psychology, and hygiene to address these goals holistically. The ILO emphasizes that a safe and healthy work environment is a fundamental right, enshrined in its Constitution and reinforced through conventions like the Occupational Safety and Health Convention, 1981 (No. 155). This convention mandates coherent national policies for risk prevention, and the Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187), which promotes a preventive safety culture⁴. Despite these frameworks, global challenges persist: the ILO reports 2.93 million annual work-related deaths, 395 million non-fatal injuries, and 2.41 billion workers exposed to excessive heat, with potential global savings of \$361 billion through improved safety measures to prevent heat-related injuries (ILO, 2023c: ILO 2024a).

To address these issues, the World Health Assembly urges countries to develop national OSH policies and action plans, strengthen institutional capacities, and expand coverage of essential interventions for preventing occupational diseases and injuries. This should be done in collaboration with programs addressing communicable and non-communicable diseases, injury prevention, mental health, and environmental health (WHO, 2023).

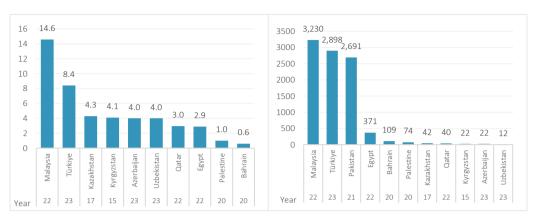
By implementing robust safety measures, providing comprehensive training, and maintaining safe working conditions, employers can significantly reduce workplace accidents, protect workers' health, and enhance productivity by minimizing disruptions caused by injuries and illnesses. The ILO-OSH 2001 Guidelines further underscore the need for integrated management systems, emphasizing continual improvement through policy formulation, hazard assessment, worker participation, and auditing to effectively mitigate risks effectively (ILO, 2001).

Data for individual OIC countries is only available for a few countries. Among those with available data, Malaysia reported the highest rate of fatal occupational injuries, followed by Türkiye and Kazakhstan (Figure 2.29a). In terms of non-fatal occupational injuries, Malaysia leads with 3,230 cases per 100,000 workers, followed closely by Türkiye at 2,898 cases and Pakistan at 2,691 cases per 100,000 workers.

⁴ILO. International labour standards on occupational safety and health. https://normlex.ilo.org/dyn/nrmlx_en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C155.

Figure 2.29a: OSH: Fatal Occupational Injuries (per 100'000 workers)

Figure 2.29b: OSH: Non-Fatal Occupational Injuries (per 100'000 workers)



Source: ILO SDG Labour Market Indicators Database (SDG 8.8.1).

Source: ILO SDG Labour Market Indicators Database (SDG 8.8.1).

These significant disparities highlight the critical need for improved data collection and targeted interventions to mitigate workplace hazards in OIC countries, particularly in high-risk sectors such as manufacturing, construction, and agriculture, which are identified as primary contributors to occupational injuries globally (ILO, 2022).

Enhanced monitoring and tailored safety measures are essential to reduce these risks and promote safer working environments across the region.



BOX 2.3: Occupational Safety and Health Capacity Building Programme (OSH-CaB)



Occupational Safety and Health (OSH) is dedicated to safeguarding the well-being, safety, and welfare of employees within their workplace environments. The paramount objective of OSH lies in proactively mitigating potential hazards. Over the last five decades, numerous developing Islamic nations have prioritized hazard management and prevention strategies, striving to ensure a safe and secure working environment for all employed individuals.

With this objective in mind, SESRIC launched the Occupational Health and Safety Capacity Building Programme (OSH-CaB) in 2010, aiming to bolster the endeavours of the Organization of Islamic Cooperation (OIC) Member States in enhancing workplace safety and health standards. Under this initiative, the Centre orchestrates capacity-building initiatives, employing diverse methods such as training courses, workshops, and study visits tailored to the requirements and capabilities of the occupational health and safety institutions within the OIC Member States. The SESRIC Occupational Health and Safety Capacity Building Programme (OSH-CaB) encompasses various subjects designed to fortify workplace safety and health within OIC Member States. These subjects span diverse areas, including risk assessment and management, occupational health services, emergency response planning, promoting safety cultures, occupational hygiene, and the effective implementation of international OSH standards.

Complementing OSH, social protection systems serve as essential mechanisms for mitigating vulnerabilities across the life cycle. They encompass benefits for contingencies such as unemployment, maternity, disability, old age, and employment injuries, thereby upholding the human right to social security as per the Social Security (Minimum Standards) Convention, 1952 (No. 102), and the Social Protection Floors Recommendation, 2012 (No. 202)⁵

Over half of the global population now benefits from some form of social protection, marking a significant milestone. However, 3.8 billion people remained without coverage, underscoring the urgent need to realize the human right to social security, espacially in the context of the climate crisis (ILO, 2024b).

Social protection plays a critical role in addressing the triple planetary crisis of climate change, pollution, and biodiversity loss. It supports both adaptation, through poverty prevention, inequality reduction, and enhanced resilience to climate shocks, and mitigation, by cushioning the impacts of environmental policies and promoting sustainable practices like greening pension funds or redirecting fossil fuel subsidies. As a catalyst for a just transition, social protection safeguards incomes, health, and jobs, fosters social cohesion, and enables equitable access to adaptation benefits, particularly for vulnerable populations. It also supports transitions to greener economies when paired with active labour market policies. However, persistent gaps in coverage, adequacy, and financing, especially in climate-vulnerable countries with low protection levels, hinder progress toward the 2030 Sustainable Development Goals.

Decisive policy action is needed to strengthen universal social protection systems, guided by human rights and international standards, to address interconnected life cycle and climate risks. This is essential not only for social justice but also to garner public support for ambitious climate policies. There is a special responsibility on high-income nations to provide financial support to low-income countries disproportionately affected by the crisis, even though they contributed least to it (ILO, 2024b).

The scope of social protection programmes, the coverage of such programmes and the expenditure on social protection are all quite varied in OIC countries. According to the ILO SDG Labour Market Indicators Database, the proportion of the population covered by at least one social protection benefit (excluding health) is lower than the world average of 52.4% in 43 OIC countries, with less than 10% of the population covered in 10 OIC countries (Figure 2.30a).

There are only 12 OIC countries where this proportion is higher than the world average and only 2 OIC countries (Iran and Guyana) where 100% of the population is covered by social protection programmes. These disparities underscore the challenges in extending comprehensive social protection systems, particularly in African and conflict-affected OIC countries.

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⁵ ILO, C102 - Social Security (Minimum Standards) Convention, 1952 (No. 102) https://normlex.ilo.org/dyn/nrmlx_en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:312247



Figure 2.30: Social Protection Coverage in OIC Countries

Source: ILO SDG Labour Market Indicators Database (SDG 1.3.1).

In OIC countries, pension coverage for individuals above retirement age varies significantly, with data from 2010 to 2023 highlighting both progress and gaps. Several nations, including Brunei Darussalam (2021), Guyana (2020), Kyrgyzstan (2022), Maldives (2021), Suriname (2020), Tajikistan (2021), Tunisia (2021), and Uzbekistan (2021), have achieved universal coverage at 100%, ensuring all eligible elderly receive pensions. High coverage is also observed in Azerbaijan (97%, 2023), Albania (96.5%, 2021), and Kazakhstan (95.7%, 2023).

However, coverage remained considerably low in countries like Malaysia (18.5%, 2023), Nigeria (19.6%, 2022), and Chad (5.8%, 2022), reflecting limited reach of pension system, particularly in low-income OIC nations where social protection infrastructure remained underdeveloped. Unemployment benefit coverage in OIC countries remained critically low, with 2016–2023 data indicating significant gaps in social protection for the unemployed. Bahrain leads with 46.6% coverage (2019), followed by Oman (25.8%, 2022) and Kazakhstan (23.2%, 2022).

However, most OIC nations reported minimal or no coverage, with 22 countriesoffering no unemployment benefits. Low coverage rates, highlight the limited reach of unemployment insurance, leaving many workers vulnerable during economic disruptions.

On the other hand, although it is not covered by the ILO database, Türkiye provides an unemployment benefit based on a contributory insurance scheme according to its Unemployment Insurance Law, which guarantees unemployment benefits for all workers who lost their job against their own will and without any fault on thier part. Such mechanisms can be used in other OIC countries to protect workers from involuntary loss of jobs.



BOX 2.4: OIC Occupational Safety and Health Network (OIC-OSHNET) Portal



OIC Occupational Safety and Health Network (OIC-OSHNET) is an OIC platform established to create closer cooperation among the national Occupational Safety and Health (OSH) Institutions of the OIC Member States through sharing knowledge, experience and best practices. The Network was launched with a kick-off meeting, jointly organized by SESRIC and the Directorate General of Occupational Safety and Health (DGOSH) of the Republic of Türkiye on 16-17 May 2011 in Ankara, with the participation of representatives of national OSH institutions of 15 OIC Member Countries, namely, Albania, Bangladesh, Egypt, Iraq, Jordan, Kyrgyzstan Republic, Lebanon, Malaysia, Morocco, Oman, Pakistan, Palestine, Senegal, Türkiye and United Arab Emirates.

The establishment of OIC-OSHNET was welcomed by the First Session of Islamic Conference of Labour Ministers held during the 19th World Congress on Safety and Health at Work on 10 September 2011 in Istanbul, Republic of Türkiye. OIC-OSHNET aims at establishing an international network for systematic sharing of information and experience in the domain of OSH among the national OSH institutions of the OIC Member States with a view to improving the quality of the OSH services and standards of these institutions. This platform, made available by SESRIC, plays a pivotal role in advancing workplace safety standards within the Organization of Islamic Cooperation (OIC) Member States.

In addition, SESRIC has recently launched the new version of the OIC-OSHNET Portal, which is an active platform and knowledge hub for all national OSH institutions and professionals in our member countries. Through the OIC OSHNET portal, professionals, and stakeholders in the OSH domain gain access to a wealth of knowledge, research, and best practices, promoting collaboration and knowledge-sharing among OIC Member Countries to ensure safer and healthier working environments.

Chapter 3

PROGRESS TOWARDS THE IMPLEMENTATION OF THE OIC LABOUR MARKET STRATEGY 2025

The OIC Ten-Year Programme of Action 2016–2025 (OIC-2025), adopted during the 13th Islamic Summit held in Istanbul from 10–15 April 2016, underscores the importance of fostering cooperation among member states in the areas of knowledge exchange, manpower development, and the sharing of best practices. In the labour sector, the programme envisions joint actions and training initiatives aimed at significantly improving labour market conditions across OIC member countries. The ultimate goals are to reduce unemployment, enhance labour productivity, and improve occupational health and safety standards.

Recognizing the shared challenges faced bv member states in their respective labour markets and the urgent need for stronger collaboration, the 3rd Islamic Conference of Labour Ministers mandated SESRIC to develop Labour comprehensive Market Strategy for consideration at the subsequent session. In **SESRIC** response, formulated the OIC abour Market Strategy, which was formally adopted at the 4th Islamic Conference Labour Ministers, held on 21-22 February 2018 in Jeddah, Kingdom of Saudi Arabia.

Thematic Areas of Cooperation of OIC Labour Market Strategy 2025



This strategic document outlines 21 strategic goals with 162 actions under five different thematic areas: (1) Encouraging participation to labour market; (2) Enhancing employability; (3) Protecting the workers' safety and well-being; (4) Promoting labour productivity; (5) Reducing unemployment. Each thematic area includes two key performance indicators (KPIs), culminating in a total of 10 KPIs for the implementation of OIC LMS.

Table 3.1: Key Performance Indicators of OIC LMS

KPI Code	KPI Description	2018	2024*	
A. Encouraging Participation to Labour Market				
KPI 1.1	Labour force participation rate	58.1%	58.7%	
KPI 1.2	Gender gap in LFPR (percentage points)	36.1	34.6	
B. Enhancing Employability				
KPI 2.1	Employment to Population Ratio	54.6%	55.6%	
KPI 2.2*	Share of Public Expenditure on ALMPs			
C. Protecting the Workers' Safety and Well-being				
KPI 3.1*	Public social protection expenditure as percentage of GDP			
KPI 3.2	Working Poverty Rate (Extremely poor < USD 2.15 PPP)	11.1.%	10.4%	
D. Promoting Labour Productivity				
KPI 4.1	Labour Productivity (USD) : Output per worker (GDP constant 2021 international \$ at PPP)	30,463	32,267	
KPI 4.2	Share of High Skilled Labour Force (Skill levels 3 and 4 $^{\sim}$ high)		%16.2	
E. Reducing Unemployment				
KPI 5.1	Unemployment rate (total)	6.2%	5.3%	
KPI 5.2	Youth unemployment rate	13.3%	10.9%	

The strategy is built on four core principles: participation, protection, productivity, and partnership. It promotes the inclusion of the entire working-age population in the labour market and strengthens employability through national and local services. It also emphasizes protecting workers from unsafe conditions, discrimination, and vulnerability. To boost productivity, the strategy encourages investment in skills development and tackling skills mismatches, key drivers of unemployment. Recognizing the diverse development levels and capacities among OIC members, the strategy fosters partnerships by encouraging knowledge sharing between countries that have successfully implemented specific policies and those seeking support.

In line with this collaborative spirit, the strategy promotes a decentralized, country-led implementation model. While some member states have already made significant progress in executing certain actions, others continue to face capacity-related challenges. To monitor progress and facilitate peer-to-peer learning, SESRIC was tasked with conducting regular online surveys to track the implementation status of OIC LMS.

This chapter provides an update on the status of implementation of the actions proposed by the OIC Labour Market Strategy 2025. It starts with an overview of key performance indicators and then continues with a summary of survey findings. The progress report is prepared based on the outcomes of the online surveys conducted by SESRIC since December 2018. The survey results show the completion rate of actions under each thematic area at OIC level, top performing OIC countries in terms of completing the actions and their readiness to share the knowledge.

3.1 Assessment of Key Performance Indicators

The OIC Labour Market Strategy identified several key performance indicators (KPIs) to evaluate the progress based on actual data. There are 10 KPIs identified in the strategy document, two of which could not be measured due to the lack of data (Table 3.1). The remaining 8 KPI were already discussed in the previous sections of this report. In this sub-section, a brief summary of these indicators is provided to facilitate the assessment of progress made by OIC member countries.

The Labour force participation rate (LFPR) in OIC countries has shown slight improvement over recent years, though challenges persist, particularly due to the adverse impacts of the COVID-19 pandemic. As of 2024, LFPR in OIC countries is estimated at 58.7%, compared to 58.1% in 2022, while it remains at 61.0% in both developed and 62% in non-OIC developing countries. The world average is 61% in 2024. New policies are evidently needed to boost labour market participation, with special attention required to address the low participation rates of youth and women.

Gender gap in LFPR has narrowed slightly, decreasing from 36.6% in 2015 to 34.6% in 2024, driven by an increase in female LFPR from 39.5% to 41.2%. Despite this progress, the gender gap in OIC countries remains significantly larger than the global average of 24.1% and 11.7% in developed countries, indicating a need for targeted interventions to further reduce this disparity.

Employment to population ratio (EPR) in OIC countries has seen modest improvement, rising from 54.8% in 2022 to 55.6% in 2024. However, this remains below the 2010 level of 55.0% and lags behind developed (58.1%) and non-OIC developing countries (59.1%) in 2024. This suggests that efforts to enhance employability have not yet yielded the desired outcomes in increasing employment rates.

The working poverty rate (living on less than US\$3.65 per day, PPP- moderately poor) in OIC countries has continued to decline, dropping from 25% in 2010 to 18% in 2024. Similarly, the extreme poverty rate (living below US\$2.15 PPP, as defined in SDG indicator 1.1.1) decreased from 17.2% in 2010 to 10.4% in 2024. While these reductions reflect significant progress, greater efforts are needed to eliminate extreme poverty and improve the living conditions of the labour force in OIC countries.

Labour productivity measured as output per worker in constant 2021 international US\$ (PPP), has increased from US\$28,996 in 2015 to US\$32,267 in 2024 in OIC countries. However, the productivity gap with developed countries remains substantial, with output per worker in developed countries estimated at US\$124,988 in 2024. An average worker in OIC countries produces only 25.8% of the output of a worker in developed countries, underscoring the need for accelerated efforts to close this gap.

The share of high skilled labour force (skill levels 3 and 4) in OIC countries is 16.2%, lower than the 44.9% in developed countries but comparable to the 14.2% in non-OIC developing countries. While investments in human capital have led to an increase in high-skilled workers, the pace of progress in OIC countries lags behind other country groups, indicating a need for more robust investments in education and training.

Total unemployment in OIC countries has decreased from 5.7% in 2022 to 5.3% in 2024, aligning closely with the global average of 5.0%. However, this rate remains higher than the 4.6% in developed countries and 4.8% in non-OIC developing countries in 2024. The persistence of unemployment, particularly exacerbated by the COVID-19 pandemic, highlights the need for innovative policies and enhanced cooperation to address this challenge.

Youth unemployment (ages 15–24) in OIC countries has shown improvement, declining from 13.9% in 2020 to 10.9% in 2024. This is lower than the 13.6% in non-OIC developing countries but slightly higher than the 10.7% in developed countries. With over 26.3% of youth in OIC countries not in education or employment, there is an urgent need to create better education and employment opportunities to mitigate economic and social challenges.

3.2 Implementation Survey

The implementation survey is being conducted with two broad objectives. One is to observe the completion of actions suggested by the strategy document and the other is to identify the opportunities for sharing knowledge and experience among the member countries. To initiate conducting implementation survey, the OIC General Secretariat and SESRIC circulated note verbal to the member countries in November 2018 requesting them to nominate a focal point from the relevant national institutions to collect reliable information and data related to the implementation of the survey. Some other countries indicated their focal points during the 4th Islamic Conference of Labour Ministers held in Jeddah, Kingdom of Saudi Arabia. In December 2018, SESRIC developed an online survey in three official languages of OIC in accordance with the priority areas and KPI of OIC LMS. The links of survey were shared with the focal points to facilitate collection of their responses concerning the status of implementation of OIC LMS. Since then, the SESRIC has received 36 responses from 23 member countries⁶. Based on these responses, this section provides a short analysis of the survey results for each thematic area. The results overall indicate that significant progress has been made in the implementation of suggested actions. There is also strong readiness to exchange knowledge and experience in achieving the strategic goals.

(i) Thematic Areas

The strategy document identified five thematic cooperation areas for strategic action. These are: (1) Encouraging participation to labour market; (2) Enhancing employability; (3) Protecting the

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⁶ The respondent countries include: Afghanistan, Azerbaijan, Bahrain, Cameroun, Indonesia, Iraq, Jordan, Kuwait, Malaysia, Niger, Nigeria, Oman, Palestine, Qatar, Saudi Arabia, Senegal, Sierra Leone, Sudan, Tunisia, Türkiye, Uganda , United Arab Emirates and Yemen

workers' safety and well-being; (4) Promoting labour productivity; (5) Reducing unemployment. There are 21 strategic goals and 162 actions specified under these thematic areas. This subsection provides a summary analysis of the implementation of actions listed in the strategic document for each thematic area.

(1) Encouraging participation to labour market

Considering the relatively lower labour force participation rates in OIC countries, there is a need to pay more attention to the challenges related to the labour market inactivity. Addressing this challenge would contribute to achieving a more inclusive and productive economy across the OIC region. Reducing economic inactivity not only stimulates economic development but also contributes to solving diverse social problems.

In order to encourage the participation to labour market, five strategic goals (SGs) are proposed in the strategy document. These are:

- SG 1.1: Improve labour market prospects and outcomes (6 actions)
- SG 1.2: Promote skills development according to labour market needs (7 actions)
- **SG 1.3:** Implement inclusive policies to enhance participation of female, young and elderly population (9 actions)
- **SG 1.4:** Devise policies to narrow down the gap between participation to labour market in urban and rural areas (5 actions)
- SG 1.5: Design programmes and policies to activate the potentials of vulnerable groups including disabled, ex-offender, and displaced people in labour market (8 actions)

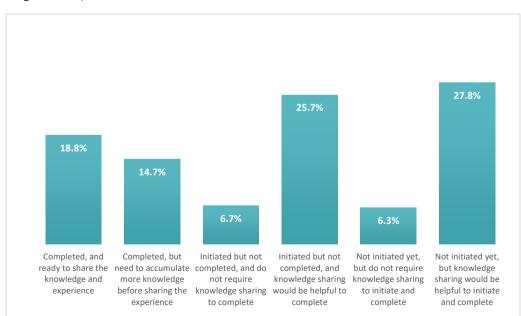


Figure 3.1: Implementation Status of Actions in Thematic Area 1

Source: OIC Labour Market Strategy Implementation Surveys by SESRIC, 2019-2024.

The actions proposed under this thematic area have higher implementation rate by the respondent countries. In total, 33.5% of all actions were completed and in many of all these actions, the member countries are in a situation to transfer their knowledge and experience. 32.4% of actions were already initiated, but another 34.1% of actions wait for the inception. In 72.3% of actions, there is a readiness for sharing knowledge and experience among the respondent countries (Figure 3.1).

(2) Enhancing employability

The level of skills and qualifications of a person is a critical factor in enhancing the employability in the labour market. Skills development is needed to improve employability, enhance productivity, enable matching of skills supply to the needs of labour markets, and facilitate the adjustment to changes in technology and markets. Yet, skills mismatch is among the top challenges faced by OIC countries. There might be different explanations for why the level of skills of individuals does not match the level of skills required in the labour market, but skill mismatch is an unhealthy phenomenon in the labour market that has significant negative consequences.

In this context, four strategic goals are proposed by the strategy document to enhance employability:

- SG 2.1: Significantly improve the skills base of the labour force to enhance employability (8 actions)
- SG 2.2: Reduce the skills mismatch (10 actions)
- SG 2.3: Implement special policies to enhance employability of vulnerable groups (10 actions)

34.6% 24.0% 16.1% 10.0% 9.4% Completed, and Completed, but Initiated but not Initiated but not Not initiated yet, Not initiated yet, but do not require but knowledge ready to share the need to accumulate completed, and do completed, and sharing would be knowledge and more knowledge not require knowledge sharing knowledge sharing helpful to initiate experience before sharing the knowledge sharing would be helpful to to initiate and and complete experience to complete complete complete

Figure 3.2: Implementation Status of Actions in Thematic Area 2

Source: OIC Labour Market Strategy Implementation Surveys by SESRIC, 2019-2024.

• SG 2.4: Improve the functioning of labour markets and institutions (8 actions)

According to the responses to the survey, only 26.1% of actions were initially completed by the respondent member countries, the lowest completion rate among the five thematic areas. In 10% of which, member countries are ready to share their knowledge and experience. Moreover, 44% of actions were initiated but not completed, and in majority of cases knowledge sharing is considered as a helpful instrument in achieving the goals. Finally, almost 30% of actions were not initiated at all, but the majority of countries are considering knowledge sharing as important (Figure 3.2).

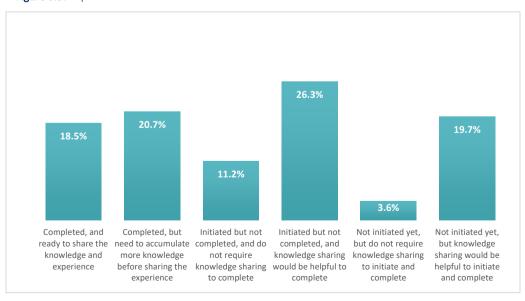
(3) Protecting the workers' safety and well-being

Occupational safety and health (OSH) represents a key element in achieving decent working conditions and sustaining well-being of workers. It is concerned with protecting safety, health and welfare of working people. Appropriate legislation and regulations together with adequate means of enforcement, are essential for the protection of workers' safety and health. Moreover, roughly 200 million workers in OIC countries live in extreme poverty or in moderate poverty with less than US\$3.10 income per day, despite being in employment.

In this context, five strategic goals are identified to protect the workers' safety and well-being in OIC countries:

- SG 3.1: Strengthen Measures for Occupational Safety and Health (10 actions)
- SG 3.2: Widen Social Protection Measures for All (7 actions)
- SG 3.3: Prevent Discrimination in the Labour Market and Workplace (6 actions)
- SG 3.4: Eliminate Child and Forced Labour (10 actions)
- SG 3.5: Reduce Informal Employment and Promote Decent Work (7 actions)

Figure 3.3: Implementation Status of Actions in Thematic Area 3



Source: OIC Labour Market Strategy Implementation Surveys by SESRIC, 2019-2024.

The highest rate of completion was indicated in this thematic area by the respondent countries. 39.1% of actions were already completed and in 20.7% of cases, they are ready to share their knowledge and experience. 37.6% of actions were initiated by the member countries and only 23.3% of actions were not still initiated. This reflects the importance given to the protection of the workers' safety and well-being. In 64.5% of actions, the countries are ready (18.5%) or willing to engage (46%) in an exchange of knowledge and best-practices (Figure 3.3).

(4) Promoting labour productivity

Workers in OIC countries on average produce lesser amount of goods and services compared to their counterparts in the rest of the world. This implies that OIC countries have a productivity problem. In a broader context, labour productivity can be enhanced by various macroeconomic policies, including policies to promote innovation, science and technology, investment and human capital. In the context of labour market, promoting labour productivity is more related to the effective utilization of existing human capacities. Human capital stock plays an important role in determining the ability to absorb new knowledge and technologies and thus increasing labour productivity.

In this context, four strategic goals (SGs) are recommended to promote productivity:

- **SG 4.1:** Effectively Utilize Existing Capacities (7 actions)
- SG 4.2: Promote On-the-Job Training Programmes and Life-long Learning (8 actions)
- SG 4.3: Invest in New Skills (6 actions)
- SG 4.4: Invest in Sustainable Physical and Digital Infrastructure (5 actions)

Actions related to the promotion of labour productivity have 26.4% completion rate. 46.7% of actions are initiated but not completed. Overall, respondent countries indicated that they are ready to engage with other member countries in exchanging knowledge and experience in 63.4% of actions (Figure 3.4).

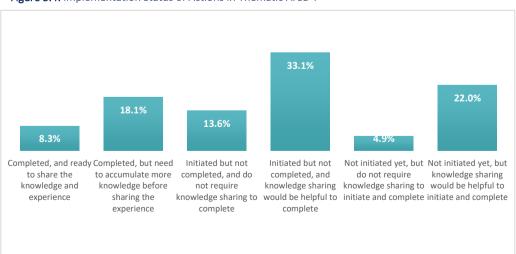


Figure 3.4: Implementation Status of Actions in Thematic Area 4

Source: OIC Labour Market Strategy Implementation Surveys by SESRIC, 2019-2024.

(5) Reducing unemployment

Unemployment remained one of the most challenging issues across the globe and OIC countries continue to have higher average unemployment rates compared to the world. In particular, unemployment rates for female labour force are higher than the rates for male. The figures on youth unemployment rates in OIC countries are also not quite promising, as young people (aged 15 to 24 years) continue to extensively suffer from lack of decent job opportunities. Therefore, productive capacity of OIC countries needs to be activated by taking into account the long-standing structural obstacles that are keeping many youths, women, people with disabilities and low-skilled workers unemployed.

In this context, three strategic goals (SGs) are identified by the strategy document to help reduce unemployment:

- SG 5.1: Expand active labour market policies for reducing unemployment (6 actions)
- SG 5.2: Implement policies to enhance job creation (7 actions)
- SG 5.3: Design special programmes to reduce youth and female unemployment (12 actions)

Actions towards reducing unemployment have been already taken by the respondent countries and 34% of them are completed. 41.5% of actions are initiated, but in 31% of actions, there is a demand for knowledge sharing to complete them. Following the thematic area 3, this is the area with the highest rate of completion or initiation. Only 24.6% of actions did not commence yet. This also reflects the critical importance given to the fighting of unemployment in OIC countries (Figure 3.5).

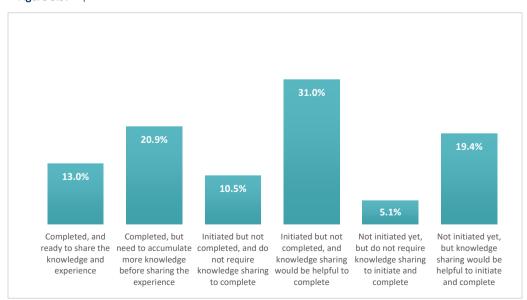


Figure 3.5: Implementation Status of Actions in Thematic Area 5

Source: OIC Labour Market Strategy Implementation Surveys by SESRIC, 2019-2024.

In total, 32.2% of all actions were completed, 39.8% were initiated but not completed and 28% were not initiated yet (Figure 3.6). Moreover, in 66.9% of cases, countries are willing to engage in knowledge sharing activity. This reflects relatively strong initial conditions to move forward and achieve the strategic goals suggested in the OIC Labour Market Strategy 2025 document.

Not initiated yet, but knowledge sharing Completed, and ready to would be helpful to share the knowledge initiate and complete and experience 14.3% Completed, but need to 22.9% accumulate more knowledge before 17.9% Not initiated yet, sharing the experience but do not require 5.2% knowledge sharing to initiate and complete 10% 29.8% Initiated but not Initiated but not completed, and do not completed, and require knowledge knowledge sharing sharing to complete would be helpful to complete

Figure 3.6: Overall Implementation Status of OIC Labour Market Strategy

Source: OIC Labour Market Strategy Implementation Surveys by SESRIC, 2019-2024.

Chapter 4

AUTOMATION, SECTORAL TRANSFORMATION AND CHANGING NATURE OF WORK

As technology advances, tasks traditionally performed by humans are increasingly subject to automation and augmentation. Generative artificial intelligence is transforming not only manual and routine activities but also cognitive and creative work. This shift has profound implications for the workforce and society but does not necessarily imply large-scale replacement of human labor. Instead, technological change reshapes jobs, alters task mixes within occupations, and creates demand for new skill sets. Preparing societies and workforces for this transition requires timely assessments of tasks most susceptible to automation and skills that will remain resilient in the digital era.

In this evolving landscape, both soft and technical skills are critical. Human-centric capabilities such as critical thinking, complex problem-solving, creativity, adaptability, socio-emotional intelligence, and communication, remain central to employability in a digital economy. Simultaneously, demand is rising for technical competencies in data analysis, artificial intelligence, machine learning, robotics, and cybersecurity, which are indispensable for harnessing the productivity gains of new technologies.

This section reviews the rising importance of digitalization, automation, and AI in the world of work, discusses emerging and declining skills associated with these trends, and assesses sectoral employment patterns in OIC countries, highlighting sector-specific impacts of digital transformation.

4.1 The Rise of Digitalization and Automation, and Impacts on Labour Markets

Digitalization in the workplace involves the adoption of a range of digital technologies, including digital communication tools, information technology, robotics, and artificial intelligence. While this process has been ongoing for decades, the COVID-19 pandemic accelerated remote and platform work, speeding up the digital transformation of traditional workplaces (WEF, 2023). Opinions on the impact of digital technologies on workplaces vary widely, with optimistic expectations conflicting with concerns, leading to polarized discussions about effects on employment levels and working conditions.

Digitalization requires enterprises to shift from labor-intensive to technology-intensive work organization. This shift may involve replacing humans with robots, altering job content, skills, working conditions, and work relations. Artificial intelligence has drawn significant attention for its potential to comprehensively digitalize the world of work. Digital technologies can improve

working conditions by replacing repetitive, heavy, labor-intensive, or dangerous tasks and reducing workloads. They can also enhance skills, improve work quality, and create new, higher-value-added employment, allowing more time for stimulating tasks and career development (EP, 2022).

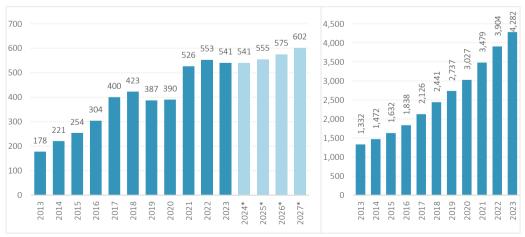
Digitalization affects not only entire jobs but also the composition of jobs by altering task profiles. Certain tasks within existing job profiles may disappear due to automation or the shifting nature of work in a digital environment. Digitalization can digitize manual or physical work processes, integrating digital tools and platforms to enhance efficiency, accuracy, and speed. Additionally, it creates new tasks and job roles associated with emerging technologies and data analysis. This evolution reflects the ongoing integration of digital technologies into work processes.

Moreover, digitalization influences wage levels, as increased aggregate demand and productivity from technology adoption can raise wages. It also affects the demand for and supply of skills, with new skills needed for emerging jobs or tasks, while others become less relevant. Digitalization offers opportunities for higher-skilled workers and those adaptable to changing skill needs, but low-skilled routine workers risk job loss and must navigate the transition to the digital age (Eurofound, 2021b; Mandl, 2021). Education systems must anticipate future skill needs and, in collaboration with businesses, adapt curricula to deliver relevant content effectively. Workers need to develop skills like data analysis, problem-solving, and technological proficiency to meet digital workplace demands.

Automation, on the other hand, involves replacing human input, either fully or partially, with machine or software input. Unlike digitalization, robots have been utilised in manufacturing for decades, but advancements in artificial intelligence and machine learning have enabled robots to perform tasks beyond repetitive, discrete motions. Sectors like business logistics, automotive manufacturing, and food preparation use advanced robotics intensively (Eurofound, 2021a).

Figure 4.1a: Annual Installations of Industrial Robots (Thousands)

Figure 4.1b: Operational Stock of Industrial Robots (Thousands)



Source: International Federation of Robotics | September 2024. (*) Projected.

In line with the increasing automation of production processes, robot installations saw a steep rise to over 541 thousand units in 2023, although the growth rate slowed to 2% compared to the previous year (Figure 4.1a).

The number of units produced is expected to remain unchanged in 2024 before increasing to 555 thousand units in 2025 and 575 thousand units in 2026. Further growth is projected to reach 602 thousand units by 2027, according to the International Federation of Robotics (IFR, 2024).

In 2023, the five major markets for industrial robots were China, Japan, United States, Republic of Korea, and Germany. Together, they accounted for 79% of global installations, with China alone representing 51% of the total. Among OIC countries, only Türkiye ranked among the 15 largest markets, with 4.4 thousand annual installations.

By industry, the automotive sector accounted for the largest share of new installations at 28.5%, followed by the electrical/electronics sector (26.6%), while the food industry only represented just 3.2%. The operational stock of industrial robots provides insight into automation trends, espacially in assembly lines. According to the IFR (2024), the global stock reached nearly 4.3 million units in 2023, increasing at an average annual rate of 12% since 2013 (Figure 4.1b).

Technology adoption goes beyond robotics. In fact, when compared to other emerging technologies, robots are considered less important for businesses. According to the WEF (2023), digital platforms and apps are the most likely technologies to be adopted, with 86% of companies expecting to integrate them into their operations within the next five years (Figure 4.2).

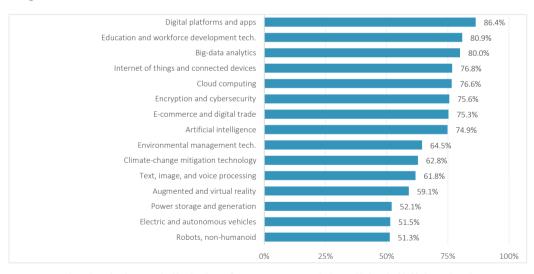


Figure 4.2: Technology Adoption (2023-2027)

Source: WEF (2023). Technologies ranked by the share of organizations surveyed who are likely or highly likely to adopt this technology over the next 5 years

E-commerce and digital trade are expected to be adopted by 75% of businesses. The second most popular technology category includes education and workforce technologies, with 81% of companies planning to adopt these technologies by 2027. The adoption of robots, power storage technology and distributed ledger technologies rank lower on the list. The WEF (2023) estimates

that the adoption of technology and increased digital access will lead to net job growth. However, adoption patterns also highlight a crucial distinction between digitalization and automation. Digitalization through platforms, apps, and e-commerce tends to create new opportunities and expand access. Automation, on the other hand, is far more contested in the literature for its effects on the labour market.

Automation has a stronger impact is on manufacturing than services, as manufacturing relies heavily on easily automated routine tasks. Jobs such as production line operators, supervisors, and forklift operators are particularly at risk, requiring significant upskilling or reskilling. Even less routine roles, like machine operators and specialized assemblers, are becoming more complex, necessitating continuous learning (Eurofound, 2021b). In contrast, service sectors like healthcare and emergency response are less likely to see job losses, with automation complementing human labour through ongoing training.

The WEF (2025) survey highlights technologies expected to transform businesses by 2030. Among nine key technologies, three stand out as particularly influential. Artificial intelligence (AI) and information processing technologies top the list, with 86% of employers expecting them to reshape operations by 2030. Robots and autonomous systems follow, projected to transform 58% of businesses, while energy generation, storage, and distribution technologies are expected to impact 41%.

Other technologies with moderate but still notable expected influence include new materials and composites (30%), semiconductors and computing technologies (20%), sensing, laser and optical technologies (18%), quantum and encryption (12%), biotechnology and gene technologies (11%), and satellites and space technologies (9%) (Figure 4.3).

Together, these findings demonstrate how digitalization and automation are converging to drive profound business transformation. On one hand, digital platforms and workforce technologies are creating more opportunities for growth and inclusivity. On the other hand, AI, robotics, and advanced energy systems are accelerating automation, reshaping industries, and redefining labour markets.

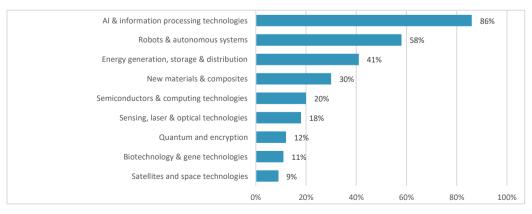


Figure 4.3: Technology Trends Driving Business Transformation (2025-2030)

Source: WEF (2025). Future of Jobs Survey 2024. Share of employers surveyed that identify the stated technology trend as likely to drive business transformation.

Empirical Evidence on the Labour Market Impacts

The most recent empirical literature continues to provide a comprehensive perspective on how digitalisation, automation, and more recently generative artificial intelligence, are shaping labour markets. Evidence from across countries indicates that new technologies have not led to widespread net job destruction at the aggregate level, though they have significantly transformed the composition of employment. OECD analysis of 21 countries finds that while all economies recorded net employment growth over the past decade, jobs at high risk of automation expanded by only 6% compared to 18% in low-risk occupations. This pattern underlines that automation has primarily triggered within-country reallocation of labour rather than broad declines in employment (Georgieff & Milanez, 2021).

More studies on industrial robots continue to illustrate these dynamics. For instance, Acemoglu and Restrepo (2017) show that each additional robot per thousand workers reduced local employment by three to six jobs, with notable adverse effects on wages in affected commuting zones. However, the experience in Germany demonstrates a different trajectory: between 1994 and 2014, declines in manufacturing employment linked to automation were largely offset by job creation in services, leading to stable overall employment outcomes (Dauth et al., 2021). These findings highlight the importance of structural shifts across sectors rather than an inevitable path toward technological unemployment. The global trend further stresses this dynamic, for instance the International Federation of Robotics (2024) reports that the operational stock of industrial robots exceeded 4.3 million units in 2023, with installations remaining above half a million annually, signalling the rapid diffusion of automation technologies into manufacturing and related sectors.

Attention has now turned to artificial intelligence, particularly generative AI, which is increasingly being applied to routine cognitive and clerical tasks. The ILO's analysis suggests that clerical work is most exposed to generative AI, with women and highly educated workers disproportionately affected by automation. Importantly, the ILO concludes that most occupations are more likely to be augmented than fully substituted, meaning that technology is reshaping task content rather than replacing entire jobs (ILO, 2023d). The OECD supports this view, noting that aggregate labour demand has not weakened but significant distributional risks are emerging, particularly for workers in routine cognitive roles (OECD, 2023). The International Monetary Fund (IMF, 2024) further estimates that around 40% of global employment is exposed to generative AI, with higher risks of substitution in advanced economies and greater potential for augmentation in emerging and developing countries.

Firm-level evidence and controlled experiments indicate that generative AI can yield substantial productivity gains, particularly by enabling workers, especially those with lower skills to produce more output in less time. This can narrow performance gaps between different groups of workers (Noy & Zhang, 2023; Gambacorta et al., 2024). Yet, despite these productivity benefits, the limited number of quantitative studies on AI technologies in the workplace have found no conclusive evidence of positive net employment effects (Acemoglu et al., 2022; Georgieff & Hyee, 2021; Damioli et al., 2022).

Economic theory helps explain this mixed evidence, suggesting that while new technologies initially displace labour, compensating mechanisms, such as the creation of new tasks, the reallocation of resources across firms and industries, and higher consumer demand driven by productivity growth can counterbalance labour-saving effects. These mechanisms underpin the dynamic relationship between technological change and employment, showing that innovation does not necessarily lead to widespread technological unemployment but instead reshapes the structure and quality of jobs (Acemoglu & Restrepo, 2019).

Additionally, not all workers benefit equally from technological upgrading. Research shows that IT specialists and those in non-routine analytic occupations enjoy greater wage growth and employment stability in firms that adopt digital technologies. In contrast, low- and medium-skilled manufacturing workers face downward pressure on wages and cumulative earnings losses due to robot adoption (Genz & Schnabel, 2021; Acemoglu & Restrepo, 2019). These patterns confirm that automation is both skill-biased and task-biased, often amplifying inequalities where complementary skills and retraining opportunities are lacking.

Beyond measurable labour market outcomes, worker perceptions also play a crucial role in shaping adaptation. Survey evidence covering advanced and emerging economies finds that workers in developing contexts are generally more optimistic about automation and its potential benefits, though they consistently emphasise the importance of reskilling and retraining to adapt to evolving skill demands (Mulas-Granados et al., 2019).

Positive perceptions are more common among younger, better-educated workers and those living in countries with stronger labour protection systems. Conversely, older and lower-income workers in economies with higher robot penetration often view automation more negatively.

In conclusion, global evidence suggests that for OIC countries, the immediate impacts of automation and AI will be felt more through task augmentation in services and administrative roles than through large-scale job losses. However, the spread of robotisation into manufacturing will increasingly affect middle-income economies. The experience of other regions indicates that technological change does not necessarily lead to inevitable unemployment but rather to dynamic task reallocation, with generative AI offering significant augmentation potential in routine cognitive work.

Therefore, the critical challenge for OIC countries is to accompany digitalisation and automation with inclusive skills development, active labour market policies, and investment in digital infrastructure and protections. With the right measures in place, automation and AI can enhance productivity, improve job quality and safety, and open new opportunities for employment. As, failure to act risks deepening labour market inequalities.

Creation of New Forms of Employment and Skills

Digitalization is enabling non-traditional forms of employment that offer greater flexibility. New patterns of employment such as ICT-based mobile work and digitally enabled forms of self-employment are gaining traction around the world (Charles et al., 2022). Remote work is increasingly viewed as the 'new normal' in labour market by both employers and employees.



BOX 4.1: GETIR - A Success Story from Türkiye

Getir is the leader of a new crop of apps, promising rapid grocery delivery in under 20 minutes. Launched in Istanbul in 2015, the app has spread across Europe and into the US, and spawned an entire industry of apps modelled after it. Over time, it expanded its original business model and started offering various other services, including GetirMore, GetirFood, GetirWater, GetirLocals, GetirDrive, GetirJobs, and GetirBiTaxi. It operates in all provinces of Türkiye, as well as in 9 countries from 3 continents. It has been downloaded over 30 million times and has 3.5 million monthly active users.

Getir's rise to prominence happened quickly, only expanding outside of Türkiye at the start of 2021. It was the most downloaded delivery app in Europe in 2021, beating out Uber Eats and Deliveroo. It expanded to the US in late 2021. That quick expansion has led to Getir's valuation skyrocketing over 2021, going from \$850 million at the start of the year to \$7.5 billion by June. It was valued at \$12 billion in 2022. To maintain its lead, Getir has acquired some smaller rivals, including Moov, Weezy and Gorillas. Gorillas was the most expensive of the lot, with Getir announcing the \$1.2 billion acquisition in December 2022. It is estimated that Getir is the most popular rapid delivery platform in Europe, possibly accounting for over 40% of the market.

Getir has 32,000 employees globally. Its riders are not selfemployed, as is the case with most Uber and DoorDash drivers and riders, but hired by the company. This provides greater social protection for the employees, demonstrating a success story in the age of digitalization.

Source: Getir corporate website and BusinessofApps.

According to a survey by the WEF, over 80% of employers are planning to quickly digitalize their working processes and potentially move 44% of their workforce to operating remotely (WEF, 2020). There are significant variations in the prevalence of teleworking across different sectors.

Teleworking is more suitable for IT and knowledge-intensive sectors compared to others. Social tasks are also being carried out remotely more frequently as digital communication becomes easier, although sometimes at the cost of service quality. Manual or physical task-based jobs are the least suitable for remote working. Since teleworking heavily relies on digital skills to perform cloud computing and collaboration, workers with strong digital skills are better equipped to work remotely.

The advancement of AI is expanding the scope of tasks that can be performed by machines. This has led to a hollowing out of jobs that involve mid-level skills, where automation has substituted machines for a significant portion of routine tasks regardless of skill level (OECD, 2013). On the other hand, there has been a significant increase in the

demand for workers in high-skilled, non-routine jobs in advanced economies.

These roles often involve working with new information, utilizing interpersonal skills, and solving unstructured problems. Additionally, there has been some growth in the demand for workers in low-skilled, non-routine jobs that involve activities such as caregiving and personal services, which are challenging to automate (OECD, 2016).

It is also believed that digital entrepreneurs will play a vital role in economic and social transformation, especially after the COVID-19 pandemic. As, digital entrepreneurs have the resilience to cope with business difficulties through digital tools and innovation to maintain growth (Charles et al., 2022). Moreover, business models that take advantage of digital connectivity can create important success stories with significant employment effects (see Box 4.1).

In line with the transformation of economic activities, labour markets are increasingly requiring digital skills (Charles et al., 2022). In the United Kingdom and EU countries, more than three quarters of job openings require digital skills (EC, 2020). In countries such as Australia, Canada, New Zealand, Singapore, and United States, seven out of ten job postings in 2019 were for digital occupations.

An increase in demand for a digitally competent workforce has been observed in China, Indonesia, Malaysia and Mexico (APEC, 2020).

However, there is a shortage of digitally skilled workers worldwide, even in more advanced countries. In 2018, 57% of enterprises in the EU reported difficulties finding ICT specialists (EC, 2020). Approximately, 42% of European citizens do not have basic digital skills.

As a response, the EU has allocated EUR 127 billion to support digital transformation during the post-COVID recovery process (EC, 2022). Similar trends are seen in developing countries such as Brazil, China, Indonesia and Mexico (Feijao et al., 2021).

A study by the International Finance Corporation (IFC) has revealed that more than 230 million jobs in Sub-Saharan Africa will require digital skills by 2030, resulting in almost 650 million training opportunities (IFC, 2018). Another recent study by the IFC found that the high demand for digital skills will create 57 million jobs over the next decade and will result in the creation of about 114 million training opportunities across the five African countries they studied (IFC, 2021).

In the Gulf Cooperation Council (GCC) countries, although there is a growing trend towards more skills, professionals with emerging technologies such as big data, analytics, cybersecurity and cloud computing remain scarce (PwC, 2017).

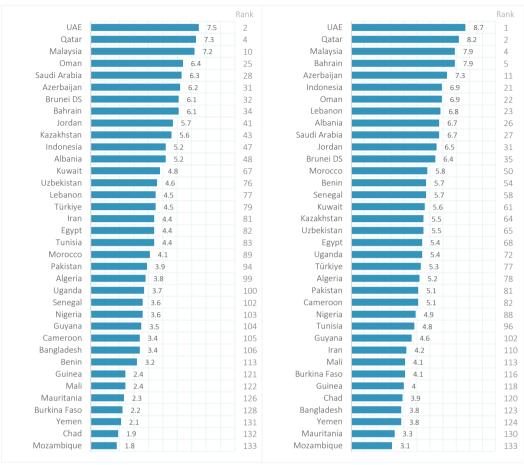
A major concern about the acceleration of advanced technologies is that it has widened the digital gap, known as the 'digital divide', between groups of workers, with implications on their employability and earnings.

There are structural problems making it hard to bridge this divide. A report launched by the United Nations Children's Fund (UNICEF) and the International Telecommunication Union (ITU) in December 2020 revealed that two thirds of school-age children (or 1.3 billion children aged 3—17 years old) have no internet access at home (UNICEF/ITU, 2020). Moreover, according to the Global Digital Skills Index developed by a private research company in 2022 based on a survey with 23,000+ respondents across 19 countries, almost 75% of workers across the globe say they do not have access to resources necessary for learning the digital skills needed to succeed in the current and future workplace. Based on 2021 survey results, overall, respondents scored 33 out of a maximum of 100 points on the Digital Skills Readiness Index (Salesforce, 2022).

The most comprehensive data on the global digital skills gap is provided by Wiley's Digital Skills Gap Index (DSGI), which is built on six pillars (1) digital skills institutions, (2) digital responsiveness, (3) government support, (4) supply, demand & competitiveness, (5) data ethics & integrity, and (6) research intensity. It is constructed based on primary research inputs and secondary research indicators compiled from various sources.

Figure 4.4a: Digital Skills Gap Index (DSGI) Score and Rankings

Figure 4.4b: Digital Divide (Supply, Demand & Competitiveness) Sub-Index



Source: Wiley's Digital Skills Gap Index (DSGI) Database covering 134 countries.

Source: Wiley's Digital Skills Gap Index (DSGI) Database covering

According to the DSGI, most economies are failing to bridge the digital skills divide. However, there are three OIC countries among the top ten performers in the world, namely United Arab Emirates (2), Qatar (4) and Malaysia (10). On the other hand, among the 36 OIC countries for which data are available, five OIC countries are ranked among the least ten performers, demonstrating the disparity among OIC countries in terms of digital skills gaps (Figure 4.4a).

Out of the six pillars of the DSGI, the digital divide (supply, demand and competitiveness) sub-index is considered the most important pillar. It combines several key indicators of the digital divide and its impact on competitiveness, including the digital skills employer-job seeker mismatch, the STEM gender gap, the ease of finding/hiring staff and access to foreign talent to bridge the gap. According to this sub-index, four OIC countries dominate the top five rankings, reflecting strong government actions towards eliminating the digital divide among thier populations (Figure 4.4b).

4.2 Emerging and Declining Skills with the Rising Digitalization and Automation

Rising digitalization and automation are driving the emergence of new skills while making some existing skills less relevant. Skills in data analysis, artificial intelligence, cybersecurity, and digital marketing are increasingly in demand. Conversely, manual tasks, basic data entry, and traditional manufacturing skills are becoming less relevant or automated.

Job-specific skills alone are no longer sufficient; technology and digitalization-related skills are critical across all industries. Employers actively seek candidates with digital skills to navigate the digitalized landscape, but a significant shortage of qualified talent poses challenges for businesses. Individuals and organizations must adapt, continuously learn, and acquire in-demand skills to thrive in the evolving job market.

Artificial intelligence and machine learning are central to discussions about future workplace skills. While these technologies are transforming the world of work, some areas remain largely unaffected, with human involvement still essential. Human skills, such as cognitive ability, empathy, creativity, communication, and social intelligence—are vital for many tasks. Consequently, professions requiring logic, critical thinking, and problem-solving skills will see growing demand.

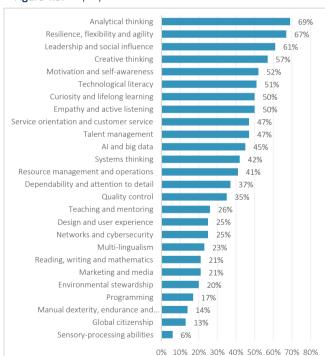


Figure 4.5: Employer-Identified Core Skills in 2025

Source: WEF (2025). Future of Jobs Survey (2024). Share of employers who consider the stated skills to be core skills for their workforce.

According to the Future of Jobs Report 2025 by the WEF, global employment is projected to undergo substantial structural changes by 2030. Over the next five years, an estimated 170 million jobs will be created while 92 million will be displaced, leading to a net increase of 78 million jobs (about 7% of total employment).

This corresponds to a structural labour-market churn⁷ of 22% of the 1.2 billion formal jobs covered in the dataset (WEF, 2025).

Currently, about one fifth of tasks (22%) are automated, highlighting the rapid pace of technological transformation. The findings of the report are

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⁷ See WEF (2025). Labour-market churn represents the sum of job losses and created jobs in a workforce as a fraction of its initial size. [https://reports.weforum.org/docs/WEF_Future_of_lobs_Report_2025.pdf]

based on comprehensive global employer survey of over 1,000 companies, representing more than 14 million workers across 22 industry clusters and 55 economies. This provides unparalleled insights into the evolving jobs landscape and the skills required for the 2025–2030 period.

An important finding of WEF (2025), based on its future of jobs survey 2024, is the interplay between humans, machines, and algorithms, which is redefining job roles across industries.

Automation is set to revolutionise the way people work, with the share of tasks performed solely or predominantly by humans projected to decline as technology advances. According to the survey, employers estimate that currently 47% of work tasks are performed mainly by humans, 22% by technology (machines and algorithms), and 30% through a combination of both. By 2030, employers anticipate that these proportions will be evenly distributed across the three categories.

In 2025, analytical thinking remains the most important core skill, with nearly seven in ten employers (69%) identifying it as essential (Figure 4.5). This is followed by resilience, flexibility and agility (67%) and leadership and social influence (61%), emphasising the central role of adaptability and collaboration alongside cognitive abilities. Creative thinking (57%) and motivation and self-awareness (52%) complete the top five, highlighting the growing value employers place on innovation, problem-solving, and personal resilience in an increasingly dynamic work environment.

The rest of the top 10 core skills further emphasizes the importance of combining technical proficiency with strong interpersonal abilities. These include technological literacy (51%), empathy and active listening (50%), curiosity and lifelong learning (50%), talent management, service orientation and customer service. Together, these skills reflect the expectation that workers must balance hard and soft skills, remain adaptable, and pursue continuous learning to remain competitive.

On the other hand, certain skills are considered core by only a small share of employers. These include sensory-processing abilities (6%), global citizenship (13%), manual dexterity, endurance and precision (14%), programming (17%), and environmental stewardship (20%). Their relatively low ranking indicates that while such skills may remain relevant in specific sectors, they are not widely prioritised across industries.

As shown in Table 1, over the next five years (2025-2030), respondent employers expect technological skills to grow in importance faster than any other category. Al and big data rankedas the single most in-demand skill, with a net increase of 87. These are closely followed by networks and cybersecurity (70) and technological literacy (68), reflecting the growing centrality of digital transformation across industries. Alongside these technical proficiencies, cognitive skills such as creative thinking (66) and analytical thinking (55) remain highly valued, emphasizing the need for workers who can combine innovation with problem-solving.

Self-efficacy and socio-emotional skills also feature prominently among those on the rise. Employers highlight resilience, flexibility and agility (66) as well as curiosity and lifelong learning (61) as essential for navigating disruption. While, the leadership and social influence (58) along with talent management (58) reflect the continued importance of interpersonal effectiveness

and people management in a rapidly evolving workplace. Skills like environmental stewardship (53), systems thinking (51), and empathy and active listening (46) further illustrate the widening scope of in-demand capabilities, from sustainability to emotional intelligence.

By contrast, several skills are expected to see limited or negative demand growth. Sensory-processing abilities (13), dependability and attention to detail (12), and global citizenship (19) are considered largely stable, while reading, writing and mathematics (-4) and manual dexterity, endurance and precision (-24) show projected declines. The latter continues a trend observed in earlier editions of the Future of Jobs Report, where physical and routine tasks are increasingly displaced by technology.

Table 1: Skills with Highest Growth in Demand (%)

Skill	Net increase	Skill	Net increase
1. Al and big data	87	14. Design and user experience	45
2. Networks and cybersecurity	70	15. Service orientation and customer service	41
3. Technological literacy	68	16. Teaching and mentoring	30
4. Creative thinking	66	17. Programming	27
5. Resilience, flexibility and agility	66	18. Marketing and media	25
6. Curiosity and lifelong learning	61	19. Resource management and operations	24
7. Leadership and social influence	58	20. Quality control	20
8. Talent management	58	21. Global citizenship	19
9. Analytical thinking	55	22. Multi-lingualism	16
10. Environmental stewardship	53	23. Sensory-processing abilities	13
11. Systems thinking	51	24. Dependability and attention to detail	12
12. Motivation and self-awareness	47	25. Reading, writing and mathematics	-4
13. Empathy and active listening	46	26. Manual dexterity, endurance and precision	-24

Source: WEF (2025). Future of Jobs Survey 2024. Share of employers that consider skills to be increasing, decreasing, or remaining stable in importance. Skills are ranked based on net increase, which is the difference between the share of employers that consider a skill category to be increasing in use and those that consider it to be decreasing in use.

Another critical finding of the WEF report is that rapidly evolving technological changes will be the strongest drivers of skills disruption over the next five years, simultaneously creating demand for new capabilities while accelerating the decline of others. Employers estimate that 39% of workers' skills will be disrupted between 2025 and 2030.

Since 2020, the pandemic and advances in frontier technologies have significantly reshaped working life, accelerating the demand for new skills. In the post-pandemic period, companies have adapted by integrating digital tools, remote work solutions, and advanced technologies such as machine learning and generative AI.

This transition has enabled employers to identify the skills most critical for navigating technological change, including AI and big data, networks and cybersecurity, technological literacy, and creative thinking (Table 1). The projected moderation in disruption may reflect a growing emphasis on continuous learning, upskilling, and reskilling, which has helped organizations anticipate and manage evolving skill requirements (WEF, 2025).

According to the report, there is an estimated structural labour-market churn of 22% across sectors and countries over the next five years. OIC countries included in the 2024 survey show varying levels of churn, with several above the global average. The largest shifts are expected in Bahrain (33%), Uzbekistan (30%), Türkiye (29%), and Morocco (27%), indicating significant workforce reallocation pressures. Other countries like Nigeria (12%), Malaysia (11%), and Indonesia (14%) are projected to experience below-average churn. Meanwhile countries like United Arab Emirates (21%), Tunisia (20%), Kazakhstan (19%), Egypt (17%), and Saudi Arabia (16%) are closer to the global average (Figure 4.6.A).

The intensity of skills disruption also varies across surveyed OIC countries. The share of workers' core skills expected to change over the next five years ranges from as high as 48% in Egypt, 44% in Türkiye, and 42% in Bahrain, to as low as 35% in Tunisia and 36% in Indonesia and Uzbekistan each, compared to the world average of 39% (Figure 4.6.B). These findings highlight the strong connection between skills transformation and labour market churn, indicating that higher disruption leads to greater churn . Therefore, upskilling and reskilling are essential for OIC countries looking to adapt to the future of work.

A. Structural Labour-force Churn B. Skills Disruption 48% Egypt Bahrain 33% Uzbekistan 44% Türkiye 30% Bahrain Türkiye 42% 29% Nigeria Morocco 41% 27% 41% UAE World 22% Malaysia UAF 21% 41% 40% Saudi Arabia Tunisia 20% 40% Kazakhstan Kazakhstan World Egypt 17% 39% Saudi Arabia Morocco 16% 37% Uzbekistan Indonesia 36% 14% Indonesia Nigeria 36% Tunisia Malaysia 35% 0% 10% 30% 10% -10% 20% 30% 40% 50% 50%

Figure 4.6: Structural Labour-force Churn and Skills Disruption in OIC Countries, 2025–2030 (%)

Source: WEF (2025). Future of Jobs Survey 2024.

In line with this, employers across the surveyed countries have outlined their top strategic responses to these disruptions. The majority plan to upskill their workforce (85%), followed by accelerating the automation of processes and tasks (73%) and hiring staff with new skills to meet emerging business needs (70%).

Others intend to complement and augment their workforce with new technologies (63%) or transition existing staff from declining to growing roles (51%). At the same time, some employers anticipate reducing staff in roles where skills are becoming obsolete (41%), while relatively fewer plan to restructure through re-shoring (10%) or offshoring (8%) (WEF, 2025). These strategies illustrate how businesses are simultaneously investing in people and technology to remain competitive in an era of rapid digitalization and automation.

4.3 Skills Constraints and Firms' Training Efforts

The uneven pace of skills disruption across OIC countries underlines the urgency of equipping workers with the capabilities demanded by digitalization and automation. While upskilling and reskilling are emerging as indispensable strategies, survey evidence indicates that many firms still struggle to effectively address this gap.

According to the World Bank Enterprise Surveys, an average of 14.6% of firms in OIC countries identified an inadequately educated workforce as a major or very severe constraint in 2024, compared to 19.2% globally, 18.3% in non-OIC developing countries, and 26.2% in developed economies. However, only 21.3% of firms in OIC countries reported offering formal training to their workers, which is well below the global average of 32.7% and far lower than the 47.1% observed in developed countries (Figure 4.7).

Figure 4.7: Lack of Skilled Workforce vs Formal Training (%), and 2024

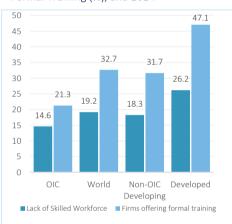


Figure 4.8: Lack of Skilled Workforce vs Formal Training in OIC Countries (%), 2024



Source: World Bank Enterprise Surveys. Latest year available during 2015-2024.

At the country level, significant disparities exist within the OIC group. The highest shares of firms reporting inadequate workforce skills as a major constraint were in Iraq (47.8%), Côte d'Ivoire (35.9%), Jordan (33.3%), and Morocco (30.8%). Firms in Tunisia, Albania, Kyrgyzstan, Niger, and Kazakhstan also reported relatively high constraints, each with more than 20% of firms affected. In contrast, very few firms in Azerbaijan (0.4%), Saudi Arabia (2.2%), Sierra Leone (2.4%), Bahrain (3.5%), Uzbekistan (4.2%), and Benin (4.6%) viewed workforce education as a serious constraint (Figure 4.7).

On the other hand, the percentage of firms offering formal training, which is a key measure of how businesses respond to skills gaps was relatively low in OIC countries, averaging 21.3%, compared to 32.7% globally, 31.7% in non-OIC developing countries, and 47.1% in developed countries. Within the OIC, the highest training provision rates were observed in Albania (46.2%), Jordan (42.2%), Bahrain (40.6%), Togo (37.9%), Malaysia (37.0%), Suriname (34.8%), and Azerbaijan (34.0%). At the lower end, less than 10% of firms offered formal training in Saudi Arabia (3.9%), Pakistan (5.9%), Bangladesh (6.4%), Egypt (7.9%), Indonesia (8.4%), and Morocco (8.8%) (Figure 4.7).

Noting the empirical findings that workers in professions with the highest likelihood of being fully automated tend to receive less on-the-job and outside-the-job training compared to those in non-automatable jobs (Nedelkoska & Quintini, 2018), it is essential for firms and governments to actively encourage such workers to participate in training programs. While many OIC member countries have initiated efforts to foster automation, digitalization, and broader technology adoption in their national development strategies, gaps remain in scaling these initiatives and linking them with workforce transformation.

Box 4.2 below presents a good practice example on Artificial Intelligence Investments and Workforce Transformation: Lessons from the United Arab Emirates and Saudi Arabia.



BOX 4.2: Artificial Intelligence Investments and Workforce Transformation Lessons from the United Arab Emirates and Saudi Arabia

United Arab Emirates and Saudi Arabia are ramping up their investments in artificial intelligence (AI) as part of broader strategies to diversify their economies beyond oil. Anchored in national visions such as the United Arab Emirates' Vision 2071 and Saudi Arabia's Vision 2030, these initiatives emphasize transforming healthcare, education, and public services, while positioning both countries as leaders in the global AI landscape.

A central element of this transformation is the commitment by both countries to invest a staggering US\$100 billion each in AI projects, making it one of the most ambitious initiatives globally. This investment is expected to create significant economic opportunities by fostering new industries, generating high-value jobs, and catalysing skills development. Both countries are already leveraging AI in critical sectors: in healthcare, for diagnostic tools and precision medicine; in education, for AI-driven personalised learning platforms; and in the public sector, where smart technologies are being deployed to improve safety, traffic management, and administrative efficiency.

These initiatives are closely linked to job creation and skills development. As AI adoption grows, demand for data scientists, AI engineers, cybersecurity experts, and digital innovators will increase. At the same time, workers in existing roles will require continuous upskilling and reskilling to adapt to the shifting nature of work. Both Saudi Arabia and United Arab Emirates are investing heavily in training programs and partnerships with universities, start-ups, and global tech firms to build a future-ready workforce.

For other OIC countries, United Arab Emirates and Saudi models provide valuable lessons. By integrating AI into national development strategies, investing in human capital, and fostering international partnerships, member states can accelerate digital transformation. Even with smaller budgets, OIC countries can prioritize targeted AI adoption in key sectors, such as health, education, and government services, while leveraging regional collaboration to share expertise and build common standards.

Source: Abouzaki (2024).

4.4 Sectoral Assessment of Employment in OIC Countries

Shifts in the global economy and rapid technological advancements are reshaping the nature of work and the skills required in today's labor markets. The rise of emerging markets, evolving trade patterns, and increasing digital connectivity create both opportunities and competitive pressures for businesses and workers. In this dynamic environment, adaptability is essential for navigating ongoing changes.

Technological progress, particularly in automation and artificial intelligence (AI), significantly boosts productivity. However, its effects on job creation and skill distribution are complex and context-dependent. While technology enhances efficiency, it may displace workers in roles reliant on manual or routine tasks, making continuous learning and reskilling critical for maintaining employability.

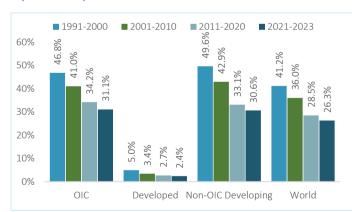
Demographic trends add complexity to this evolving landscape. In higher-income economies, declining birth rates and longer life expectancies result in aging populations and shrinking labor forces, increasing pressure to adopt automation to address workforce shortages. Conversely, many lower-income countries experience rapid labor force growth as younger generations enter the job market. In these regions, abundant manual labor may reduce incentives for heavy automation investment, potentially slowing technological change.

This section examines the evolving employment landscape in OIC countries, focusing on the impact of technological progress and demographic shifts across key economic sectors. Rather than emphasizing potential job losses from automation, the analysis highlights how sectors like agriculture, manufacturing, and services are adapting to demands driven by digitalization, workforce growth, and demographic trends. By understanding these dynamics, OIC countries can better prepare their labor markets to capitalize on opportunities from expanding working-age populations and technological advancements.

Agriculture, Forestry and Fishing

Changing climate conditions, population growth, and extreme weather events are not only putting increasing pressure on the agriculture, forestry, and fishing industries, but rapid

Figure 4.9: Employment in Agriculture, Forestry and Fishing (1991-2023)



Source: SESRIC staff calculations based on ILO Modeled Estimates, Nov. 2024.

advancements in high technology, such as Al and automation, are also driving profound transformations across these sectors.

While emerging technologies are set to enhance efficiency in agriculture, they are also expected to reduce the need for manual labour.

The impact of these innovations on agricultural employment may be particularly significant in economies that are heavily

dependent on agriculture, such as Niger, where 71% of total employment was in the agricultural sector in 2023, and in countries like Mozambique, Chad, Mali, and Uganda, where agriculture accounted for over 60% of total employment.

Over the past three decades, from the early 1990s to 2023, the share of employment in agriculture, forestry, and fishing has been steadily declining across the globe (Figure 4.9). This share in OIC countries fell from 46.8% during the 1990s to 34.2% during the 2010s and reached 31.1% by 2023. The fall in the share of employment in agriculture was more rapid in non-OIC developing countries, which fell from 49.6% during the 1990s to 33.1% during the 2010s and reached 30.6% by 2023, which is below the average of OIC countries. This share is as low as 2.4% in developed countries.

As automation and advanced technologies become increasingly accessible in OIC countries, a continued shift of employment from agriculture to manufacturing and services is anticipated in the coming years and decades. To ensure this transition is inclusive and sustainable, it is essential for OIC countries to invest in workforce upskilling, helping to mitigate potential economic and social disruptions.

Mining and Quarrying

The mining sector is currently undergoing profound transformation driven by shifting economic, environmental, and technological factors. Climate policies are pushing the industry to reduce emissions, while the growing shift toward low-carbon technologies is increasing the demand for critical minerals essential to this transition.

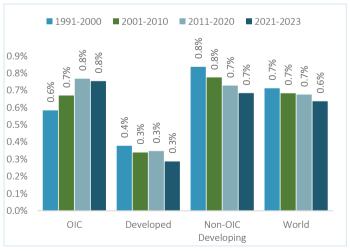
At the same time, the sector faces significant challenges, including geopolitical tensions and economic uncertainty. However, technological advancements are enhancing safety and efficiency within mining operations and enabling innovative extraction methods like deep-sea

and microbe mining, opening new frontiers for resource development.

Global employment in the mining and quarrying sector has remained consistently low and experienced a modest downward trend from the early 1990s through to 2023 (Figure 4.10). In contrast, OIC countries have seen a slight increase in employment in this sector over the past three decades.

During the 2010s, the mining and quarrying sector accounted for 0.8% of total employment in OIC countries. This could be due

Figure 4.10: Employment in Mining and Quarrying (1991-2023)



Source: SESRIC staff calculations based on ILO Modeled Estimates, Nov. 2024.

to a higher number of mining facilities in OIC countries or a lack of technological infrastructure to reduce human contribution to extractive activities.

Nevertheless, it is expected that automation will reduce the need for human resources in mining industries. Therefore, necessary policies should be developed to facilitate the movement of the labour force from mining to other productive sectors.

Manufacturing

The manufacturing sector is heavily influenced by the use of advanced technology, as many of its jobs involve routine, non-cognitive tasks that machines can easily perform. Technological advancements increase production speed, ensure consistent product quality, reduce labour costs, and minimise human error, all of which contribute to more efficient and reliable operations.

However, the high initial investment required for these technologies can slow adoption, especially in OIC countries where labour costs are relatively low. At the same time, the industry faces a demographic challenge as the workforce ages and fewer young people enter the field. This shift contributes to widening skill gaps and motivates companies to adopt more digital and automated solutions to maintain productivity and attract younger, tech-savvy workers.

OIC countries like Turkmenistan, Suriname, and Iran rely heavily on manufacturing, with manufacturing value added representing 30%, 25%, and 23% of their GDPs, respectively. Similarly, in Tunisia, Morocco, and Türkiye, manufacturing goods made up 78%, 75%, and 73% of their total merchandise exports in 2023. These economies are therefore more susceptible to automation risks in manufacturing due to their reliance on the sector for economic output and trade.

The global share of employment in manufacturing has experienced a modest yet noticeable decline, dropping from 14.9% in the 1990s to 14.3% in the 2010s (Figure 4.11).

The latest estimated average value is 14.1% for the world, 12.8% in developed countries and 15% in non-OIC developing countries. OIC countries have been employing a lower share of the labour force in the manufacturing sector compared to other country groups, mainly due inadequate capacities manufacturing industries. However, an increase has been observed since the 2000s and it reached 12.5% by 2023.

Figure 4.11: Employment in Manufacturing (1991-2023)

Although it has increased, this share remains below the average of other comparison groups. The decline in manufacturing employment in developed countries is primarily driven by technological innovations, while the growth observed in OIC countries is likely result of the expansion of labour-intensive manufacturing sectors. While this trend offers short- and medium-term advantages by helping to develop skills and enhance productivity, long-term strategies must consider the influence of advanced technologies to sustain and improve international competitiveness in manufacturing.

Utilities

The utilities sector is undergoing significant transformation as rising demand, rapid technological advances, and climate volatility reshape how it operates and invests.

The adoption of renewable energy and clean technologies is driving this change, placing strain on grid capacity due to growing electrification and the high energy needs of large data centres.

This shift also impacts related sectors such as water supply, waste management, and environmental clean-up, which are expanding to meet the demands of growing populations.

Automation is reducing the need for manual labour, but human involvement remains vital for managing, designing, and overseeing these complex systems. As the workforce ages, technology supports experienced employees and facilitates knowledge sharing.

Although automation threatens many low-skill jobs, especially in waste management, it also creates new opportunities for skilled professionals to develop innovative environmental solutions. To navigate these changes successfully, these industries must adopt new technologies while investing in retraining workers and addressing the challenges of an ageing workforce.

While utilities represent a small fraction of overall employment, their share has been gradually growing across many parts of the world. By 2023, the global average share of employment in the utilities sector reached 1% (Figure 4.12), with developed countries recording a slightly higher rate of 1.2%, and non-OIC developing countries at 0.9%.

Despite the increases over the last decades, this share remained at 1% in OIC countries. Several OIC

■ 2001-2010 2011-2020 **1991-2000** 1.4% 1.2% %8.0 1.0% 0.8% 0.6% 0.4% 0.2% 0.0% OIC Developed Non-OIC World

Figure 4.12: Employment in Utilities (1991-2023)

Source: SESRIC staff calculations based on ILO Modeled Estimates, Nov.

Developing

countries are making substantial investments in renewable energy, while others have made

notable progress in water management, leading to the development of new skills needed to

operate automated systems. However, many OIC countries still heavily rely on traditional, labour-intensive methods, especially in waste and water management. As urbanization accelerates across many OIC nations, the utilities sector will see increased employment demand in the short to medium term. Therefore, it is important to develop strategies that prepare for the sector's long-term technological and structural transformation.

Construction

The construction sector is being shaped by key factors such as urbanisation, an ageing population, digital transformation, and the transition to sustainable energy. The ageing population increases demand for age-friendly infrastructure and creates workforce challenges as experienced workers retire, leading to labour shortages.

To address these issues, the industry is adopting smart construction, which is transforming project execution from start to finish. Smart construction uses advanced technologies such as digital project modelling, lifecycle cost management, and predictive maintenance to optimise costs, manage risks, and improve capital efficiency.

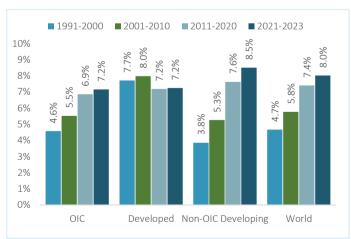
Initially regarded as an innovative concept, smart construction is gradually emerging as a valuable approach to improving efficiency and profitability in the construction sector. It also supports the industry's ability to adapt to shifting demographic and technological trends.

However, the construction sector has traditionally been slow to adopt innovation. As Bock (2015) explains, this is largely due to the complex nature of construction products, their long-life cycles, diverse dimensions and materials, and the fixed-site nature of construction activities. Looking ahead, demand for construction is expected to remain strong in the coming decades. To meet

this demand effectively, the workforce is expected need to develop new skills to work with emerging tools and technologies designed to enhance productivity and precision. The construction industry is a major employer, providing jobs for millions of unskilled, semi-skilled, and skilled workers. It attracts substantial investment and remains a key driver of economic growth, especially in the short and medium term.



Figure 4.13: Employment in Construction (1991-2023)



Source: SESRIC staff calculations based on ILO Modeled Estimates, Nov. 2024.

increasing, with the exception of developed countries. The sector currently accounts for 8% of

total global employment, including 7.2% in developed countries and 8.5% in non-OIC developing countries (Figure 4.13). In OIC countries, the construction sector's share of employment has significantly increased, rising from 4.6% in the 1990s to 7.2% by 2023.

Wholesale and Retail Trade, Repair of Motor Vehicles, Motorcycles

The retail and wholesale trade industry is currently undergoing shifts, driven by important trends that are changing how businesses operate and connect with customers.

At the heart of this evolution is digital transformation, where technologies such as automation, AI, and data analytics are streamlining operations and enhancing customer experiences.

These innovations are enabling companies to become more efficient, responsive, and personalised in meeting consumer needs. Alongside technological advancements, sustainability has emerged as a significant priority, with growing consumer demand for eco-friendly products and responsible supply chains encouraging businesses to adopt more environmentally conscious practices.

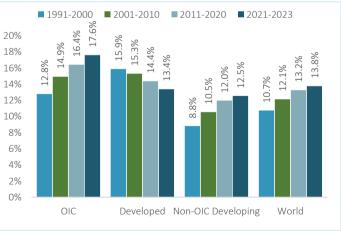
In developed economies, employment in wholesale and retail trade, including sectors such as vehicle repair, is generally declining. This trend is largely due to the widespread adoption of automation, digitalization, and the expansion of e-commerce, which collectively reduce the need for traditional retail labour. Slower population growth and market saturation in these regions further limit opportunities for job creation, reflecting a mature market environment.

In contrast, developing countries are experiencing growth in employment within wholesale and retail sectors. Rapid population growth, urbanization, and increasing incomes are driving higher consumer demand, which in turn supports the expansion of these industries. Additionally, lower

levels of automation and less developed digital infrastructure mean that wholesale and retail trade remain relatively labour-intensive, allowing for sustained job creation and economic participation.

The share of the sector has been steadily growing in OIC countries. The latest estimated average value is 17.6% in OIC countries and 12.5% in non-OIC developing countries (Figure 4.14). However, the

Figure 4.14: Employment in Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles (1991-2023)



Source: SESRIC staff calculations based on ILO Modeled Estimates, Nov. 2024.

growth and adoption of e-commerce applications is likely to influence labour market dynamics, particularly by reducing the demand for workers in traditional retail trade. This decline may be

offset by increased employment opportunities in delivery and logistics services. At the same time, in many OIC countries, the average number of motor vehicles per capita remains relatively low. As vehicle ownership continues to rise, the demand for labour in vehicle repair and maintenance is expected to remain strong.

Transportation, Storage and Communication

The transport and storage industries have been transformed by Industry 4.0, with advancements in driverless technology and cloud storage.

The automation of transportation tasks has resulted in a decline in labour share, a trend expected to continue (Autor & Salomons, 2018). For many workers who were formerly engaged in traditional industries or services, automation has inevitably led to job losses.

Digitalization, automation, and the shift toward sustainability are transforming traditional roles. Long-distance truck drivers, for example, face job displacement due to driverless technologies, while the rise of electric vehicles is creating demand for new skills in clean energy and tech-driven logistics. These changes are not limited to transport, as related sectors like information and communication are also seeing high automation risks.

However, human skills such as leadership, critical thinking, and crisis management will still be needed for roles like pilots, train conductors, and ship captains. As a result, reskilling and adaptability are becoming essential for workers to stay relevant in this changing landscape.

The transportation and communication sector has been gaining increasing significance in global labour markets, and this trend is also evident in OIC countries. By 2023, the sector reached 6.2% of total employment in OIC countries, up from 4.4% in the 1990s. This is consistent with the

average observed in other non-OIC developing countries (see Figure 4.15).

In developed countries, where information and communication technologies are more advanced and require a higher proportion of skilled labour, the sector's share reached 9.8% by 2023. In the years and decades ahead, the sector is expected to require more skilled workers in OIC countries as businesses and individuals increasingly rely on ICT systems and tools.

Figure 4.15: Employment in Transport, Storage and Communication (1991-2023)



Accommodation and Food Service Activities

The travel, tourism, and hospitality labour market is being affected by new technologies like Al, automation, smart Internet of Things devices, and biometric check-ins. These innovations help businesses run more efficiently, improve guest experiences, and simplify many processes, allowing for more personalised and convenient services.

Compared to other industries, automation has had a bigger impact on replacing human jobs with machines and algorithms, especially in accommodation and food services. For example, self-service kiosks and ordering systems in fast-food restaurants have reduced the need for servers and cashiers. Similarly, online booking services have decreased the number of hotel receptionists needed.

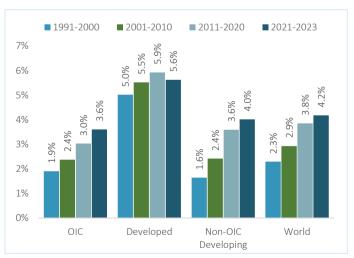
Many restaurants have also automated both food preparation and service. Technologies now let customers browse menus, read descriptions, place orders, and pay bills without human help (Ivanov et al., 2017). One exciting advancement is the use of 3D food printers, which can create unique designs and customise the nutritional content of meals (Botero-Murphy, 2016).

Additionally, robot chefs are starting to prepare popular dishes like noodles and burgers in some restaurants (Ivanov et al., 2017).

At the same time, the industry faces demographic challenges. An ageing workforce and stricter immigration rules have caused shortages of workers, especially in entry-level jobs. To tackle these problems, companies are working on ways to keep employees longer, focus on sustainable practices, and adjust to the changing needs of both workers and travellers. The demand for labour in accommodation and food service activities has steadily increased over the past three decades, reaching 3.6% in OIC countries, 4% in non-OIC countries and 5.6% in developed countries (Figure 4.16).

Although delivery service methods may become more efficient with fewer staff, particularly in developed countries, the sector is expected to remain labour-intensive for a considerable period continue to absorb a significant share of the labour force. If consumer behaviour changes significantly, leading to reduced demand for accommodation and food services or less interpersonal interaction in service delivery, policies may be needed to support the reskilling of workers in this sector.

Figure 4.16: Employment in Accommodation and Food Service Activities (1991-2023)



Financial and Insurance Activities

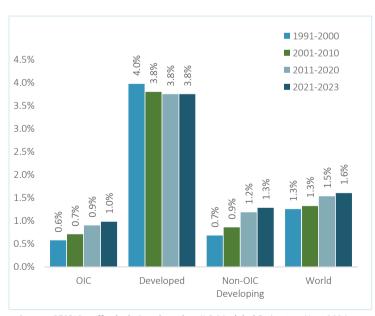
Automation has transformed not only routine tasks but also complex sectors like finance and insurance, which require extensive knowledge and information processing. Technologies such as ATMs, online banking, and mobile banking have improved the efficiency, accessibility, and user-friendliness of financial operations. These advancements have driven growth in the sector's market value, size, capacity, and outreach. Professionals in finance and insurance, including financial analysts, traders, investors, and bankers, rely on technical expertise and experience. While automation boosts productivity and creates additional value, it may reduce demand for certain roles.

Additionally, the finance and insurance industry is adapting to demographic shifts, particularly an aging population. This trend increases demand for services like retirement planning, pension management, and healthcare financing, requiring specialized roles to meet clients' needs. Concurrently, workforce retirements pose challenges for knowledge transfer and talent retention. In response, financial institutions are prioritizing workforce renewal, offering upskilling opportunities, and adopting age-inclusive employment strategies. Employment in financial and insurance activities tends to be higher in developed countries, where the sector is more advanced, accounting for 3.8% of total employment. In contrast, this share is lower in OIC countries at 1.0%, and 1.3% in non-OIC developing countries, as illustrated in Figure 4.17.

In developed economies, job growth in the sector has levelled off, largely financial services are already well established and increasingly automated. Meanwhile, employment in the sector is on the rise in developing countries, where financial systems are still expanding to serve individuals and businesses that previously lacked access to such services.

As a result, OIC countries are likely to see further job creation in the finance sector in the near to medium term. Nonetheless, the long-term impact of automation may reduce the need for workers in certain roles.

Figure 4.17: Employment in Financial and Insurance Activities (1991-2023)



Real Estate, Business and Administrative Activities

The real estate sector has become a cornerstone of the global economy, reaching a total value of \$379.7 trillion in 2022, nearly four times the global GDP of \$100.6 trillion (WEF, 2024). With its immense value, the real estate sector is attracting a growing labour force, encompassing diverse roles that vary in their susceptibility to automation.

Nearly half of the tasks in the real estate sector are estimated to be automatable (Dengler & Matthes, 2015). The adoption of technologies such as robotics, AI, and machine learning is transforming industry operations. These advancements drive significant structural changes, potentially displacing jobs, particularly in routine tasks, while emphasizing the need for workers to develop new skills. Balancing human expertise with technological innovation is essential to maintain a relevant and value-creating workforce in the evolving digital landscape.

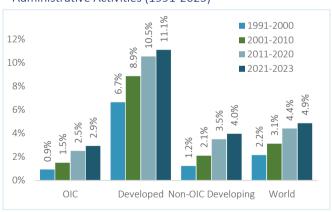
The future of employment in the professional, scientific, and technical activities sector hinges on workers' skills and their exposure to automation risks. This sector encompasses diverse activities requiring scientific or technical expertise, with tasks involving reasoning and decision-making less susceptible to automation.

Similarly, roles in administration, support services, and management are expected to grow in importance, relying on social skills and adaptability to the changing work environment. Future

managers and administrators will require specialized knowledge and skills to effectively navigate organizations through a complex and dynamic landscape.

The share of employment in real estate, business, and administrative activities has been steadily increasing worldwide. This sector is especially prominent in developed countries, where its share of total employment reached 11.1% by 2023 (Figure 4.18).

Figure 4.18: Employment in Real Estate; Business and Administrative Activities (1991-2023)



Source: SESRIC staff calculations based on ILO Modeled Estimates, Nov. 2024.

OIC countries have also seen

growth in their share of employment, rising from 0.9% in the 1990s to 2.5% in the 2010s. By 2023, this share increased further to 2.9%, compared to a global average of 4.9%. The demand for skilled jobs in real estate, business, and administrative activities is closely linked to a country's income level, with higher-income countries requiring more skilled labour. As OIC countries develop and organizations become more advanced, the need for such skills will grow, while the impact of automation and digitalization on these jobs is expected to remain limited.

Public Administration and Defence

Technology has significantly transformed the public administration and defence labour market, primarily by automating routine office and administrative tasks. Governments worldwide are increasingly adopting e-government platforms to enhance governance and improve the delivery of public services through digital technologies.

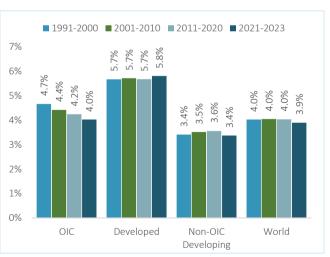
Mobile technologies further support this transformation by enabling remote access to education, healthcare, and social services, particularly benefiting disadvantaged groups, including those in rural areas.

Despite these advancements, automation is expected to continue reshaping the public administration sector, with estimates indicating that around 20% of jobs could be automated. Positions requiring lower levels of education and skills are especially at risk of being replaced by automated systems (ILO, 2020).

In contrast, the defence sector has long been a centre of technological innovation and is expected to continue developing advanced systems and devices. To keep pace with this evolution, the industry will require a comprehensive workforce strategy aimed at attracting, upskilling, and retaining diverse talent equipped with digital competencies such as AI and data analytics, which are essential for creating modern defence platforms. However, concerns are growing about the use of AI in public administration and defence, particularly in relation to ethical and governance challenges (WEF, 2019).

Public administration accounts for a significant share of wage employment globally. While this share has remained relatively stable in developed and non-OIC developing countries, it has been gradually declining in OIC countries when considering employment in public administration, defence, and compulsorv social security combined. Although the decrease is modest, it is still noteworthy, dropping from 4.7% in the 1990s to 4.2% in the 2010s. with the most recent data indicating a further decrease to 4% by 2023 (Figure 4.19).

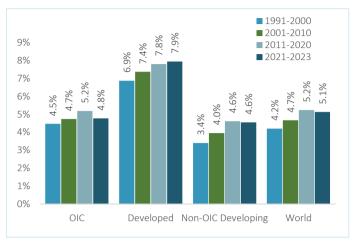
Figure 4.19: Employment in Public Administration and Defence; Compulsory Social Security (1991-2023)



Education

Digitalization and the rise of eLearning platforms transforming education systems globally. Automation and digital tools enhance both educational quality students' access to learning opportunities. Educators and institutions must increasingly adopt innovative technologies and methods to effectively meet students' needs. According to the WEF (2025), education-related roles, such as university lecturers and

Figure 4.20: Employment in Education (1991-2023)



Source: SESRIC staff calculations based on ILO Modeled Estimates, Nov. 2024.

secondary school teachers, are expected to be among the largest sources of job creation globally over the next five years, primarily driven by expanding digital access and a growing working-age population.

From the 1990s to the 2010s, employment in the education sector grew worldwide. In OIC countries, the share of education employment peaked at 5.2% during the 2010s before declining to 4.8% by 2023 (Figure 4.20).

In comparison, developed countries saw a higher share of 7.9% by 2023, while non-OIC developing countries have maintained a stable rate of 4.6% since the 2010s. Although the average in OIC countries is close to the global average, the need for expanding the education sector remains critical. This is due to the growing demand for skills upgrading in response to the fourth industrial revolution and digital transformation, as well as the relatively high pupil-to-teacher ratios in OIC countries (SESRIC, 2023b). To address these challenges, OIC countries must invest in hiring more teachers and education professionals; while also ensuring they are trained in the latest digital tools and modern teaching methods.

Human Health and Social Work Activities

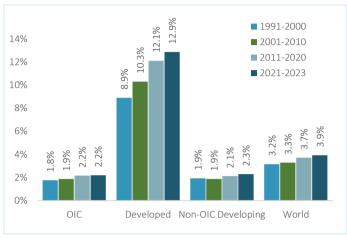
Advancements in technology, especially AI, are transforming the healthcare sector and its workforce by automating routine tasks, improving operational efficiency, and allowing healthcare professionals to devote more time to patient care. While healthcare workers generally do not fear AI replacing their jobs, they express concern about AI systems being developed and implemented without their input (OECD, 2024).

Moreover, certain occupations within the sector, such as nurses and dentists, have relatively low automation potential, with under 30% for nurses and only 13% for dentists (Chui et al., 2016), which underscores the continued need for skilled human labour.

Furthermore, the persistent shortage of healthcare personnel highlights the crucial role of human resources in the sector. Nevertheless, some tasks, such as food preparation and data entry, are more easily automated and could improve efficiency, particularly in countries with limited healthcare infrastructure and resources.

With the increasing prosperity and demand for better health services, the number and share of health and social workers are

Figure 4.21: Employment in Human Health and Social Work Activities (1991-2023)



Source: SESRIC staff calculations based on ILO Modeled Estimates, Nov. 2024.

increasing all around the world. Improved health infrastructure in both urban and rural areas, as well as accessibility to health services in geographically and economically disadvantaged regions, have forced governments to train more health workers to meet the growing demand for health services. The share of employment in this sector has been increasing globally, reaching an average of 3.9% by 2023. However, this number remained lower at 2.2% in OIC countries and 2.3% in non-OIC developing countries, despite improvements over the past decades. Meanwhile, developed countries with their advanced capacities in social services have a significantly higher employment share of 12.9% in this sector(Figure 4.21).

Other Services

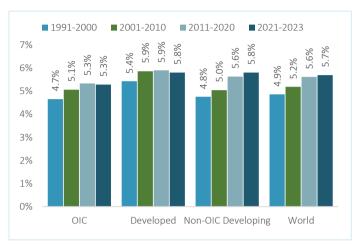
Compared to agriculture and manufacturing, the services sector is less affected by automation overall, although automation risk varies significantly within the sector. Jobs in courier services, land transportation, and food delivery are highly susceptible to automation, while other service areas face lower risks.

The arts, entertainment, and recreation sector is expected to benefit from Industry 4.0, creating opportunities for highly educated individuals, skilled artisans, and roles driven by technological innovation. In contrast, domestic work in household services remains less automatable due to its reliance on low-paid, manual labour.

Meanwhile, digitalization and technological progress are fostering new occupations across the services sector, including brand managers, data analysts, online legal advisors, virtual consultants, and personal coaches, reflecting the sector's ongoing transformation in response to

emerging technologies. The combined share of employment in these service activities has been rising in all country groups except developed countries. According to the latest data, OIC countries recorded the lowest share at 5.3%, compared to the global average of 5.7%, while both developed and non-OIC developing countries reported an equal share of 5.8% (Figure 4.22).

Figure 4.22: Employment in Other Services (1991-2023)



Source: SESRIC staff calculations based on ILO Modeled Estimates, Nov. 2024.

Overall, employment has declined in only three sectors in OIC countries. reduction The agriculture, forestry, and fishing aligns with global trends, while declines in public administration and defense contrast with increases in other groups. country In education, employment grew steadily for three decades but slightly declined after 2020, unlike other country

groups. Conversely, employment shares in all other sectors have increased in OIC countries.

These increases generally align with global trends, except in manufacturing and mining, where employment has decreased in other country groups. The growth in wholesale and retail trade employment mirrors trends in non-OIC developing countries but contrasts with declines in developed economies. An annex table (Annex 2) is included in the report to complement discussion in this chapter, providing details on the characteristics of emerging global sectors.

Chapter 5

PLANNING FOR THE NEXT GENERATION OF JOBS AND EMPLOYMENT

The report provides an analysis of the structure of the labour market and discusses several labour market issues relevant to OIC member countries. It assesses labour market participation, labour force composition, skills, productivity, income, social protection, and transformations in skills and labour markets, including drivers and disruptors of labour markets driven by a rise in automation and the impact of Generative AI on productivity.

In light of significant transformations and disruptions that emerging technologies and automation bring to the job market, it is imperative for OIC countries to prepare for the future of work. They can mitigate the potential negative impacts of these changes and harness the opportunities they present by proactively equipping individuals with the necessary skills and capabilities. Being prepared for the future of work ensures that individuals remain employable and adaptable in a rapidly evolving labour market. By developing the right skill sets, such as critical thinking, problem-solving, digital literacy, and creativity, individuals can position themselves for new job opportunities and career pathways. Additionally, acquiring these skills enables individuals to navigate the digital landscape, participate in the digital economy, and access remote work opportunities. It empowers workers to be resilient in the face of job displacement and encourages lifelong learning and upskilling to stay relevant in their fields.

From a broader perspective, preparing for the next generation of work is crucial for overall economic growth and societal well-being. Countries that prioritize the development of skills and adapt their labour markets to technological advancements will be better positioned to attract investments, foster innovation, and remain competitive in the global economy. Moreover, being prepared for the future of work helps reduce inequality and social disparities. It ensures that all segments of society have access to quality jobs and the opportunity to participate in the digital transformation, preventing a deepening of the digital divide. Instead of focusing solely on the sheer number of jobs created or lost, the focus should be on adapting to the changing nature of work.

Thus, recognizing the critical importance of preparing for the future of work for individuals, societies, and economies, this section highlights the main challenges and opportunities arising from adaptation to new economic dynamics and provides guidelines for OIC countries to better prepare for this transformation.

5.1 Challenges and Opportunities

Digitalization, automation, and generative AI present both challenges and opportunities. These innovations have implications for how work is performed and its outcomes. They have transformed and will continue to transform existing jobs and create new ones, such as those in maintenance, programming, data science, and AI support services.

Conversely, the increasing trend to replace human labour with technologies like robotics and generative artificial intelligence has the potential to reduce the demand for labour and increase the capital share of income. This means that these innovations can disrupt the demand for human labour, leading to job loss, displacement, and obsolescence. Workers will need to develop new skills and adapt to technological advancements to remain relevant in the labour market. Particularly, upskilling will be critical for workers this transition countinues and new advancements arise. For policymakers, managing the adoption and integration of technological innovation to increase output while creating decent employment opportunities will be key to averting negative trade-offs.

It is important to note that as technology rapidly evolves, certain factors hinder or delay the adoption of automation and other technological advancements. Key among these factors is technical feasibility, as the necessary technology must be developed, integrated, and adapted for specific activities. The cost of developing and operationalizing technology, labour market dynamics (including demand, availability, and cost of labour), return on investment, and regulatory and social acceptance are important factors that affect automation. Skills availability related to the development of innovative technologies, challenges in developing employee skills, employee absorptive capacity, and innovativeness (driven by the desire or commitment to reduce costs or improve existing products and processes) also hinder technological adoption. Considering these factors, it is expected that it will take decades for the full effects of automation on current work activities to unfold (MGI, 2017). Even if the impact is expected to be gradual at a macro level within sectors or economies, individual workers or companies can feel the impacts of automation-driven disruptions more rapidly.

Challenges

OIC countries are facing several challenges when it comes to adapting to the increasing digitalization in the workplace. Acording to SESRIC (2023a), there are significant disparities among individual OIC countries in terms of access to digital technologies. While the challenges may vary depending on the specific context, common issues include the digital divide, skills gaps, the informal economy, regulatory environment, limited fiscal space, socioeconomic inequalities, and cybersecurity concerns.

Heightened Global Uncertainty: Economic uncertainty has been high in 2025, largely shaped by geo-economic realignments and trade-related disruptions. Changes in tariffs are disrupting supply chains and increasing inflation expectations across regions. The weakening of the global

economy in 2025 due to these factors has important implications for global employment prospects, as lower economic growth is likely to translate into slower employment growth in the short term. The recent shift in global trade dynamics, which has increased trade uncertainty, is a major driver of slower labour market prospects. The decline in global economic growth is anticipated to result in a decline in global employment growth by approximately 7 million workers (ILO, 2025), either through a decrease in labour force entrants or layoffs. Workers in member countries with high export dependency on the U.S. may be vulnerable to a high risk of job loss due to higher tariffs.

High Levels of Inactivity: Despite a labour force participation rate in OIC member countries, inactivity, particularly youth inactivity, remains a major concern (see Figure 1.10). Since youth comprise a large proportion of the population in member countries, drastically reducing youth inactivity should be prioritized at organizational and country levels. This would not only contribute to harnessing the potential of youth but also drive economic growth. Furthermore, curbing youth inactivity would contribute to overall stability by decreasing social fragility, a major driver of labour market transformation.

Digital Divide: One of the most critical challenges facing OIC countries is the digital divide. They often struggle with limited access to affordable and reliable internet connectivity, as well as a lack of digital infrastructure. This creates disparities in access to technology and digital skills among different segments of the population, particularly between urban and rural areas. The digital divide is not just limited to spatial differences, but also becoming more prominent among workers of different age groups. The rapid advancements in digital technology often put older workers (aged 55 and above) at a disadvantage, as they are less likely to adapt to new technology. Bridging this divide is crucial to ensure equal opportunities for individuals and businesses to participate in the digital economy. In the OIC group, some countries, particularly in sub-Saharan Africa, have extremely low levels of internet usage, necessitating significant investment in infrastructure and skills.

As more decent jobs are created in the data, information, and technology sectors, and considering thier contributions to national output, countries deficient in digital infrastructure and skills will have fewer job opportunities for emerging roles. This is due to investors' hesitancy to invest in these countries, which limits the potential benefits of these sectors contributions to national economic growth. New technologies are more likely to be deployed earlier in advanced economies, giving workers in these economies a competitive advantage. Increasing digital skills and capacities in member countries would be an important factor for local competitiveness across multiple sectors. For instance, the rise of e-commerce could displace retail workers, while firms in countries with poor digital infrastructure and skill gaps could widen their talent pool beyond national borders to rely on remote workers. This could potentially oversaturate the local labour market eith these skills. Therefore, scaling up digital capacities and skills and putting in place regulatory and supportive mechanisms for place-based work policies will increase workforce resilience to rapidly evolving jobs and provide protection against displacement risk.

Skills Gap and Mismatch: Another major challenge hindering OIC countries from reaping the benfits of digital transformation is the presence of skills gaps and inadequate education. Digital tools and technologies require higher skills and qualifications, yet, as shown in Figure 2.4, the average skill level in OIC countries falls well below that of developed countries. Many OIC countries face challenges in providing quality education and vocational training that can equip individuals with the necessary digital literacy and technical skills. Therefore, OIC countries need to address skills gaps to ensure that their education and training systems are aligned with the demands of the digital age. Enhancing the education system to promote digital skills and lifelong learning is essential to prepare the workforce for the evolving job market.

Skills mismatch is also a major concern in the wake of rising automation, as it often requires a different set of skills than those traditionally needed by labour-intensive industries. The widening gap between skills required by the automated job market and those possessed by the workforce poses a challenge that hampers workers' employability and their ability to capitalise on emerging job propects. Similar to digital transformation, rising automation requires comprehensive efforts in education and training to equip individuals with the essential skills for the future of work.

Job Displacement and Unemployment: An inadequate response to the rising digitalization and automation may lead to significant job displacement and unemployment, particularly in sectors where routine and repetitive tasks can be easily automated. A large portion of the workforce in OIC countries is employed in labour-intensive industries, such as agriculture and low-technology-intensive manufacturing (see Figure 2.7), which are vulnerable to automation. Job losses in these sectors can have a major impact on workers' employment and income. Even sectors with low workforce concentration, such as the finance sectorcould be at risk, as innovation and technology adoption rates in this sector have been rapidly growing, as seen in the rise of the fintech industry. This shift is likely to significantly reduce the share of the workforce in the finance sector, especially for those lacking technological skills and data science competencies. This is due to the rapid automation of traditional finance skills, the broadening of talent pools beyond national borders, and the concentration of the fintech industry's development in advanced economies.

Without adequate policy measures, digitalization can worsen existing inequalities within societies. The lack of access to technology, skills, and opportunities for disadvantaged and vulnerable communities, including women and rural populations, can further widen the socioeconomic divide.

Limited Fiscal Space and Lack of Enabling Environment for Investment: Another challenge arises in the realm of digital transformation and the adoption of advanced robotics, which require significant investment in infrastructure development. However, limited fiscal space and a lack of an enabling environment for foreign investment impeded the adoption of digital technologies and investments in digital infrastructure. This in turn, leads to restricted access to capital for technological advancements and research and development. Similarly, limited access to advanced automation technologies constitutes one of the major challenges in OIC countries. As

discussed in the previous chapter, there is growing investment in advanced robotics, mainly driven by advanced economies and China. In order to prevent productivity losses resulting from the limited adoption of automation, OIC countries need to invest in technology infrastructure, promote technology transfer, and support access to affordable automation solutions.

Regulatory Environment and Cybersecurity: Current challenges faced by OIC labour markets, such as the informal economy, lack of social protection, and inadequate access to formal training opportunities, are likely to affect the transition of the labour force to the future of work. Policymakers in developing countries seek to attract, retain, and expand FDI stock to create more formal sector jobs. To facilitate inward FDI flows, governments undertake reforms to simplify their trade and investment policy regimes, improve the business environment, and offer investment incentives. The desire to lure foreign investors may pose challenges in regulating labour market institutions, exposing workers to lower wages and inadequate social security coverage. This requires supportive policies and a regulatory environment to overcome. Governments need to develop agile and adaptive policies that promote automation adoption while safeguarding workers' rights and ensuring fair labour practices. Moreover, issues such as data protection, cybersecurity, intellectual property rights, and e-commerce regulations require attention from governments to provide a conducive environment for digital businesses while ensuring privacy and security. It is particularly important to address cybersecurity, including digital fraud and privacy concerns, that emerges as a result of increasing reliance on digital technologies, which can otherwise hinder trust in digital systems and the adoption of new technologies.

Addressing these challenges requires a comprehensive and coordinated approach involving investments in digital infrastructure, education and skills development, policy reforms, public-private partnerships, and targeted support for vulnerable populations. Collaboration between policymakers, private sector representatives, educational institutions, and civil society is also critical. International cooperation and knowledge-sharing can also play a vital role in helping developing countries overcome these challenges and leverage the potential of digitalization and automation in the workplace.

Opportunities

While policy measures are necessary to address the challenges within the changing global economic landscape, it is also crucial to consider the significant opportunities in policy design.

Leapfrogging: Many OIC countries lack access to traditional infrastructure for manufacturing and technology development. With the spread of advanced technologies, they have the opportunity to leapfrog traditional infrastructure development and directly adopt the most recent technologies. This allows them to bypass outdated technologies and systems, enabling faster implementation of digital solutions and greater efficiency in sectors such as telecommunications, energy, transportation, and healthcare. For example, many African and Asian countries never established a landline telephone system; instead, they directly embraced mobile technology (UNDP, 2017).

To realize leapfrogging in the context of digitalization and automation, OIC countries need to prioritize the expansion of mobile and internet technologies, ensuring widespread access to affordable connectivity for individuals and firms. It is also crucial to invest in digital skills and literacy. This would require integrating digital literacy programs into education systems and offering training and vocational programs. Promoting innovation and entrepreneurship, fostering public-private partnerships, developing digital payment systems, prioritizing digital government services, and creating a favorable policy environment are also important strategies to capitalize on emerging technologies and leapfrog traditional development pathways. By implementing these measures, OIC countries can unlock the transformative potential of digitalization and automation and propel their economies forward.

Leapfrogging must be carried out in a coordinated manner to avoid the regulatory challenges discussed earlier. Accordingly, adopting new technologies in the absence of traditional infrastructure must be done in conjunction with the formulation of regulatory frameworks or set upon adoption. This would address the negative spillover effects of adopting new technologies.

Industrial Upgrading and Economic Diversification: Automation and robotics offer OIC countries the opportunity to upgrade their industrial sectors, increase productivity, and enhance their competitiveness in global markets. It also opens up possibilities for them to diversify their economies and venture into new industries and sectors. If managed successfully, they can leverage automation technologies to foster innovation, drive research and development, and create solutions that address local challenges. This can contribute to economic growth, technological advancement, and the development of knowledge-based industries. Naturally, this will have implications for labour markets. Automation will replace certain repetitive and low-skilled jobs, but it can create new job opportunities with a different set of skill requirements. To this end, OIC countries need to focus on skill development programs to equip their workforce with the necessary technical, analytical, and problem-solving skills needed to operate, maintain, and innovate with automation technologies. This can lead to higher-skilled employment and improved labour market outcomes.

Smart Agriculture and Rural Development: Some OIC countries are facing significant challenges in promoting rural development, but digital technologies offer opportunities for enhancing agricultural productivity and rural development. Given the importance of the agricultural sector in many OIC countries, solutions such as precision farming, remote sensing, and digital platforms for market access can enhance agricultural practices, increase yields, and connect farmers with buyers. These advancements in agriculture contribute to food security, income generation, and poverty reduction in rural areas. To achieve this, necessitates ignificant investment in rural digital infrastructure, including internet connectivity and mobile networks, to enable access to information, educational resources, and financial services by rural communities, thereby bridging the urban-rural divide.

Inclusive Growth and Development: Digitalization has the potential to drive inclusive development by enhancing access to education, healthcare, financial services, and information for disadvantaged populations. It enables remote work opportunities, reducing geographical barriers and providing employment options for individuals in rural areas. Digitalization can also create

new job opportunities and promote entrepreneurship by fascilitating the emergence of digital startups, online platforms, and service-based industries. Moreover, the integration of automation technologies can help OIC countries optimize resource utilization and enhance sustainability in sectors like agriculture, energy, and transportation. To this end, OIC countries need to create an enabling environment that fosters innovation and technology adoption, encourages entrepreneurship, empowers small businesses, and prioritizes digital inclusion to fully leverage the potential benefits of digitalization and technological advancements.

Improved Government Efficiency and Social Services: Digitalization enables governments in OIC countries to enhance service delivery, improve transparency, and engage with citizens more effectively. E-government initiatives, digital identity systems, and online service platforms streamline administrative processes and enhance access to public services. Digitalization also contributes to transparency, accountability, and good governance by increasing public trust. Similarly, automation can be utilized in social services to improve the efficiency of public service delivery, such as automated systems for social welfare and beneficiary management. By leveraging advanced technologies, OIC countries can enhance the quality and accessibility of public services, promote citizen participation, and improve overall governance, leading to more effective and responsive governments.

There are also other opportunities emerging from the changing global economic landscape. International trade and improved communication technologies have been facilitating knowledge transfer among countries, but digitalization boosts this trend by making information and advanced technologies more accessible. Moreover, online platforms and digital marketplaces allow businesses to reach a wider customer base and engage in international trade without traditional barriers of distance and logistics. This opens up opportunities for export-oriented industries, small businesses, and entrepreneurs to connect with customers and expand their market presence.

Evidently, there are significant opportunities that come with the digitalization and automation of workplaces. To seize these opportunities, OIC countries need to invest in infrastructure, education, and skills development, foster innovation ecosystems, and create supportive policies and regulations. They should also prioritize collaboration and partnerships with technology providers, international organizations, and other stakeholders to leverage global knowledge and expertise in digitalization, automation, and advanced robotics.

5.2 Getting Prepared for the Future of Work

Previous analyses have highlighted the increasing significance of digitalization and automation in global economies as well as emergence and decline of certain skills. The discussion on challenges and opportunities associated with the growing integration of digital and automated technologies in economic activities have also provided important insights into the challenges OIC countries face in adapting to the new environment. The economic, social, and demographic structures of

individual OIC countries show distinct characteristics, making it difficult to provide one-size-fitsall policy recommendations. However, based on common challenges and emerging opportunities, the following recommendations should be considered to help OIC countries prepare for and adapt to the changing workforce.

Planning, Monitoring and Evaluation: OIC countries primarily need to develop strategic workforce planning. To inform the decision-making process, it is essential to have access to the most recent data and information on factors affecting labour markets.

- (a) Understand changing workforce dynamics in relation to emerging jobs, sectors, and the relevance of skills (in-demand, obsolete, and redundant) for such emerging jobs. Understand current trends in workforce supply and demand, identify gaps in certain jobs, sectors, and skills, and predict the measures needed to close those gaps.
- (b) Establish labour market information systems to collect and analyze data on employment trends, skills gaps, and future job prospects.
- (c) Support research and analysis on the impact of automation, digitalization, and robotics on the labour market.
- (d) Use evidence-based policymaking to inform decision-making and prioritize interventions.
- (e) Regularly monitor and evaluate the progress of initiatives and policies related to the future of work.
- (f) Adapt strategies as needed based on emerging trends, challenges, and opportunities.
- (g) Provide career and education counseling in accordance with labour market trends.
- (h) Policymakers often target the creation of new jobs; however, there is a need to ensure that newly created jobs provide quality employment (offering decent jobs and working conditions). Integration of informal markets into formal markets and the extension of social protection coverage to vulnerable workers should be prioritized for greater output and workforce resilience through safety nets. With a high proportion of this category of workers in many member countries, monitoring employment conditions would be important in ensuring that labour markets create opportunities for decent work, as opposed to informal and lower-quality employment.

Skills Development and Education: Guided by strategic workforce planning, OIC countries should enhance the quality and relevance of education and training systems to equip individuals with the necessary skills for the future job market. This includes promoting digital literacy, critical thinking, problem-solving, creativity, and entrepreneurship. Special emphasis should be given to vocational training programs to provide practical skills aligned with emerging industries.

(a) Promote digital literacy as well as science, technology, engineering, and mathematics (STEM) education from early childhood to higher education to cultivate a talent pool with the skills required for emerging industries.

- (b) Prioritize digital skills development, including coding skills, data analytics, AI expertise, and cybersecurity know-how, to meet the demand for jobs in the digital economy.
- (c) Invest in vocational training programs that focus on relevant skills for emerging industries.
- (d) Encourage lifelong learning: In a constantly changing labour market, entry-level workers and those already employed must be willing to acquire new skills to remain competitive and employable. According to data from the WEF, by 2025, 39% of workers' existing skills will be transformed or become outdated within the next five years. Adult learning and training programs are important in addressing new skill requirements driven by technological change. Fostering an environment for lifelong learning and adult training is crucial in enhancing new skill acquisition. Evidence shows that work-related training can minimize the gap between skills acquired during formal education and those required on the job and decrease skills mismatch (Adalet McGowan & Andrews, 2017). Therefore, for workers and their talents to remain relevant, displaying agility and adapting to emerging skill sets will be an important determinant of employability. However, public policies related to lifelong learning (adult education and training) programs should focus on increasing the participation of low-skilled workers in these programs.
- (e) Foster public-private partnerships to align education and training with industry needs.
- (f) Encourage skill transferability and portability within workplaces and across spatial domains toward occupations and regions where there is high demand for fast-growing jobs.
- (g) Educational policies should target skills obsolescence in fast-evolving fields where curricula often fall behind rapidly changing industry demands.
- (h) Member countries undergoing a transition from lower-skilled to high-skilled jobs due to demand in technology-related jobs need to proactively manage this shift to ensure that the adoption of technology and automation (specifically Generative AI) promotes the creation of decent jobs for all. This underscores the need to formulate policies that support structural transformation and create more diverse job opportunities.

Industry and Sector-Specific Strategies: Workforce strategy should be complemented by overall economic strategies. Given the changing nature of international economic relations and production systems, it is critical for OIC countries to identify industries and sectors with growth potential in their own context and align education and training programs to meet sector-specific skills needs.

- (a) Promote diversification of the economy by identifying and targeting strategic sectors with growth potential.
- (b) Engage with industry leaders, conduct labour market analyses, and develop targeted strategies to promote job creation and skill development in these areas.
- (c) Facilitate trade and investment and enhance regional and international economic integration to access new markets and opportunities.
- (d) Promote the development of sustainable and green industries, such as renewable energy, clean technology, and circular economy practices.
- (e) Redeploy internal talent: In economies where a higher number of jobs fall within the declining job category due to disruptive technologies, retaining workers through reskilling and upskilling into fast-growing areas should be considered to protect job security. Upskilling will align workforce capabilities with current and future workforce demands.

Regulatory and Ethical Policies, and Worker Engagement: As technology rapidly evolves, OIC countries should adopt flexible regulatory frameworks that can adapt to emerging trends. This includes addressing issues related to data protection, privacy, intellectual property rights, and cybersecurity. Governments should also establish policies that promote worker engagement in the face of job destruction and creation.

- (a) Review and update labour laws and regulations to ensure they are flexible and adaptable to changing work arrangements.
- (b) Develop regulations and ethical guidelines to address emerging issues such as data privacy, Al ethics, and cybersecurity.
- (c) Encourage responsible and ethical use of technology to protect workers' rights and prevent exploitation.
- (d) Encourage social dialogue and collaboration between employers, workers' organizations, and the government to address emerging labour market challenges. e. Labour income shares, i.e., the total income earned by workers in a given economy as a share of GDP, have been declining. To ensure that the benefits of economic growth are equitable, inclusive, and shared, it is important to strengthen labour market institutions. Regulatory frameworks that hold labour market institutions accountable for adhering to workers' rights and collective bargaining are essential in increasing workers' earnings and decreasing the prevalence of cheap labour.

Innovation and Entrepreneurship: Recognizing that the transformation of economic activities will bring new job and business opportunities, it is critical to encourage entrepreneurial ecosystems by supporting startups, fostering innovation hubs, and promoting entrepreneurship education. This will help create job opportunities, drive local innovation, and nurture a culture of creativity and risk-taking in the era of digitalization and automation.

- (a) Foster an environment conducive to innovation by establishing innovation hubs, incubators, and technology parks.
- (b) Provide financial and non-financial support to startups and SMEs, including access to capital, mentorship, and business development services.
- (c) Simplify regulatory processes and reduce bureaucratic hurdles for starting and scaling businesses.
- (d) Encourage multilateral and bilateral partnerships and collaboration to facilitate technology transfer.

Labour Market and Social Protection: In order to support workers during the transition to the future of work, governments should establish or strengthen their social safety nets, including unemployment benefits, income support, and retraining programs for those affected by automation or job displacement.

- (a) Implement flexible labour market regulations that accommodate changing work arrangements, such as part-time work and remote work.
- (b) Strengthen social protection measures to provide a safety net for workers, including unemployment benefits and access to healthcare.
- (c) Enhance workers' rights and ensure fair wages, safe working conditions, and protection against discrimination.
- (d) In countries where social protection coverage is limited, extending it to cover small business owners, self-employed individuals, and own-account workers should be considered. By providing a sense of security and stability, social protection measures contribute to the overall welfare and economic stability of workers, fostering social cohesion.

Digital Infrastructure and Connectivity: An important factor in reducing the digital divide is improving digital infrastructure and connectivity. Governments should invest in robust digital infrastructure to ensure that individuals and businesses can effectively participate in the digital economy. This enables individuals to have better access to online learning resources, digital tools, and remote work opportunities.

- (a) Invest in the development of affordable and reliable digital infrastructure, including broadband connectivity.
- (b) Bridge the digital divide by expanding access to digital tools for people in remote and rural areas.
- (c) Provide support for the adoption of digital technologies by businesses, including tax incentives and subsidies.



BOX 5.1: Leading Al Dominance, Bridging Innovation Gaps

United Arab Emirates, as one of leading global investors in the technology industry, is strengthening its position in the competition for control of AI technologies. Leveraging investment in AI technologies and infrastructure, it has become a leading actor in the development of AI models. The country has prioritised investment in AI development to boost economic growth and serve critical sectors such as government, education, health, renewable energy etc. The United Arab Emirates through its Technology Innovation Institute (TII), a subsidiary of the Advance Technology Research Council, created Falcon, an advance artificial intelligence program capable of generating human-like text. As AL models remain largely propriety, Falcon is a free and open source model that can be used and modified for free allowing business, schools and government users to optimise output. Newer version such as Falcon Arabic and Falcon-e have been launched by the TII for language processes and energy efficient usage respectively. This has contributed to a shift in the concentration of AI technology development in advanced economies, narrowing digital divide and boosting economic growth.

Furthermore, most recently, the country has intensified its quest to build data centers to power its AI programs by partnering with leading industry players such as Open-AI, Microsoft and oracle. In May 2025, the country announce a multimillion-dollar investment program to build the largest AI infrastructure center outside the United States. The AI Campus which will house Stargate UAE will be built and maintained by G42, a state backed technology firm in partnership with OpenAI, NVIDIA, Oracle, Cisco, and SoftBank. Thus, there is concerted effort in the UAE to not only build technological infrastructure and enhance its usage in critical sectors for economic return, but also to solidify its position as a leading player in AI and AI-related technologies.

Demographic Opportunities and Potential of Youth: The youth population in OIC countries presents a unique opportunity to tap into the emerging opportunities associated with rising digitalization and automation. To harness the potential of youth in developing countries amidst rising digitalization and automation, young people should be equipped with the necessary technical skills, critical thinking abilities, and adaptability to navigate the digital landscape. This will ensurethey can seize employment opportunities, contribute to innovation, and actively participate in the digital economy.

- (a) Prioritize digital skills development for youth by integrating digital literacy programs into school curricula, offering specialized training programs, and promoting online learning platforms.
- (b) Provide mentorship and entrepreneurship support to youth to empower them to establish their own digital ventures and leverage technology for social and economic impact.

- (c) Ensure political stability: As highlighted in the World Economic Forum's The Future of Jobs Report, 2025, geopolitical stability is one of the main drivers transforming the labour market. Theerfore, it is essential to perioritise fostering social cohesion and stability.
- (d) Amid slower employment growth due to uncertainty, effective public employment schemes could help support job seekers in countries looking to stabilize their labour markets. Exploring alternative trade markets could help reignite exports and thus create jobs for workers dependent on global supply chains.

Collaboration and Partnerships: Fostering collaboration between governments, development partners, private sector organizations, educational institutions, and civil society is critical in addressing the challenges and opportunities of the future of work. This involves developing policies, sharing resources, and creating platforms for dialogue and knowledge exchange.

- (a) Foster collaboration between government, industry, academia, and civil society to identify emerging job trends, skills needs, and labour market gaps.
- (b) Engage in regional and international partnerships to share knowledge, best practices, and resources.
- (c) Participate in global initiatives and platforms to influence international policies and standards related to the future of work.
- (d) Integrate the principles of sustainable development, such as environmental sustainability and social inclusion, into strategies for the future of work.
- (e) Provide in-house training and work placement programs to offer greater exposure to emerging jobs and pave the way to the right career path.

Improving public education systems has been highlighted as a perceived and important public policy priority area (WEF, 2025). Member countries should design and realign education and training programs to match job availability and demand, aiming to attract potential talent pools toward jobs of the future and top-hiring sectors. This will significantly reduce the mismatch between acquired training and skills and those required by in-demand jobs while increasing the proportion of the workforce in decent jobs, as newly created jobs often come with incentivized remuneration.

Despite the rapidly evolving jobs in labour markets and the transforming skill sets required to adapt to these changes, skills such as critical thinking, problem-solving, and collaboration remain important in high-work environments. Since innovation and technological development are driven by human ingenuity, it is important to put human labour at the forefront of the future of jobs.

In terms of bilateral labour initiatives, a high-skilled labour mobility scheme within member countries should be prioritized to encourage fluidity of mobility. This will lead to the rerouting of migration channels for high-skilled labour, reducing the effects of brain drain, as high-skilled workers will be dispersed within theOIC group as opposed to current trends. It will also help alleviate restrictions on countries with high outflows while creating pathways for high-skill workers in recipient economies facing shortages.

In order to fully leverage the benefits of rising digitalization and advanced robotics in association with the 4th Industrial Revolution, it is crucial to prioritize education and training programs that foster these skills. Governments, educational institutions, and businesses should collaborate to provide opportunities for upskilling and reskilling the workforce. This will ensure that individuals are equipped with the right skill sets to adapt to changing job requirements and remain competitive in the labour market. The ability to predict automatable tasks and skill sets as well as cultivate valuable skills, is essential for preparing societies and workforces for the future. Finally, it is important to note that these policies should be tailored to the specific context and priorities of each country and effective policy implementation requires strong governance, stakeholder engagement, and monitoring mechanisms to ensure desired outcomes.

ANNEXES

Annex 1 - Country Classifications

A. Major Country Groups used in Report

OIC Countries (57)

Code	Name	Code	Name	Code	Name
AFG	Afghanistan	GUY	Guyana	PAK	Pakistan
ALB	Albania	IDN	Indonesia	PSE	Palestine
DZA	Algeria	IRN	Iran	QAT	Qatar
AZE	Azerbaijan	IRQ	Iraq	SAU	Saudi Arabia
BHR	Bahrain	JOR	Jordan	SEN	Senegal
BGD	Bangladesh	KAZ	Kazakhstan	SLE	Sierra Leone
BEN	Benin	KWT	Kuwait	SOM	Somalia
BRN	Brunei Darussalam	KGZ	Kyrgyzstan	SDN	Sudan
BFA	Burkina Faso	LBN	Lebanon	SUR	Suriname
CMR	Cameroon	LBY	Libya	SYR	Syria
TCD	Chad	MYS	Malaysia	TJK	Tajikistan
COM	Comoros	MDV	Maldives	TGO	Togo
CIV	Cote d'Ivoire	MLI	Mali	TUN	Tunisia
DJI	Djibouti	MRT	Mauritania	TUR	Türkiye
EGY	Egypt	MAR	Morocco	TKM	Turkmenistan
GAB	Gabon	MOZ	Mozambique	UGA	Uganda
GMB	Gambia	NER	Niger	ARE	United Arab Emirates
GIN	Guinea	NGA	Nigeria	UZB	Uzbekistan
GNB	Guinea-Bissau	OMN	Oman	YEM	Yemen

Developed Countries* (41)

Andorra	France		Lithuania		Slovak Republic
Australia	Germany		Luxembourg		Slovenia
Austria	Greece		Macao SAR		Spain
Belgium	Hong Kong SAR		Malta		Sweden
Canada	Iceland		The Netherlands		Switzerland
Crotia	Ireland	New Zealand	Now Zooland		Taiwan Province of
Crotta				China	
Cyprus	Israel		Norway		United Kingdom
Czech Republic	Italy		Portugal		United States
Denmark	Japan		Puerto Rico		
Estonia	Korea		San Marino		
Finland	Latvia		Singapore		
* Refers to "advanced economies" as classified by the IMF, September 2025.					

Developing Countries

Includes all countries other than those classified as developed countries.

B. OIC Countries by Geographical Classification

Africa Region (17)			
Benin	Gabon	Mozambique	Togo
Burkina Faso	Gambia	Niger	Uganda
Cameroon	Guinea	Nigeria	
Chad	Guinea-Bissau	Senegal	
Côte d'Ivoire	Mali	Sierra Leone	

Arab Region (22)			
Algeria	Jordan	Oman	Syria
Bahrain	Kuwait	Palestine	Tunisia
Comoros	Lebanon	Qatar	United Arab Emirates
Djibouti	Libya	Saudi Arabia	Yemen
Egypt	Mauritania	Somalia	
Iraq	Morocco	Sudan	

Asia Region (18)						
Afghanistan	Guyana	Malaysia	Türkiye			
Albania	Indonesia	Maldives	Turkmenistan			
Azerbaijan	Iran	Pakistan	Uzbekistan			
Bangladesh	Kazakhstan	Suriname				
Brunei Darussalam	Kyrgyzstan	Tajikistan				

Annex 2: Characteristics of Emerging Sectors

Emerging sector	Subsector	Type of activities / occupations	Skill level of workforce	Capital required	Work intensity	Potential to absorb informal workers
	AI, cloud computing, machine learning, IoT, big data		High	High	Low	Low
	Drones and sensors	R&D, production, services associated	High	High	Low	Low
Knowledge economy	Agriculture 4.0	(retail, operators, repair)	Medium- high	High	Medium– low	Medium- low
	Industry 4.0		Medium– high	High	Low	Low
	Online labour platforms	Speech and image recognition, cyber security, finding bugs	Medium	Medium	Low	Medium
Location- based platforms		personal services (domestic work and me services (plumbing, electrician,	Low	Medium– low	High	High
	Solar photovoltaics	Manufacturing engineers, technicians and operators, R&D and software	Medium- high	Medium	Medium	Medium- low
	Biofuels	engineers, marketing and sales specialists, logistics professionals and	Medium- low	Medium– low	High	Medium
	Wind	operators, construction and transportation workers, management and retail personnel	High	High	Medium– low	Low
	Bio-economy	Organic farming, regenerative agriculture, agro-ecology, conservation agriculture, sustainable fisheries, manufacture of products that use bio-based components	Medium	Low	High	Medium
	Circular economy	Waste pickers, recycling managers	Low	Low	High	High
Green economy	Sustainable tourism	Guides, rivers, family-owned restaurants, handicraft producers and artisans, landscape operators, cleaning services, cooking services, environmental educators, naturalists, photographers, journalists and researchers	Medium- low	Low	High	Medium- low
	Ecosystem restoration, Eco- conservation and climate adaptation	Reforestation and afforestation, forest thinning, slope protection, soil and water conservation, the lining of rivers and creeks, sluices and footbridges, and construction of dikes	Medium– low	Low	High	High
	Blue economy	Wave and tidal energy, algae production, restoration of marine ecosystems, sustainable fisheries	Medium Low	Medium– high	High	High
Care economy	Domestic worker, elde cooking, pet care	orker, elderly care, patient care, babysitting, t care		Low	High	High
Orange	Creative	Professional business services, videogame developer, videogame taster, graphic design, virtual animation	High	Medium– high	Medium– high	Medium
economy	Cultural	Cultural tourism, heritage, music, art, literature, fashion, design, media, radio, TV, film industry	Medium- high	Medium– low	High	High

REFERENCES

Abouzaki, M. (2024). United Arab Emirates and Saudi Arabia's strategic investments in artificial intelligence. Emircom. https://www.emircom.com/uae-and-saudi-

https://www.emircom.com/uae-and-saudiarabias-strategic-investment-in-artificialintelligence/

Acemoglu, D., D. Autor, J. Hazell, P. Restrepo (2022). "Artificial Intelligence and Jobs: Evidence from Online Vacancies." *Journal of Labor Economics*. Volume 40, S1, April 2022.

Acemoglu, D. and P. Restrepo (2017). "Robots and Jobs: Evidence from US Labor Markets." *NBER Working Paper* No. 23285 March 2017.

Acemoglu, D. and P. Restrepo (2019). "Automation and New Tasks: How Technology Displaces and Reinstates Labor." *Journal of Economic Perspectives*. 33(2): 3-30.

Adalet McGowan, M. and D. Andrews (2017), Skills Mismatch, Productivity and Policies: Evidence from the Second Wave of PIAAC Economics Department Working Paper No. 1403. https://dx.doi.org/10.1787/65dab7c6-en

Ajilore, G. (2025). More than the Unemployment Rate: What Metrics to Watch for on Jobs Day. Center on Budget and Policy Priorities. http://www.jstor.org/stable/resrep69781

APEC (2020). APEC Closing the Digital Skills Gap Report: Trends and Insights; Perspectives on the Supply and Demand of Digital Skills and Degree of Digitalization. Asia-Pacific Economic Cooperation.

Arntz M., S. Blesse, P. Doerrenberg (2022). The End of Work is Near, Isn't It? Survey Evidence on Automation Angst. ZEW Discussion Paper No. 22 - 036 | 08/2022.

Arntz, M., T. Gregory, and U. Zierahn (2017). Revisiting the risk of automation. Economics Letters 159, 157-160.

Autor, D., and Salomons, A. (2018). Is Automation Labor-displacing? Productivity Growth, Employment, and the Labor Share. NBER Working Paper No. w24871. National Bureau of Economic Research.

BCG (2021). The Future of Jobs in the Era of Al. Boston Consulting Group.

Bock, T. (2015). "The Future of Construction Automation: Technological Disruption and the Upcoming Ubiquity of Robotics." Automation in Construction. Volume 59, November 2015, 113-121.

Botero-Murphy, B. (2016). Can 3D Printing Help us to Eat Healthier? Chicago Tribune.

Charles, L., S. Xia and A.P. Coutts (2022). Digitalization and Employment: A Review. International Labour Organization

Chui, M., Manyika, J., Miremadi, M. (2016). "Where machines could replace humans-and where they can't (yet)." McKinsey Quarterly. July 2016.

Damioli, G., Van Roy, V., Vertesy, D., Vivarelli, M., (2022). Al technologies and employment: microevidence from the supply side. Applied Economics Letters

Dauth, W., S. Findeisen, J. Suedekum, N. Woessner (2021). "The Adjustment of Labor Markets to Robots." *Journal of the European Economic Association*. Volume 19(6): 3104-3153, December 2021.

De Gobbi, M., Kühn, S., Heins, G., Malikova, Z. (2025). Demographic change in Europe and Central Asia: Addressing the issue of a shrinking and ageing labour force, ILO Working Paper 139 (Geneva, ILO).

https://doi.org/10.54394/UTFG0314

Dellot B. and F. Wallace-Stephens (2017). The Age of Automation - Artificial intelligence, robotics and the future of low-skilled work. Royal Society for the encouragement of Arts, Manufactures and Commerce. UK.

EC (2020). Digital Economy and Society Index (DESI) 2020. Brussels: European Commission.

EC (2022). Digital Economy and Society Index (DESI) 2022. Brussels: European Commission.

EP (2022). "Digitalisation and changes in the world of work: Literature Review." Policy Department for Economic, Scientific and Quality of Life Policies. European Parliament. Luxembourg.

Eurofound (2021a). The digital age: Implications of automation, digitisation and platforms for work and employment, Challenges and prospects in the EU series, Publications Office of the European Union, Luxembourg.

Eurofound (2021b). *Digitisation in the workplace*. Publications Office of the European Union, Luxembourg.

Feijao, C., I. Flanagan, C. Van Stolk, and S. Gunashekar (2021). The global digital skills gap - Current trends and future directions. The RAND Corporation.

Gambacorta, L., Qiu, H., Shan, S., & Rees, D. (2024).
Generative Al and labour productivity: Evidence from a field experiment on coding (BIS Working Paper No. 1208). Bank for International Settlements. Accessed from https://www.bis.org/publ/work1208.pdf

Frey, C.B. and M.A. Osborne (2017). "The future of employment: How susceptible are jobs to computerisation?" *Technological Forecasting and Social Change*, Volume 114: 254-280.

Genz, S., Schnabel, C., 2021, Digging into the Digital Divide: Workers' Exposure to Digitalization and Its Consequences for Individual Employment. *IZA Discussion Papers* 14649.

Genz, S., Terry, G., Janser, M., Lehmer, F., Matthes, B., 2021, How Do Workers Adjust When Firms

Adopt New Technologies? *IZA Discussion Papers* 14626.

Georgieff A. and A. Milanez (2021). What happened to jobs at high risk of automation? OECD Social, Employment and Migration Working Papers No. 255. OECD Publishing, Paris.

Georgieff A. and R. Hyee (2021). Artificial intelligence and employment: New cross-country evidence. OECD Social, Employment and Migration Working Papers No. 265. OECD Publishing, Paris.

Golman M. and C. Ernst (2022). Future of Work, Emerging Sectors and the Potential for Transition to Formality. Geneva: International Labour Organisation.

IFC (2018). Digital Skills in Sub-Saharan Africa – Spotlight on Ghana. International Finance Corporation.

IFC (2021). Demand for digital skills in sub-Saharan Africa. Key findings from a five-country study: Cote d'Ivoire, Kenya, Mozambique, Nigeria, and Rwanda. International Finance Corporation.

International Federation of Robotics (IFR). (2024). World Robotics 2024: Executive summary. Frankfurt. Accessed from https://ifr.org/img/worldrobotics/Executive_Summary_WR_2024_Industrial_Robots.pdf

ILO (2001). Guidelines on occupational safety and health management systems (ILO-OSH 2001). Available at this link: https://www.ilo.org/publications/guidelines-occupational-safety-and-health-management-systems-ilo-osh-2001

ILO (2017). Global Employment Trends for Youth 2017: Paths to a better working future. Geneva: International Labour Organization.

ILO (2018). "Avoiding unemployment is not enough- An analysis of other forms of labour underutilization." ILO Stat Spotlight on Work Statistics. No: 4. August. Geneva: International Labour Organisation.

ILO (2020). Social Protection for Migrant Workers: A Necessary Response to the Covid-19 Crisis. ILO Brief, 23 June 2020. Available at this link.

ILO (2023a). *World Employment and Social Outlook* - *Trends 2023*. Geneva: International Labour Organisation.

ILO (2023b). The ILO strategy on skills and lifelong learning 2030. Geneva: International Labour Organisation. ISBN 978-92-2-038965-2 (web PDF).

ILO (2023c). A call for safer and healthier working environments.

https://doi.org/10.54394/HQBQ8592. Geneva: International Labour Organisation.

ILO. (2023d). Generative AI and jobs: A global analysis of potential effects on job quantity and quality. Geneva: Accessed from https://researchrepository.ilo.org/view/pdfCover Page?instCode=41ILO_INST&filePid=1312908639 0002676&download=true

ILO (2024a). Ensuring safety and health at work in a changing climate. ISBN 9789220405079 (web PDF) Geneva: International Labour Organisation.

ILO (2024b). World Social Protection Report 2024–26: Universal social protection for climate action and a just transition. *ISBN 978-92-2-040449-2 (print); 978-92-2-040450-8 (web PDF)* Geneva: International Labour Organisation.

ILO (2024c). ILO Brief. The jobs gap: Measuring labour underutilisation beyond unemployment. DOI: https://doi.org/10.54394/JWPM3037. Geneva: International Labour Organisation.

ILO (2025). World Employment and Social Outlook: May 2025 Update. Geneva: International Labour Organisation.

International Monetary Fund (IMF). (2024). GenAl and the future of work: Exposure, risks, and policy. Washington, DC: IMF. Accessed from https://www.imf.org/-

/media/Files/Publications/SDN/2024/English/SDN FA2024001 ashx

International Monetary Fund (IMF). (2025). World Economic Outlook: A Critical Juncture amid Policy Shifts. Washington, DC. April.

Ivanov, S. H., Webster, C., Berezina, K. (2017). "Adoption of robots and service automation by tourism and hospitality companies." Revista Turismo & Desenvolvimento, 27(28), 1501-1517.

Lu, Y., Xu, X., & Wang, L. (2020). "Smart manufacturing process and system automation—a critical review of the standards and envisioned scenarios." Journal of Manufacturing Systems, 56, 312-325.

Mandl, I. (2021). *Employment impact of digitalisation*. 15 December 2021, Eurofound. Available at this link.

MGI (2017). A Future That Works: Automation, Employment, and Productivity. McKinsey Global Institute. McKinsey & Company.

Mulas-Granados, C., R. Varghese, V. Boranova, A. deChalendar and J. Wallenstein (2019). Automation, Skills and the Future of Work: What do Workers Think? IMF Working Paper No: WP/19/288. International Monetary Fund.

Nedelkoska, L. and G. Quintini (2018). Automation, skills use and training. OECD Social, Employment and Migration Working Papers, No. 202. OECD Publishing, Paris.

Noy, S., & Zhang, W. (2023). Experimental evidence on the productivity effects of generative artificial intelligence. Science, 381(6654), 187–192. Accessed from https://economics.mit.edu/sites/default/files/inline-files/Noy_Zhang_1.pdf

OECD (2013). OECD Skills Outlook 2013: First Results from the Survey of Adult Skills. OECD Publishing, Paris.

OECD (2016). Automation and Independent Work in a Digital Economy. Policy Brief on the Future of Work. May 2016. OECD Publishing, Paris.

OECD. (2023). OECD Employment Outlook 2023: Artificial intelligence and the labour market. Paris: OECD Publishing. Accessed from https://www.oecd.org/en/publications/oecd-employment-outlook-2023 08785bba-en.html

OECD (2024). Artificial Intelligence and the Health Workforce Perspectives from Medical Associations on AI in Health. OECD Artificial Intelligence Papers November 2024 No.28. OECD Publishing, Paris.

PwC (2017). Empowering the GCC Digital Workforce: Building Adaptable Skills in the Digital Era. PricewaterhouseCoopers.

Rogers, W.P., Kahraman, M.M., Drews, F.A. et al. (2019). "Automation in the Mining Industry: Review of Technology, Systems, Human Factors, and Political Risk." Mining, Metallurgy & Exploration 36, 607–631.

Salesforce (2022). Global Digital Skills Index: In-Depth Insights from 23,000 Workers. San Francisco.

SESRIC (2020). OIC Labour Market Report 2020 – Progress towards the Implementation of the OIC Labour Market Strategy. Ankara: Statistical, Economic and Social Research and Training Centre for Islamic Countries.

SESRIC (2023a). OIC Economic Outlook 2023 - The Rise of the Digital Economy and Bridging the Digital Divide. Ankara: Statistical, Economic and Social Research and Training Centre for Islamic Countries.

SESRIC (2023b). Education and Scientific Development in OIC Countries. Ankara: Statistical, Economic and Social Research and Training Centre for Islamic Countries.

Shiller, R. J. (2019). Narratives about technology-induced job degradations then and now. NBER Working Paper No. 25536.

UNDESA (2018). World Youth Report: Youth and the 2030 Agenda for Sustainable Development New York: United Nations Department of Economic and Social Affairs.

UNDESA (2024). United Nations, Department of Economic and Social Affairs, Population Division (2024). World Population Prospects 2024, Online Edition.

UNDP (2017). Harnessing the Positive Potential of Technology for an Inclusive Future of Jobs. Seoul: UNDP Seoul Policy Center.

UNICEF/ITU. (2020). How many children and young people have Internet access at home? Estimating digital connectivity during the COVID-19 pandemic. United Nations Children's Fund & International Telecommunication Union

WEF (2019). A Framework for Developing a National Artificial Intelligence Strategy Centre for Fourth Industrial Revolution. Geneva: World Economic Forum.

WEF (2020). Future of Jobs Report 2020. Geneva: World Economic Forum.

WEF (2021). A Framework for the Future of Real Estate. Geneva: World Fconomic Forum.

WEF (2023). Future of Jobs Report 2023. Geneva: World Fconomic Forum.

WEF (2024). Reimagining Real Estate: A Framework for the Future December 2024. Geneva: World Economic Forum.

WEF (2025). Future of Jobs Report 2025. Geneva: World Economic Forum

World Bank (2018). World Development Report 2019: The Changing Nature of Work. Washington DC: World Bank.

WHO (2023). Occupational health. Available at this link: https://www.who.int/healthtopics/occupational-health