



International
Labour
Organization



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► Skills mapping in Egypt

Opportunity scouting and skills mapping
analysis



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ISBN 9789220416440 (print PDF)

ISBN 9789220416457 (web PDF)

Doi <https://doi.org/10.54394/GPGS5135>

Also available in Arabic: تحديد المهارات في مصر، تحليل استكشاف الفرص وتحديد المهارات، ISBN 9789220416464 (print PDF), ISBN 9789220416471 (web PDF).

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Summary of findings

The report asserts that skill development is essential for improving productivity and diversifying employment opportunities for workers. However, workers in the informal economy encounter numerous obstacles that hinder their access to lifelong learning and skill development. These obstacles include insufficient of foundational skills, formal educational entry requirements, the costs associated with training, lost income during training periods, and location- and gender-specific factors that limit access to educational opportunities—particularly for girls and individuals in rural areas.

The analysis has pinpointed the most important challenges confronting the Egyptian labour market, which can be categorized into three primary issues. The first challenge is the inherent weakness and rigidity of the labour market in responding to both external and internal crises. The second challenge, which is the focus of this report, is that low unemployment figures create a misleading perception of a healthy labour market. The third challenge concerns skill gaps, which highlight the critical structural weaknesses within the labour market. This mismatch indicates that the skills of the workforce do not align with the market's demands, leading to an imbalanced labour market.

The report referred that the skill gaps influenced by several determinants that contribute to the mismatch between the required skills by employers and the skills already possessed by employees. Understanding these determinants is essential for identifying the root causes of the skill gaps and devising effective strategies to address them. The main determinants are categorized into four factors, which are institutional, educational, financial and other factors.

Young men and women face several barriers in accessing training and employment, particularly women and informal workers in specific sectors and geographical areas, such as rural and urban settings. The most significant challenges include limited access to vocational training, affordability and financial constraints, a lack of job opportunities, economic limitations, and insufficient career guidance and support services.

Through the analysis, it became clear that there are ways for enhancing employability and skill sets for informal workers through reskilling initiatives, as well as through understanding future skills requirements, the most important of which are work-based learning, new patterns of work as well as green skills and jobs.

At the end of the report, a set of proposed recommendations that would improve employability, skills, training programmes, and delivery to enhance the prospects of young people and women in accessing decent work in the formal economy in Egypt are presented. Strengthening public-private partnerships in skill development through encouraging cooperation between the government, academic institutions, and employers in the private sector to match training programmes with industry demands and labour market needs is the most significant of these suggested measures. Increasing funding for TVET infrastructure would also enable more people to access vocational and technical education and training, especially in underserved and rural areas.

1. Introduction

Skills development is essential for enhancing labour productivity and increasing job opportunities. However, informal workers encounter several challenges in accessing skills development and lifelong learning opportunities. These challenges include limited basic skills, stringent formal school admission requirements, training costs, loss of income during training, and barriers related to gender and location that disproportionately affect women and those living in rural areas.

Despite these challenges, there have been promising approaches aimed at bridging this gap and enabling informal workers to engage in skills development and lifelong learning initiatives. One effective approach is informal apprenticeships, which provide a significant source of skill acquisition for young people. Various successful interventions have been implemented to preserve and enhance these informal training systems. Additionally, recognizing prior learning is a crucial strategy, as it allows for the certification of skills gained outside formal training environments, facilitating the transition of informal workers to formal employment.

Furthermore, digital learning and training solutions present an opportunity to expand access for informal economy workers, particularly during periods when training institutions are closed due to lockdowns or other circumstances. However, for informal workers to fully leverage these new learning opportunities, it is vital to ensure connectivity, access to appropriate technology, and digital literacy.

Despite these initiatives, there remains considerable work to be done to make lifelong learning a reality for the two billion individuals engaged in the informal economy. Addressing this challenge requires a comprehensive approach that integrates policy development, financial reforms, and structural transformations. Ultimately, enabling informal workers to access and participate in skills development and lifelong learning is not only essential for individual and economic empowerment but also crucial for reducing their vulnerability and mitigating risk during crises.

2. Literature reviews

In recent years, there has been a notable trend towards more flexible and accessible training delivery methods for informal youth workers. These methods encompass online courses, mobile learning platforms, and blended learning approaches that integrate traditional classroom instruction with digital technologies (Brouse et al., 2021). There has also been an increased emphasis on competency-based training programmes that prioritize practical skills development over purely theoretical knowledge (Calleja, 2022).

Several organizations have initiated trainings specifically designed for informal youth workers across various sectors. One example is the International Labour Organization (ILO), which has introduced the «Skills for Trade and Economic Diversification» (STED) programme in Egypt. This initiative offers technical and vocational training in high-growth sectors such as renewable energy, construction, and tourism (ILO, 2020). Similarly, in India, the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) project provides short-term training courses to enhance the employability skills of informal youth workers (MSDE, 2022).

The funding for training programmes targeting informal youth workers typically comes from a mix of government initiatives, international development organizations, and partnerships with the private sector. In Egypt, for instance, the European Union has allocated resources for the «Technical and Vocational Education and Training (TVET) Reform Programme» which seeks to improve the quality and relevance of TVET for informal workers (GIZ, 2021). In South Africa, the National Skills Fund (NSF) provides support for training initiatives aimed at informal workers, including youth, funded through a portion of the skills development levy contributed by employers (NSF, 2023).

The maturity of training infrastructure for informal youth workers varies significantly across different countries and regions. In some areas, there exists a well-established network of vocational training centers and community-based programmes, while in others, the infrastructure is still in the early stages of development. For instance, Ghana boasts a relatively robust Technical and Vocational Education and Training (TVET) system, with numerous public and private institutions offering training programmes specifically for informal workers, including young people (World Bank, 2022). Conversely, in Sub-Saharan Africa, the overall training infrastructure for informal workers remains quite limited, facing challenges such as insufficient funding, outdated curricula, and a shortage in qualified instructors (ILO, 2021).

3. An overview of the labour market in Egypt and its challenges

The labour market in Egypt is facing significant difficulties, characterized by a persistently high unemployment rate of 6.9% in the fourth quarter of 2023 and a declining labour force participation rate of 43.1%, particularly among women and young people. Egypt's labour force consists of approximately 31.1 million individuals. Over the past three decades, unemployment trends have undergone notable transformations, reflecting the dynamic nature of labour supply and demand in the country. Several factors have contributed to these trends, most significantly the nature of economic reform programmes, employment policies, macroeconomic policies, and various local and global shocks that have varied substantially in intensity and impact over time.

From this analysis, three primary challenges emerge and can be traced back to structural deficiencies within Egypt's labour market. The first challenge is the overall weakness of the labour market, which exhibits rigidity in the face of both external and internal crises. The second challenge is that the relatively low unemployment rate can create a misleading impression of a healthy labour market, as the methodology used to calculate these rates fails to account for categories such as underemployment, discouraged workers, and hidden unemployment—factors that significantly influence the index's relevance.

The third challenge is the skills mismatch, a term that encompasses various imbalances between the skills available in the labour market and those that are actually needed. This mismatch underscores severe structural weaknesses within the labour market, as the skills of individuals often fail to align with market demands, resulting in an inefficient use of human resources. In response to the increasing supply of inadequately skilled workers, the private sector is compelled to implement training programmes to bridge this gap. As a result, companies are responsible for training 89% of new workers.

According to a recent study on the labour market conducted by the Egyptian Center for Economic Studies (ECES) for the Federation of Egyptian Industries in 2022, all industrial sectors cited the lack of required skills (53.6%), inadequate training post-graduation (51.1%), and poor educational outcomes (40.2%)¹ as significant issues. Notably, 40% of the jobs available to blue-collar workers required a higher skill level, further highlighting the substantial gap between labour supply and demand and underscoring the waste of human resources in Egypt.

1. Multiple answers are allowed in the survey, so the percentages do not add up to %100

There are various types of skill gaps, including skill shortages, vertical and horizontal skill mismatches, and skill obsolescence. Each of these gaps poses distinct challenges and influences the overall performance and competitiveness of different industries. Identifying these skill gaps is crucial for several reasons. First, it helps us understand employees' current capabilities and their readiness to meet market demands and expectations. Second, it provides valuable insights to policymakers, industry stakeholders, and training institutions, enabling them to design targeted interventions and initiatives to effectively bridge these gaps.

Egypt is actively working on developing a comprehensive qualifications framework to standardize and recognize various learning forms, including work-based learning. Here are more details about the qualifications systems in Egypt:

National Qualifications Framework (NQF): Egypt is in the process of establishing a National Qualifications Framework (NQF) to facilitate the recognition and comparability of qualifications obtained through diverse learning pathways, encompassing formal education, vocational training, and work-based learning experiences.

Sectoral qualifications: In alignment with the NQF, various sectors in Egypt have created their own sectoral qualifications frameworks. For instance:

- The Tourism Skills Organization has implemented a sectoral qualifications framework for the tourism and hospitality industry, which encompasses occupational standards and competency-based qualifications.
- The Industrial Training Council (ITC) has developed occupational standards and qualifications for various industrial sectors, including construction, manufacturing, and automotive.

Recognition of prior learning (RPL): Egypt has instituted initiatives to acknowledge the skills and competencies gained through non-formal and informal learning, including work-based learning experiences. The RPL system aims to validate and certify these competencies, allowing individuals access to further education or employment opportunities.

Competency based training and assessment: The Ministry of Education and Technical Education is making strides toward implementing competency-based training and assessment approaches in technical schools, emphasizing the evaluation of learners' practical skills and abilities rather than focusing solely on theoretical knowledge. This approach is particularly relevant for work-based learning programmes and for aligning qualifications with industry standards.

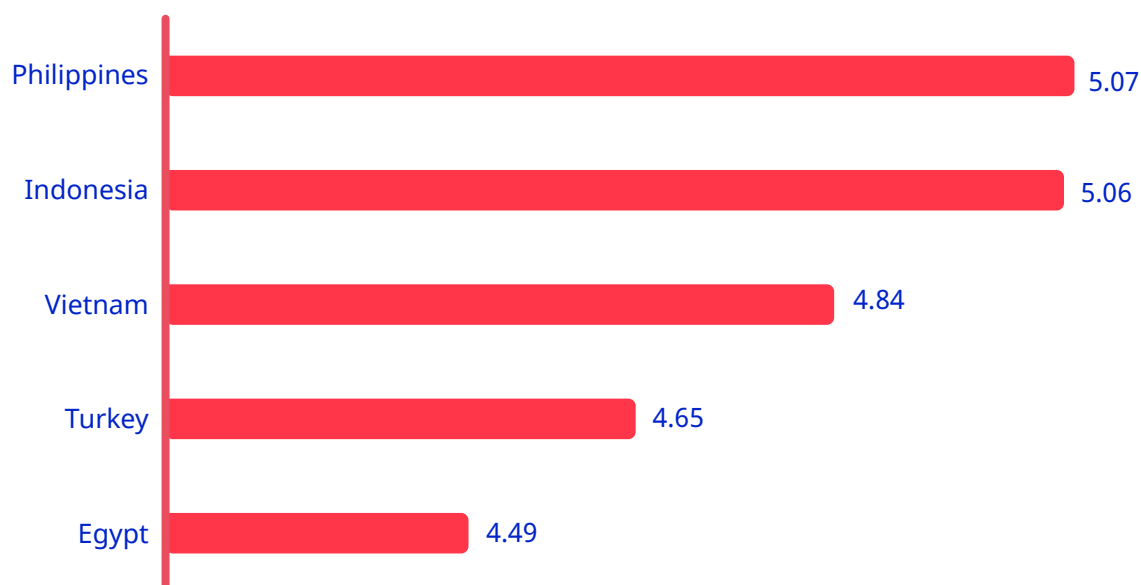
Quality assurance mechanisms: To ensure the quality and relevance of qualifications, Egypt has established various quality assurance mechanisms, such as the National Authority for Quality Assurance and Accreditation of Education (NAQAAE), which oversees the accreditation of educational programmes, including work-based learning initiatives.

Egypt has made significant progress in establishing a National Qualifications Framework (NQF) and developing sectoral qualifications frameworks across various industries. Additionally, efforts are being made to transition towards competency-based training and assessment approaches, aligning qualifications with industry standards and practical skill requirements. However, challenges remain in terms of ensuring the consistent implementation, quality assurance, and recognition of qualifications across different sectors and learning pathways, including work-based learning programmes.

4. Overview of skill gaps in Egypt

According to the «Future of Jobs Report 2023» published by the World Economic Forum (WEF), Egypt continues to rank low in the index measuring the ease of finding skilled employees in its local labour market. This is in comparison to several developing countries, such as the Philippines, Indonesia, and Vietnam.

Figure 1: Ease of finding skilled employees in the Local Labour Market Index, 2022



Source: World Economic Forum (WEF), Future of Jobs Report 2023.

Note: Index's value ranges (1: 7), 1= companies cannot easily find skilled employees, 7 = companies can easily find skilled employees.

4.1 Determinants of skill gap

Skill gaps are influenced by a variety of factors that contribute to the mismatch between the skills required by employers and those currently possessed by employees. Understanding these determinants is crucial for identifying the underlying causes of skill gaps and developing effective strategies to address them. The primary determinants are categorized into four main factors: institutional, educational, financial, and other factors, as outlined in Table 1 below.

Table (1) Skill gap determinants in Egypt

Institutional factors	Educational factors	Financial factors	Other factors
Failures in the labour market system	Outdated curriculum, insufficient practical training, research gaps and the lack of a research culture	Limited financial resources	Negative perception of career opportunities
Limited collaboration between industry and academia	Inadequate language skills	Inadequate wages and remuneration	Demand driven by industry needs
Insufficient engagement from government and industry associations	Insufficient investment in teacher training and performance-based incentives		External shocks
Inadequate assessment of skill gaps			Geographic inequalities
Absence of a comprehensive sector-specific database			Labour migration
Insufficient monitoring and evaluation mechanisms			

■ Institutional factors

Failures in the labour market system

The shortcomings within the labour market system significantly contribute to skill mismatches. One major issue is the lack of accurate and up-to-date information regarding job vacancies and the skills required for them. This absence of transparency and effective information sharing makes it challenging for job seekers and educational institutions to align their skills with market demands. Consequently, this results in individuals either possessing skills that are not in demand or being unaware of job opportunities that match their skill sets. Additionally, the inadequate support for retraining and upskilling further compounds the problem of skill mismatches. As industries evolve, it is essential for individuals to continuously update their skills to meet changing demands. However, limited access to training programmes and insufficient funding for upskilling initiatives restricts individuals' ability to acquire new skills or enhance their existing ones.

Moreover, the labour market is hindered by the inefficiency of recruitment agencies, particularly governmental employment offices. As a result, many companies turn to informal recruitment methods. For instance, over 50% of companies in the engineering sector rely on informal mechanisms, such as referrals from employees, family, and friends, for their hiring processes.

Limited collaboration between industry and academia

Collaboration between educational institutions and industry stakeholders is limited. This lack of partnership and cooperation between academia and the industry hampers the alignment of educational programmes with the needs of the job market. Such insufficient collaboration is evident at both the Technical and Vocational Education and Training (TVET) level and the higher education level, resulting in a failure to adequately address the market's skill requirements, particularly given rapid technological advancements. Consequently, graduates may find themselves lacking the relevant skills and knowledge that employers seek.

However, there are current initiatives aimed at addressing this challenge. One such initiative is the establishment of sectoral skills councils (SSCs) led by employers, such as the Federation of Egyptian Industries and the Egyptian Federation of Tourist Chambers. These councils are designed to ensure that the TVET system aligns with the sector's demand for skilled technical workers. SSCs serve to institutionalize connections between private-sector employers and TVET service providers.

An SSC collaborates with employers and education and training providers to create training and learning solutions tailored to the needs of the specific sector it represents. As a result, employers view SSCs as demand-driven organizations, while the government recognizes them as legitimate entities. SSCs identify and define the skills required within a specific sector or industry and facilitate dialogue among employers about the competencies needed to sustain that sector. Moreover, SSCs can provide practical advice to the public authority overseeing TVET on job-related policies and the requisite skills. They also play a vital role in ensuring that training programmes and curricula are aligned with current occupational requirements and competencies.

Insufficient engagement from government and industry associations

The inadequate collaboration between the government and industry associations is another significant factor contributing to the skill gaps in both sectors. The absence of established agreements on standards, certifications, and regulations can lead to a lack of quality control and limited professional development opportunities. Consequently, this shortfall results in policies that do not effectively address the existing skill gaps.

Inadequate assessment of skill gaps

A key issue contributing to skill mismatches is the lack of a comprehensive assessment of current skill requirements. Without a clear understanding of which skills are in high demand and which are lacking, effectively addressing the skill gap becomes a challenge. This disconnect can result in a disparity between the skills possessed by the workforce and the skills that are truly needed.

Absence of a comprehensive sector-specific database

The absence of a centralized database that compiles information on both supplied and demanded skills, along with career guidance, leaves stakeholders—students, parents, employers, and investors—without access to essential information. This deficiency can lead to poor decision-making regarding career choices and investments, further exacerbating skill gaps in the labour market.

Insufficient monitoring and evaluation mechanisms

Without robust tools to assess labour performance and the effectiveness of policies and development programmes, identifying areas for improvement and implementing corrective actions becomes difficult. This lack of monitoring and evaluation stifles progress toward bridging skill gaps and aligning workforce capabilities with industry needs.

■ Educational factors

Outdated curriculum, insufficient practical training, research gaps and the lack of a research culture:

The presence of outdated curricula and insufficient practical training in educational institutions, including Technical and Vocational Education and Training (TVET) schools, has contributed to a mismatch in skills. This issue is compounded by a lack of professional development opportunities and inadequately equipped facilities. Nevertheless, the government is actively working to reform the TVET system. One of the initiatives is the establishment of applied technology schools that focus on a competency-based approach. Additionally, a specialized organization has been created to ensure high-quality technical education.

Inadequate language skills

The limited emphasis on language training and the narrow range of languages offered in educational institutions further exacerbate the skills mismatch. While inadequate language skills may pose less of a challenge in certain sectors, the necessity for these skills remains. The technical complexity of products and the need for collaboration with foreign experts highlight the importance of working knowledge of foreign languages. This knowledge is crucial for understanding machine operations and troubleshooting, as well as for effective interaction with international professionals and participation in global fairs and exhibitions.

Insufficient attention to core skills

There is a low prioritization of core skills such as punctuality, work ethic, and teamwork, alongside a lack of focus on fostering creative skills and techniques.

Insufficient investment in teacher training and performance-based incentives

The lack of investment in teacher training and the lack of performance-based payment systems significantly affect the quality of education. Many teachers require training for their professional growth, and without it, challenges in instructional effectiveness arise. Furthermore, the absence of performance-based incentives fails to encourage teachers to improve their skills or enhance student outcomes. As a result, this neglect not only hampers teachers' professional development but also undermines the overall educational system, making it more difficult to align skills with market needs.

■ Financial factors

Limited financial resources

Insufficient funding significantly hampers efforts to bridge the gap between the skills that are needed and those that are currently available. Allocating financial support to training programmes is crucial for overcoming these financial constraints and promoting skill development across various sectors. We can identify three distinct levels of financial limitations, all of which are evident in both public and private sectors:

- 1. Government level:** The budget designated for education, including both general and Technical and Vocational Education and Training (TVET), as well as government funding for training centers and recruitment offices, is often restricted. Typically, the financial resources allocated to technical education and vocational training are far less than those set aside for general education. This disparity leads to significant skill gaps, both in terms of current competencies and the future skills that will be required.

2. Firm level: The number of resources that companies allocate for training and upskilling their workforce—beyond basic training—tends to be limited, particularly within small enterprises.

3. Individual worker level: This refers to the proportion of a worker's wages that they invest in their continued education and skill upgrading. Low salaries, coupled with a lack of financial mechanisms—aside from self-funding—can discourage workers from pursuing further skill development.

Inadequate wages and remuneration

One major factor contributing to the skill mismatch in various sectors is the issue of inadequate wages and the absence of competitive remuneration packages, particularly for manufacturing workers and technicians. Low salaries can lead to several consequences that exacerbate this skills mismatch. Firstly, talented individuals may opt for alternative career paths that provide higher pay and greater financial stability. Additionally, insufficient wages can hinder the retention of skilled workers

■ Other factors

Negative perception of career opportunities

Many industrial sectors struggle with a pessimistic view of their future, often seen as lacking value. This perception makes it difficult to attract and retain talented professionals. The challenge is further compounded by the poor quality of Technical and Vocational Education and Training (TVET) systems.

Demand driven by industry needs

The fast-paced changes in certain sectors, driven by shifting market trends, evolving customer preferences, and technological advancements, create a growing need for new skills. Employees must now possess digital skills to effectively address these demands. However, the existing education and training systems may fall short in meeting these emerging skill requirements.

External shocks

External shocks, which are unforeseen events or circumstances that significantly affect industries, often lead to sudden changes in demand, operational disruptions, and a mismatch between the skills available in the workforce and those needed in new contexts. Such shocks are a major factor in skill mismatches across many sectors. A prime example is global pandemics like the COVID19- outbreak. This abrupt decline in the industry can result in an oversupply of skilled workers who are no longer needed, leading to unemployment and skill obsolescence. Conversely, as industries begin to recover from such shocks, there may be a shortage of skilled workers due to attrition or individuals pursuing other career paths, thus creating a skill gap that hinders the sector's ability to meet demand.

Labour migration

A significant contributor to skill mismatches across all sectors is the issue of inadequate wages and unattractive compensation packages. Low salaries can have several repercussions that exacerbate skill mismatches. Talented individuals may opt for alternative career paths that offer higher wages and greater financial security. Additionally, insufficient wages can negatively impact the retention of skilled workers, further exacerbating the skill gap.

4.2 Sectoral analysis of skill gaps

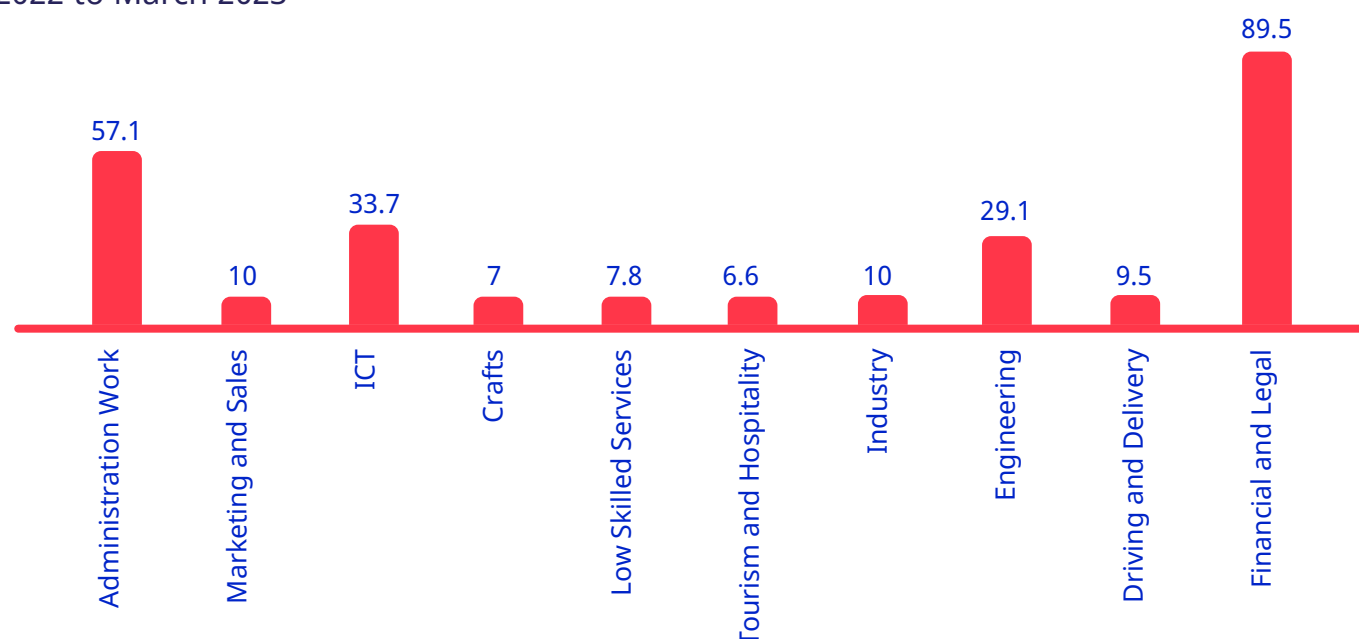
Historically, official statistics have mainly concentrated on the characteristics of the labour force, resulting in a substantial gap in understanding the specific skills and qualifications required by the private sector in Egypt. This deficiency in information has contributed to a persistent mismatch between the skills available in the labour market and the needs of employers.

Various measures have been implemented to tackle this issue. For instance, the «ADWA» project, funded by the Swedish International Development Cooperation Agency (SIDA) in collaboration with the International Labour Organization, aims to enhance the collection, analysis, and utilization of data in order to reform economic policies toward fostering job-rich growth. Additionally, the Central Agency for Public Mobilization and Statistics (CAPMAS) has partnered with the International Labour Organization to establish a new unit dedicated to producing periodic bulletins on labour demand and the skill requirements of the job market, based on employment and wage research data. This unit published its inaugural report in June 2024.

Nevertheless, challenges remain. According to the Egyptian Center for Economic Studies (ECES), a project launched in June 2021 to gather comprehensive data on companies' skill requirements is ongoing, with updates on this information planned quarterly. The subsequent analysis measures skill adequacy as the percentage of applicants meeting job requirements during the period from January 2022 to March 2023.

Figure 2 illustrates the number of job applicants categorized by job type and sector. The data reveals that the highest number of applicants is found in the financial, legal, administration, and ICT sectors, while the lowest numbers are seen in tourism and hospitality, crafts, and low-skilled services. This trend suggests a general preference among applicants for administrative and office positions over fieldwork.

Figure 2. Number of applicants per job/sector during the period from January 2022 to March 2023

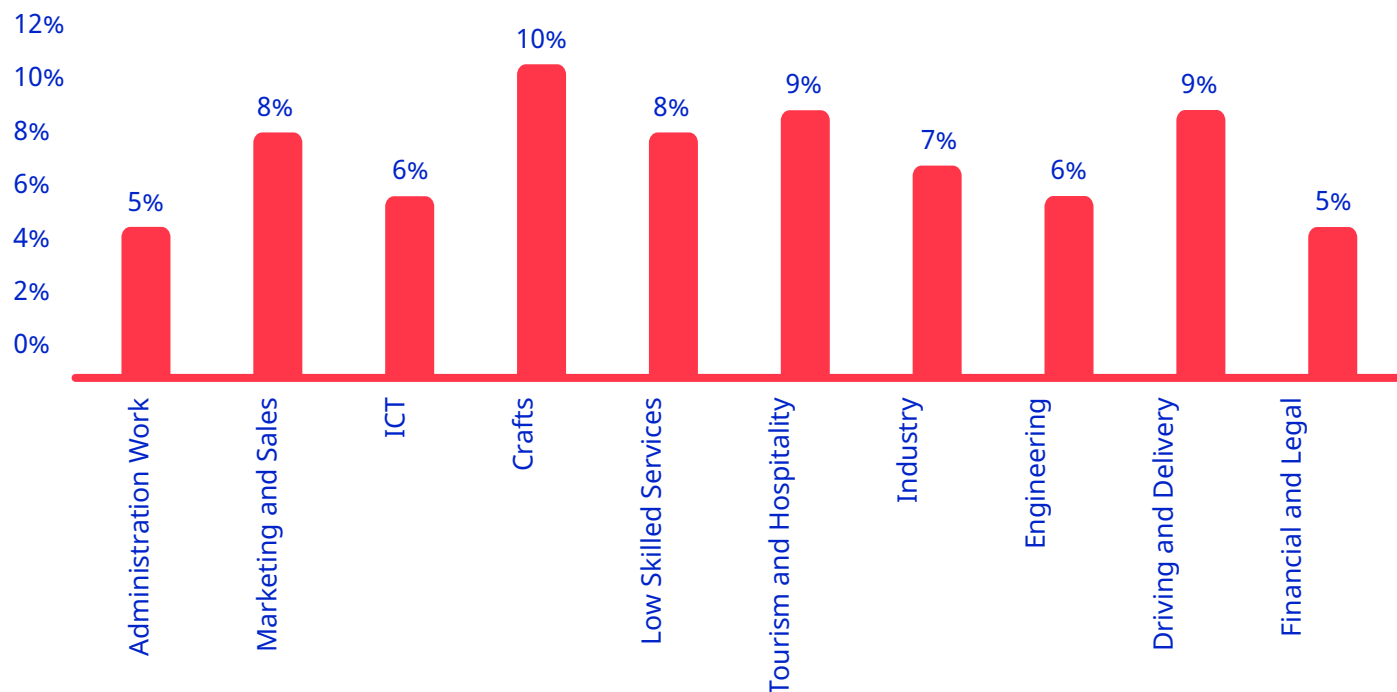


Source: ECES Job Market Dynamic Analysis (Jan. 2022- March 2023).

Examining the skill adequacy levels, defined as the percentage of applicants meeting job requirements, reveals that the Egyptian labour market struggles with low skill adequacy. On average, only 6.5% of applicants possess the necessary qualifications for a given job. Figures 3 and 4 below illustrate skill adequacy by job/sector and geographical location. Regarding skill adequacy by job/sector, we can categorize jobs into two main groups: those where skills can be relatively easily acquired through training and those that require several years of formal education. The first group includes occupations such as crafts, driving, delivery, tourism and hospitality, low-skilled services, marketing and sales, and certain industries, which all exhibit relatively high skill adequacy levels. Conversely, the second group—which encompasses fields like information and communication technology (ICT), engineering, finance and law, and administrative roles—shows significantly lower adequacy rates.

It is essential to recognize that formal, specialized education forms the foundation for skill acquisition. While training can enhance the quality of skills through practical experience, particularly in low-skill sectors, it can also help create a larger pool of workers even before they complete their formal education. Consequently, while training can increase the availability of labour in some low-skill positions with limited direct client interaction, it cannot substitute for formal education.

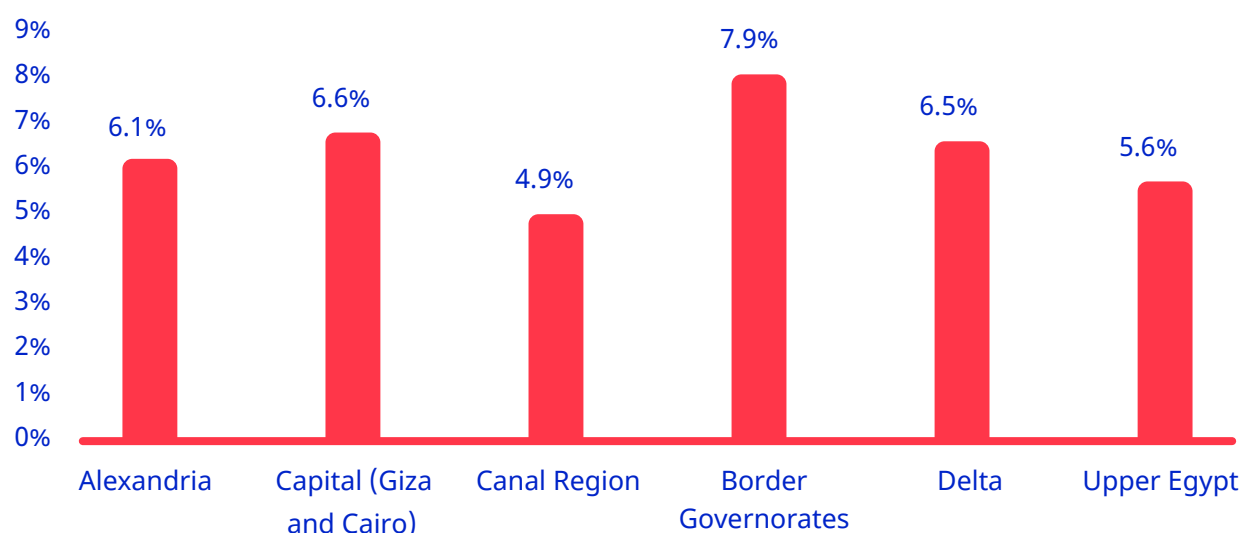
Figure 3. Skill adequacy by job/ sector measured as the percentage of applicants satisfying job requirements during the period (January 2022- March 2023)



Source: ECES Job Market Dynamic Analysis (Jan. 2022- March 2023).

Figure 4 illustrates skill adequacy across different regions, revealing that the border governorates exhibit the highest levels of skill adequacy. This phenomenon can be partly attributed to the general labour shortage in these areas, leading employers to be less stringent regarding qualifications compared to those in other governorates. Additionally, a significant proportion of jobs in the border governorates fall into the category of «skills that can be easily acquired through training.» Conversely, the Canal governorates and Upper Egypt show the lowest levels of skill adequacy.

Figure 4. Skill adequacy by region measured as the percentage of applicants meeting the job requirements during the period (January 2022- March 2023)



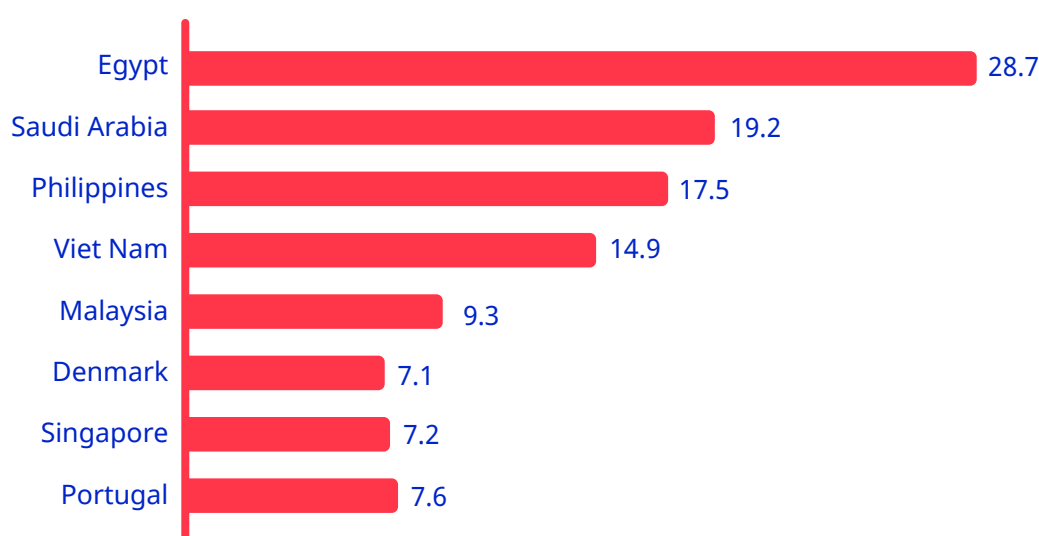
Source: ECES Job Market Dynamic Analysis (Jan. 2022- March 2023).

5. Barriers young men and women face in accessing training and employment

On the skills supply side, informal workers often possess lower levels of education and have fewer opportunities to enhance their skills compared to their formal counterparts. While workers in the informal economy can acquire skills both prior to entering this sector and through practical experience gained on the job, many have undergone varying degrees and quality of formal education and training. These prior experiences influence the skills they bring to their work. The initial education and training received by informal workers play a crucial role in determining their chances of securing employment—whether in formal or informal settings—as well as their ability and opportunities to learn and acquire new skills in a rapidly evolving job market. This, in turn, affects the educational outcomes of future generations, influencing whether they can escape the cycle of informal employment.

According to World Bank data, the proportion of youth who are not engaged in education, employment, or training is notably high in Egypt, standing at 28.7% of the youth population, which is significantly higher compared to other countries.

Figure 5. Percentage of youth Not in Education, Employment or Training (NEET), Total % of Youth Population



Source: World Bank database, percentage of Youth not in Education, Employment or Training (NEET), Total % of Youth Population

5.1 Challenges faced by women and young informal workers in accessing decent employment across sectors and geographies (rural vs. urban)

In Egypt, young workers face significant challenges related to minimum wages and informal employment, which hinder their access to stable and decent jobs. Less than half of the youth in the country hold permanent positions, with only 45% employed in such roles. According to the ILO (2022), around 63% of Egyptian workers are engaged in informal employment, which often lacks decent working conditions and social protection. As a result, more than half of the young workers are particularly vulnerable, with 22% employed on a temporary basis, 6% in seasonal jobs, and 25% in casual work. Consequently, most young people find themselves in precarious work situations, often hired without formal contracts and lacking access to social security and protection. Additionally, 41% of youth aged 15 to 24 works beyond the legal limit of 48 hours per week.

Informal workers also encounter difficulties in improving their skill sets compared to their formal counterparts. Training opportunities provided by employers are less common for informal workers, making it challenging for them to gain the necessary technical skills. This situation puts informal workers at a higher risk of remaining trapped in low-skill, low-wage positions. They are not only more likely to have limited formal education but also face barriers in accessing further training needed to acquire advanced skills.

In Egypt, young men and women confront numerous interconnected barriers hindering their access to training and employment opportunities. These barriers significantly affect their chances of securing decent work. Key barriers include:

1. Educational attainment and skills mismatch: According to the World Bank (2020), about 30% of Egyptian youth aged 15-24 have not completed basic education, severely restricting their access to better job opportunities. Furthermore, there exists a disconnect between the skills provided through education and training and those demanded by employers, which exacerbates youth unemployment.

2. Gender discrimination and social norms: Women in Egypt encounter considerable gender discrimination and societal norms that restrict their participation in the labour force. The International Labour Organization reported in 2022 that the labour force participation rate for women in Egypt is merely 18.5%, compared to 72.6% for men.

3. Limited access to vocational training: Opportunities for vocational training, particularly in rural areas, are often scarce, limiting young people's ability to gain relevant skills. In 2017, only 7.5% of Egyptian youth aged 15-24 were enrolled in technical and vocational education and training programmes. The shortage of vocational training centers in rural areas further complicates access to skill development opportunities for both women and young workers. Even in urban settings, specialized training programmes designed to meet the needs of informal workers, especially women, remain limited.

4. Affordability and financial constraints: Many women and young informal workers face financial limitations that prevent them from enrolling in and completing training programmes, as they often come from low-income backgrounds or serve as the primary breadwinners for their families.

5. Lack of career guidance and support services: A significant number of young people in Egypt lack access to career guidance, mentorship, and support services that could assist them navigate the labour market and find suitable training and job opportunities.

6. Limited job opportunities and economic constraints: Youth unemployment in Egypt is high, with 24.8% of individuals aged 15-24 unemployed in 2020. An economic slowdown and a lack of job creation in the formal sector have intensified the challenges faced by young job seekers.

7. Mobility and transportation challenges, and cultural and social norms: Women, in particular, face mobility challenges rooted in social norms, safety concerns, and the unavailability of reliable, affordable transportation. This makes accessing training facilities difficult, especially in rural regions. Societal expectations surrounding gender roles can further discourage women from seeking skills training, particularly in traditionally male-dominated sectors or occupations.

5.2 The expected impact of addressing skill gaps

Training and upskilling the current and future workforce are no longer an optional choice; it has become a pressing necessity. This need is highlighted by the rapid technological advancements that are transforming nearly every job in the economy, rendering many skills obsolete at an alarming rate. The lack of effective training and upskilling initiatives adversely affects the performance of industries across their supply chains, stifling sector growth and limiting opportunities for new entrants.

Addressing skill gaps can significantly benefit both individual industries and the broader economy. By investing in the elimination of these gaps, Egypt can unlock a range of advantageous outcomes:

- **Improved service quality:** Closing skill gaps ensures that employees are equipped with the necessary knowledge and abilities to deliver high-quality services. This improvement in service quality leads to greater customer satisfaction and enhances the efficiency of production and service delivery processes.
- **Increased competitiveness:** Equipping industries with a skilled workforce enables them to adapt to changing market demands and emerging trends, thereby providing a competitive advantage.
- **Sustainable sector growth:** Interventions aimed at bridging skill gaps contribute to the long-term sustainability and growth of various sectors. By aligning workforce skills with industry needs, Egypt can bolster economic resilience and its ability to withstand challenges such as economic fluctuations, political instability, and global crises.
- **Professionalism and industry standards:** Addressing skill gaps fosters a culture of professionalism within industries. It encourages employees to pursue industry-specific certifications, engage in continuous education, and adhere to established standards and best practices. This enhanced professionalism uplifts the overall image of various sectors and cultivates a sense of excellence and pride among the workforce.
- **Economic development and job creation:** Bridging skill gaps generates more employment opportunities and stimulates income generation for the local population, resulting in lower unemployment rates, reduced poverty, and improved living standards.
- **Workforce empowerment and career advancement:** Bridging skill gaps offers employees pathways for personal and professional growth. It empowers them to enhance their competencies, acquire new skills, and seek career advancement within their respective fields. Initiatives focused on upskilling and reskilling positively impact employee morale, motivation, and job satisfaction, ultimately leading to higher retention rates.

6. Enhancing employability and skills of informal workers: Opportunities in Egypt

There are numerous opportunities to improve the employability and skills of informal workers in Egypt. One effective approach is to expand access to vocational and technical training programmes, particularly in rural areas and for women. By increasing the availability and accessibility of these programmes, informal workers can acquire essential skills that align with the needs of the job market. Additionally, promoting entrepreneurship and self-employment can be beneficial. Providing training, mentorship, and access to financing can empower informal workers to start their own businesses, thereby creating self-employment opportunities.

Improving access to information and career guidance is also crucial. By offering easily accessible information about training opportunities, job search assistance, and career advice, informal workers can make informed choices and navigate the labour market more effectively. Fostering collaborations among the government, private sector, and training institutions can further help ensure that training programmes align with the skills employers are seeking.

Promoting formalization and decent work initiatives is essential as well. This entails implementing policies and programmes that support the transition from informal to formal employment. Such measures may include offering incentives for registration, facilitating access to social protection, and enforcing labour regulations. These should be customized to meet the specific needs of informal workers across different sectors and geographical areas. Implementing them will require a collaborative effort involving various stakeholders, including the government, civil society organizations, and the private sector.

6.1 Reskilling initiatives and challenges in implementing these initiatives

Egypt has undertaken several reskilling and training initiatives aimed at improving access to decent work for its citizens. Among the most significant initiatives are:

- **Vocational training centers:** Operated by the Ministry of Labour and the Ministry of Trade and Industry, particularly through the Productivity and Vocational Training Department (PVTD), these centers specifically target informal workers.
- **Non-governmental organizations (NGOs) and civil society initiatives:** The Sawiris Foundation for Social Development has launched the «Enhancing Economic Opportunities for Informal Workers» programme, which offers skills training, entrepreneurship support, and access to microfinance for informal workers across various sectors, including agriculture and micro-enterprises.

- **Private sector training programmes:** Companies like IBM and Microsoft have introduced digital skills initiatives that provide online certification courses and workshops in fields such as artificial intelligence, data analytics, and cybersecurity. Local tech startups and training centers also offer specialized boot camps in software engineering and digital marketing, often facilitating job placements with partner companies.
- **Public-private partnerships and industry collaborations:** The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) is actively supporting the «Technical and Vocational Education and Training (TVET) Reform Programmes» in Egypt. This effort involves partnerships between the government, private sector firms, and training providers to create tailored skills development programmes for informal workers in various industries, including construction, tourism, and manufacturing.
- **Digital skills and E-learning programmes:** The Information Technology Industry Development Agency (ITIDA), in partnership with the International Finance Corporation (IFC), has established the «Digital Jobs for Youth in Egypt»² programme". This initiative provides online training and certification in a range of digital skills such as web development, data analysis, and digital marketing, specifically targeting young people, including those in the informal sector.
- **Entrepreneurship and business development programmes:** The American University in Cairo (AUC) Venture Lab offers an «Entrepreneurs' Boot Camp» that delivers intensive training in entrepreneurship, business planning, and provides access to mentorship and funding opportunities for informal workers aspiring to start or formalize their businesses.

These initiatives, bolstered by support from international organizations and bilateral partnerships, seek to address the skills gap, enhance the employability of the Egyptian workforce, and promote decent work opportunities through reskilling, vocational training, and entrepreneurship support.

The challenges associated with these initiatives can be summarized in the following points:

- **Funding issues:** There are budgetary constraints that hinder the implementation of large-scale skills development programmes.
- **Scalability:** Although these programmes are gaining popularity, reaching underserved regions poses significant challenges due to insufficient digital infrastructure and limited public awareness.
- **Industry alignment:** Programmes must continuously adapt to the evolving needs of employers, ensuring that curricula remain relevant in the face of rapid technological advancements. Collaboration with the private sector is essential to maintain this alignment.

2. https://mcit.gov.eg/en/Media_Center/Latest_News/News/3215

- **Inclusivity:** It is crucial to ensure that women, youth, and other marginalized groups have fair access to these opportunities.
- **Recognition and accreditation:** There are challenges in establishing standardized accreditation systems that effectively recognize new skills.

6.2 Varying levels of employer engagement in skills development mechanisms and coordination bodies

In Egypt, employer engagement in skills development mechanisms and coordination bodies exists at various levels. Below is an overview of these different levels:

1. National coordination bodies:

2. The Supreme Council for Human Resource Development (SCHRD) serves as a national entity that coordinates policies and strategies for human resource development, including initiatives for skills development. This body comprises representatives from various ministries, employers' organizations, and trade unions.

3. The Industrial Training Council (ITC) is another national body focused on enhancing the quality and relevance of technical and vocational education and training (TVET) programmes. It also involves representatives from the government, private sector employers, and trade unions.

2. Sectoral skills councils (SSCs): SSCs have been established in multiple industries, including tourism, construction, and automotive, to foster employer engagement in skills development and curriculum design. For example, the Tourism Skills Council (TSC) operates as a public-private partnership aimed at improving the skills and competencies of the tourism workforce in Egypt.

3. Industry associations and chambers of commerce: These organizations represent the interests of employers across various sectors and provide valuable input on skills development needs. For instance, the Federation of Egyptian Industries (FEI) and the Egyptian Businessmen's Association (EBA) have actively participated in discussions and initiatives related to skills development and TVET reform.

4. Direct employer engagement: Employers engage directly with TVET institutions and training providers through several mechanisms, including:

5. Participating in the development and review of curricula to ensure training programmes remain relevant.

- Offering apprenticeship and on-the-job training opportunities for students and trainees.
- Providing feedback on the skills and competencies necessary for their respective industries.
- Contributing to the creation of occupational standards and competency frameworks.

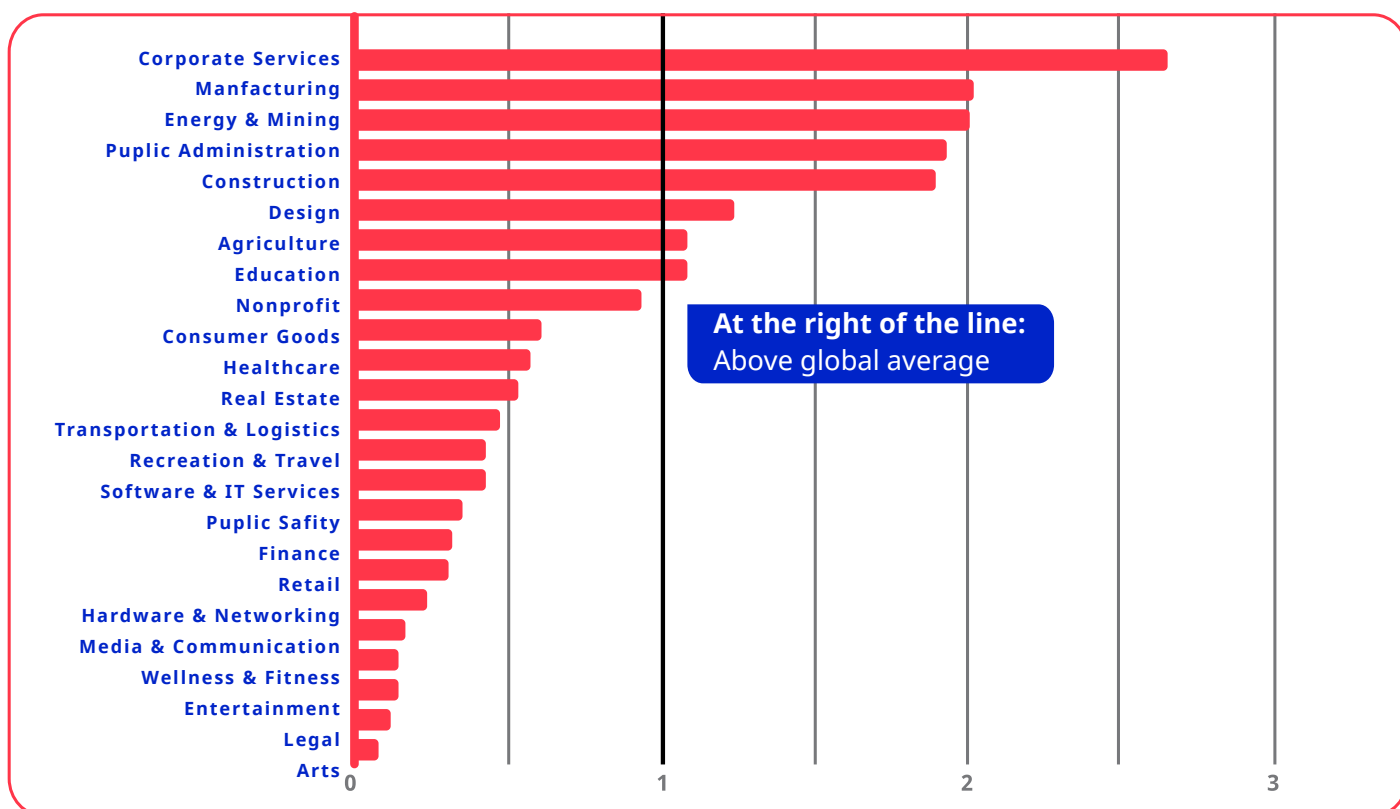
5.Public-private partnerships (PPPs): Numerous PPP initiatives in Egypt aim to enhance employer participation in skills development. One notable example is the Technical and Vocational Education and Training (TVET) Reform Programme, supported by the German Development Cooperation (GIZ). This programme involves a partnership among the government, private sector, and training providers to enhance the relevance and quality of TVET programmes.

7. Future skills requirements

7.1 Trends in transitioning to green jobs and skills

Given the current growth trajectory of green skills in the labour market, it is essential that the intensity of these skills increases across all sectors and countries. This is necessary to create sufficient supply to meet the rising demand for green talent, which is crucial for achieving climate goals. Some positive developments have already occurred. In 2019, hiring rates for green workers surpassed those of non-green workers in most economies, indicating a shift towards prioritizing green talent globally. Furthermore, the proportion of green workers in the global workforce has increased from 9.6% in 2015 to 13.3% in 2021, reflecting an annual growth rate of 6% and a cumulative increase of 38%.

Analyzing the distribution of talent globally and within different sectors through the lens of green skills reveals a significant disparity between demand and supply. The impact of the green transition has been felt across all sectors and countries, with no area remaining unaffected. Our findings not only emphasize the scale of this challenge but also illuminate potential pathways forward. We can provide policymakers and business leaders with targeted insights tailored to specific sectors and countries, outlining workforce needs and the skills that are necessary. Early trends indicate that workers are actively upskilling to adapt their jobs to greener practices, particularly in industries and regions that have historically been associated with high emissions. The data demonstrates varying rates of attraction for green skills among different sectors and countries. It is imperative that green skills intensity rises across all sectors and nations to meet the necessary supply and demand to attain climate objectives. The chart below illustrates green skills intensity across sectors, highlighting that corporate services, manufacturing, energy and mining, public administration, and construction are the sectors with the highest utilization of green skills worldwide.

Figure 6. Relative green skill intensity by sector

Source: LinkedIn Corporation, Global Green Skills Report 2022. Note: Relative Green Skills Intensity (1 = global average)

The green economy presents a significant opportunity for women to earn their rightful place in the workforce through better-paid, non-traditional jobs—defined as those in which women represent less than 25% of the workforce (ILO, 2007). Green jobs can serve as a pathway for low-income workers to transition into higher-skilled positions, facilitated by programmes that promote career advancement and upward mobility. This transition can help both men and women move from unemployment or underemployment to sustainable job options, equipping them with the skills and support they need to thrive. In every country, underserved communities with high unemployment rates can be prioritized for green job opportunities. These initiatives are particularly beneficial for women, enabling them to pursue career paths that foster economic independence and allow them to support themselves and their families.

To increase the representation of women in green jobs and ensure the quality of these roles, we can follow a five-step strategy:

- 1. Promote employment:** Address barriers to female participation in the workforce by combating discrimination and implementing family-friendly policies.
- 2. Enhance recruitment:** Actively recruit women for non-traditional jobs through special programmes and quotas.
- 3. Facilitate training:** Equip women with the skills necessary for green jobs through targeted training programmes.
- 4. Ensure equitable pay:** Work to reduce gender-based job segmentation and close the gender wage gap.
- 5. Encourage organization:** Increase union representation for women in emerging green sectors.

7.2 Emerging work patterns

Recent technological advancements have given rise to new work patterns, including flexible hours, remote work, part-time employment, annual hour systems, phased retirement, and compressed workweeks.

Numerous studies indicate that implementing these innovative work patterns can yield several positive outcomes, such as:

- Enhancing economic, social, and humanitarian development.
- Reducing production costs.
- Offering services that balance high quality with affordability.
- Improving access to healthcare for individuals.

7.3 Work-based learning

Work-based learning (WBL) is an educational approach that combines theoretical instruction with practical, hands-on training in a professional work environment. It aims to provide learners with the knowledge, skills, and experience required for successful employment in a particular field or industry. In Egypt, different types of WBL programmes are being implemented to enhance the employability of the workforce, particularly for young people and women.

Table (2) Types of work-based learning in Egypt

Apprenticeships	Apprenticeships offer a blend of practical on-the-job training and associated theoretical instruction. In these programmes, learners collaborate with seasoned professionals to enhance their skills and knowledge. Apprenticeships are prevalent in several technical sectors, including construction, manufacturing, and automotive repair.
Dual system	Known as education based on a combination of theoretical education and training, that combines classroom instruction with practical training in the workplace. It is one of the educational reform projects that aims to enhance educational outcomes by equipping students with the skills and competencies they need for real-world employment through hands-on experience.
Internships	Internships offer students and recent graduates a valuable opportunity to gain practical experience in their chosen fields. These positions may be paid or unpaid and can sometimes be a mandatory component of specific educational programmes. Internships are particularly common in industries such as business, engineering, and healthcare.
On-the-job training	On-the-job training involves structured programmes provided by employers for new or existing employees. This form of WBL is prevalent across various sectors, allowing employees to develop job-specific skills and knowledge while engaging in their work tasks under the mentorship of experienced professionals.
Entrepreneurship programmes	Additionally, some WBL initiatives are designed to foster entrepreneurial skills and support the establishment of new businesses. These programmes often include mentorship opportunities, assistance with business plan development, access to funding, and incubation support for aspiring entrepreneurs.

Work-based learning (WBL) can significantly enhance access to decent work in Egypt's formal economy. By integrating theoretical education with practical, on-the-job training, WBL programmes help bridge the divide between academic knowledge and the needs of the labour market. Here are several ways that WBL can improve access to decent work opportunities in Egypt's formal economy:

1. Developing job-relevant skills: WBL programmes, such as apprenticeships, internships, and cooperative education, offer hands-on experience in real-world settings. This practical training enables participants to acquire both technical skills specific to their fields and essential competencies (such as teamwork, communication, and problem-solving) that employers in the formal sector highly value.

2. Facilitating the school-to-work transition: WBL programmes help ease the transition from education to employment by familiarizing participants with workplace culture, expectations, and practices. This exposure enhances their employability and increases their chances of securing decent work opportunities in the formal economy.

3. Promoting industry-relevant skills and workplace readiness: By fostering collaboration between educational institutions and employers, WBL programmes ensure that training is aligned with industry standards and labour market demands. This alignment enhances participants' ability to develop the skills and readiness necessary for formal employment.

4. Establishing industry connections and networks: WBL programmes enable participants to create professional networks and establish relationships with potential employers in the formal sector. These connections can lead to job opportunities, references, and mentorship, facilitating entry into quality work within the formal economy.

5. Addressing skills mismatch and labour market needs: WBL programmes can help cover the gap between the skills acquired through traditional education and those required by employers in the formal sector. By tailoring training to meet industry needs, WBL initiatives contribute to fulfilling the demand for skilled workers in the formal economy.

6. Promoting formalization and decent work: WBL programmes can incorporate components that raise awareness about labour rights, decent work conditions, and the advantages of formal employment. This awareness encourages participants to pursue job opportunities that offer good working conditions and social protections.

8. Skills required in the Egyptian labour market

The skills required in the Egyptian labour market are divided into three groups of skills, technical and industrial skills, core skills, and entrepreneurship skills:

Technical and industrial skills: The technical and industrial skills required vary across different industrial sectors. Available data has identified a set of common technical skills that are essential and common, such as machine maintenance, lathe operations, technical operating procedures, and product assembly. However, there is a notable skills gap in these areas within the overall industrial sector.

In general, Egypt's industrial sector faces a significant shortage of skilled engineers, technicians, and assistant specialists. This conclusion is supported by the job market analysis conducted by the Egyptian Center for Economic Studies (ECES) from January 2022 to March 2023, as highlighted in the following table. An analysis of this data reveals key insights into the demand for skilled labour:

Table 3. Number of Applicants for Jobs and Percentage of Qualified Personnel by Occupation

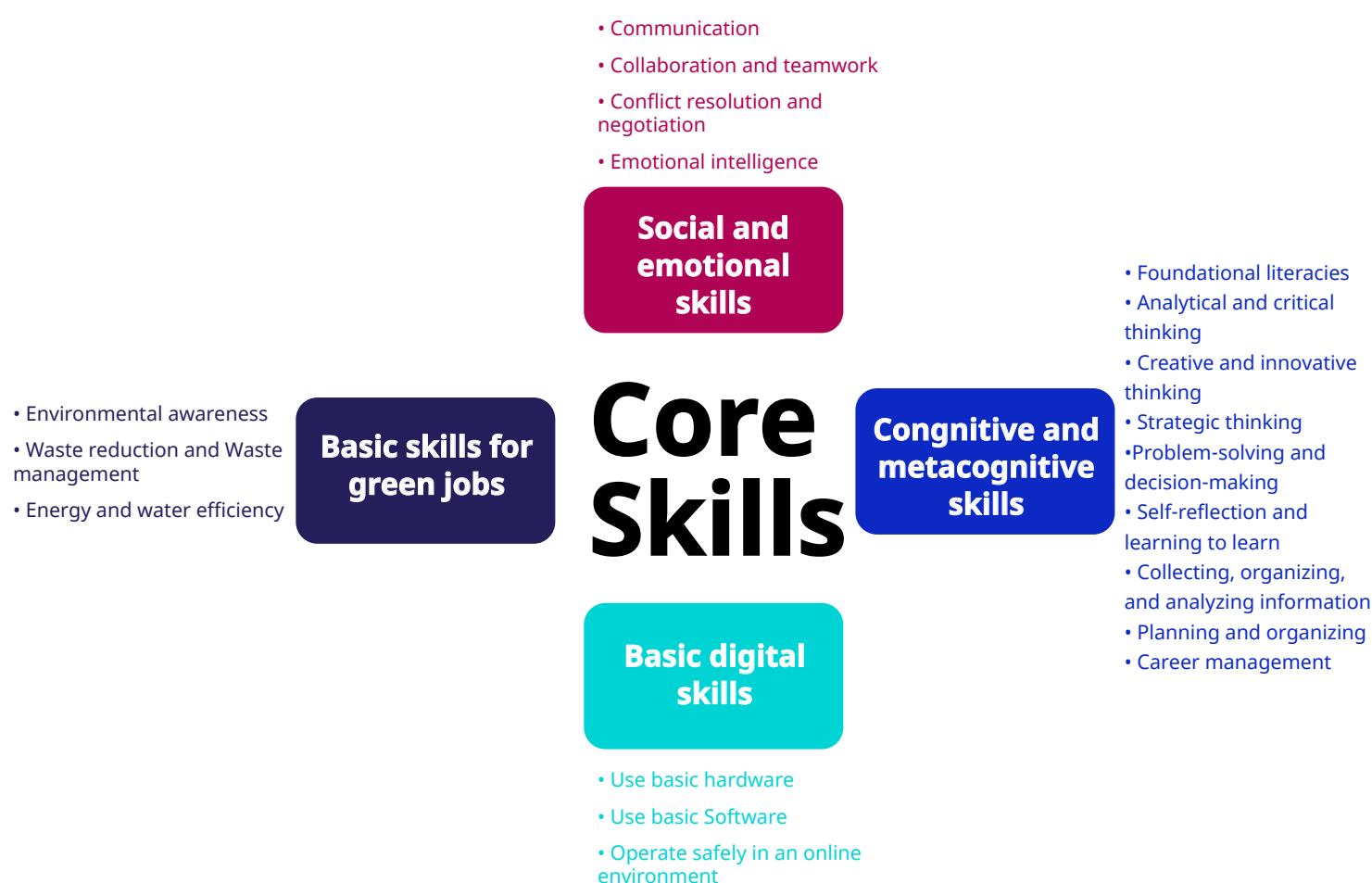
Occupation	Number of applicants per job	Qualified applicants as % of total applicants
Lathe operators	4.9	16.7 %
Operating technicians	5.1	13.2 %
Machine maintenance	8.2	12.4 %
Packaging of products	6.9	11.9 %
Electronic circuits/safety devices installation and maintenance technicians	6.4	8.9 %
Production labour and technicians	7.5	7.6 %
Occupational health and industrial safety	41.2	5.5 %
Quality control	42.5	3.7 %
Product assembly	3.1	3.80 %

Source: ECES Job Market Dynamic Analysis (Jan. 2022- March 2023).

Core skills: The International Labour Organization (ILO) has identified a set of core skills that are vital for success in the workplace. These include the ability to learn and adapt, perform calculations competently, listen and communicate effectively, think creatively, solve problems independently, manage oneself at work, interact with co-workers, work in teams, utilize basic technology, lead teams effectively, and follow supervision. The ILO divides these core skills into four main groups: social and emotional skills, cognitive and metacognitive skills, basic digital skills, and basic skills for green jobs.

In the Egyptian labour market, as in many other regions, employers across various industries place a high value on specific soft skills. These skills not only complement technical qualifications but are also essential for professional success and career advancement. Here are some key soft skills that are particularly sought after in the Egyptian labour market:

Figure 7. ILO global framework for core skills



Source: International Labour Organization, 2021, Global framework on core skills for life and work in the 21st century.

Social and emotional skills

These skills refer to an individual's ability to manage their thoughts, emotions, and behaviors. They are shaped by the context, environment, and society in which a person lives, as they dynamically interact with personal characteristics, beliefs, values, mindsets, and attitudes. These competencies are critical for effective social interactions in the workplace and play a vital role in the educational process. Additionally, they contribute to the development of metacognitive and cognitive skills.

Social and emotional skills are increasingly recognized as core skills, with a growing demand across all industries worldwide. These abilities are not only necessary for adapting to the evolving nature of work but are also vital for attaining a respectable standard of living, managing stress, and cultivating empathy.

- **Communication:** This involves the ability to convey information effectively, actively listen to understand others, articulate ideas clearly, exchange information, and utilize oral, written, and nonverbal communication methods to express opinions, needs, desires, and concerns across various contexts and for multiple purposes.
- **Collaboration and teamwork:** This skill encompasses the capacity to collaborate respectfully and effectively within diverse teams, taking collective responsibility for outcomes and demonstrating adaptability. It also involves recognizing and valuing the emotions, experiences, and viewpoints of others while showing compassion, kindness, and empathy.
- **Conflict resolution and negotiation:** This capability entails resolving disagreements or conflicts through logical argumentation and persuading others to cooperate in reaching a consensus among differing interests.
- **Emotional intelligence:** This refers to the ability to recognize, comprehend, and manage one's own emotions, as well as to assist others in doing the same. Emotional intelligence can be divided into four key areas: relationship management, social awareness, self-awareness, and self-management. Together, these domains encompass twelve competencies, including empathy, adaptability, achievement orientation, and optimism.

Cognitive and metacognitive skills

These skills pertain to the brain's capacity to process new information, comprehend it, remember it, and apply it effectively. By enhancing cognitive skills, individuals can better analyze new knowledge and adapt it to various situations with greater speed and efficiency.

There is growing recognition of the strong connection between cognitive abilities and social/emotional skills. While the importance of social and emotional intelligence is increasingly acknowledged, cognitive skills are still considered foundational for critical thinking and for accessing and understanding specific areas of knowledge.

- **Foundational literacies:** These encompass literacy, numeracy, health literacy, financial literacy, scientific literacy, cultural awareness, and civic knowledge.
- **Analytical and critical thinking:** This involves the ability to assess problems effectively and evaluate relevant data in order to reach conclusions or make decisions, whether individually or in a group. It includes the capacity for analytical, logical, and rational thought, as well as the evaluation and interpretation of information and objective analysis to solve problems.
- **Creative and innovative thinking:** This refers to the ability to generate, articulate, and apply original and innovative ideas through various idea production strategies, ultimately using these unique/original concepts to tackle complex tasks and life challenges.
- **Strategic thinking:** This involves the ability to think intellectually, creatively, systematically, and opportunistically, resulting in a clear set of goals, strategies, and innovative ideas necessary for thriving in competitive and dynamic environments.
- **Problem-solving and decision-making:** This encompasses the ability to identify and assess challenges and issues, leverage available resources for brainstorming alternative solutions, weigh the pros and cons of different options, and ultimately select the best course of action.
- **Self-reflection and learning to learn:** Self-reflection is the capacity to use reasoning to analyze one's thoughts and behaviors, evaluate personal growth, and identify areas for further development. Learning to learn refers to applying cognitive processes to personal learning—understanding what and how we learn—and using this knowledge to continuously acquire new skills and knowledge while striving for improvement.
- **Collecting, organizing, and analyzing information:** This skill involves locating, selecting, assessing, and organizing data to mobilize relevant information effectively. It also includes the ability to model and reorganize data from various sources to generate unique interpretations.
- **Planning and organizing:** This skill entails the ability to schedule and arrange tasks in order to complete them successfully within a specified timeframe, particularly in complex environments and situations.
- **Career management:** This includes the ability to set, organize, and pursue both short- and long-term goals with measurable success criteria. It also involves building mutually

beneficial share similar interests, as well as applying job search techniques and understanding work contexts to identify employment opportunities using labour market information.

Basic digital skills

Basic digital skills are a set of skills for performing basic tasks involving the use of hardware, software, and basic online operations. They make it possible for people to become digitally literate and thrive in both the business and society. Having a basic understanding of digital abilities can improve our lives by allowing us to communicate with others and access commercial, financial, and governmental services. Basic digital abilities include things like using simple hardware, simple software, and being safe when using the internet.

- **Use basic hardware:** The ability to use a keyboard, mouse, navigation buttons, touchscreen technology, and other hardware features to operate a computer, tablet, smartphone, or other digital device as necessary.
- **Use basic software:** The ability to handle files, access and modify privacy settings, word process, and troubleshoot simple programmes and applications.
- **Operate safely in an online environment:** The ability to explore, analyze, and share knowledge in a secure, morally responsible manner using fundamental online features, apps, digital learning and communication platforms, and media.

Basic skills for green jobs

These skills pertain to the abilities required to adapt to environmental regulations and requirements aimed at mitigating global warming. They underscore the importance of recognizing the increasing demands as we collectively move toward universally sustainable economies and communities. The transition to greener economies creates opportunities to establish respectable green jobs by fostering the development of skills that align with environmental legislation, sustainable business practices, eco-friendly technologies, and innovation. To cultivate environmentally conscious citizens and workers who prioritize efficiency and manage waste responsibly, governments, in collaboration with social partners, must provide targeted training and education.

- **Environmental awareness:** The capacity to understand and demonstrate knowledge of the physical environment and the importance of its protection.
- **Waste reduction and management:** The ability to effectively manage, utilize, and dispose of resources while safeguarding the physical and ecological world.
- **Energy and water efficiency:** The skill to use water and energy effectively in ways that conserve both the physical and natural environments.

Entrepreneurial skills in the Egyptian labour market

As Egypt's entrepreneurial ecosystem continues to grow and evolve, entrepreneurship skills have become increasingly valuable. These skills transcend traditional job roles and are essential for those looking to start their own businesses or contribute effectively within entrepreneurial settings. Here are some key entrepreneurial skills sought in the Egyptian labour market:

Creativity and innovation	Business planning and strategy	Networking and relationship building
Financial literacy and management	Adaptability and resilience	Market awareness and customer focus
Leadership and team management	Digital and technology skills	Legal and regulatory understanding

- **Creativity and innovation:** The ability to think creatively and transform ideas into actionable solutions that address community needs is crucial. Entrepreneurs in Egypt often face the challenge of distinguishing their products or services in competitive markets.
- **Business planning and strategy:** This involves formulating a long-term vision, establishing overarching goals that align with that vision, and identifying the necessary steps to achieve those goals. Key components include risk management, financial planning, and market analysis.
- **Networking and relationship building:** In Egypt's business environment, nurturing and maintaining relationships with stakeholders—including potential clients, investors, suppliers, and industry peers—is vital for the growth and sustainability of a business.
- **Financial literacy and management:** A solid understanding of financial concepts, coupled with the ability to manage budgets, cash flow, and financial forecasting, is essential for entrepreneurs. These skills enable informed decision-making and contribute to financial stability.
- **Adaptability and resilience:** In light of the economic and regulatory challenges in Egypt, entrepreneurs must be flexible in adapting to changing circumstances and resilient in navigating setbacks.
- **Market awareness and customer focus:** A profound understanding of market trends, consumer behavior, and competitive dynamics is essential for developing products or services that effectively meet customer needs.

- **Leadership and team management:** Entrepreneurs often need to organize and coordinate their team members to complete tasks efficiently and inspire their workforce to achieve business objectives. Effective leadership is key to fostering a productive and motivated team environment.
- **Digital and technology skills:** The ability to locate, analyze, utilize, share, and create content on digital devices such as computers and smartphones is increasingly important. Proficiency in digital skills is essential for engaging customers in Egypt's expanding digital economy.
- **Legal and regulatory understanding:** A thorough knowledge of local business laws, regulations, and compliance standards is crucial for maintaining ethical and legal operations in Egypt.

8.1 Opportunities for Egyptian workers abroad

Egyptian workers have numerous opportunities abroad, driven by the diverse demands of global labour markets, as well as the unique skills many of them possess. For instance, in the Gulf Cooperation Council (GCC) countries such as the UAE, Saudi Arabia, Kuwait, and Qatar, Egyptians can find employment opportunities in various sectors, including oil, construction, engineering, and healthcare. This is largely due to the region's rapid development and extensive infrastructure projects. In Europe, particularly in countries like Germany and the UK, skilled Egyptian professionals are in high demand across fields such as information technology, engineering, and healthcare. Similarly, North America, encompassing the USA and Canada, offers abundant opportunities in the technology, finance, and academia sectors, further encouraged by immigration policies designed to attract highly skilled labour. Germany, in particular, has emerged as a hub for advanced manufacturing and technological innovation, providing avenues for Egyptian experts in multiple domains. These prospects are further supported by favorable immigration policies and professional networks that aid in integration and career advancement. As a result, Egyptian workers can cultivate rewarding careers around the world, contributing their expertise to various industries while immersing themselves in diverse cultures and environments. Below is a detailed overview of these sectors and the skills required.

Information technology (IT) and digital technology	Skills required: • Software development: Proficiency in programming languages such as Java, Python, C++, and JavaScript. • Data science: Skills in data analysis, machine learning, and statistical programming. • Cybersecurity: Knowledge of network security, encryption, and risk management. • Cloud computing: Experience with cloud platforms like AWS, Azure, or Google Cloud.
Engineering	Skills required: • Mechanical engineering: Skills in CAD software, thermal systems, and manufacturing processes. • Electrical engineering: Knowledge in electronics, circuit design, and embedded systems. • Automotive engineering: Experience with automotive systems, testing, and vehicle dynamics.
Healthcare	Skills required: • Doctors: Possess medical degrees, specializations, and proficiency in patient care. • Nurses: Nursing qualifications, patient management, and emergency care skills. • Medical technicians: Expertise in diagnostic equipment and laboratory procedures.
Manufacturing and skilled trades	Skills required: • Electrical work: Knowledge of electrical systems, wiring, and troubleshooting. • Plumbing: Expertise in installation and repair of plumbing systems. • Industrial mechanics: Skills in machine maintenance, repair, and mechanical systems.
Oil and gas	Skills required: • Petroleum engineering, geoscience, drilling, refining, petrochemical production, maintenance, and operations.

Tourism and hospitality	Skills required: • Hotel management: Proficiency in hospitality management, customer service, and operations. • Culinary arts: Skills in international cuisine, food safety, and kitchen management. • Tour guiding: Knowledge of local history, languages, and tourism services.
Finance and business administration	Skills required: • Finance: Expertise in financial analysis, risk management, and investment strategies. • Accounting: Skills in financial reporting, auditing, and tax preparation. • Business consulting: Proficiency in business strategy, project management, and operational efficiency.
Construction and engineering	Skills required: • Civil and structural engineering expertise. • Project management and planning skills. • knowledge of building codes and safety regulations. • experience with construction software and tools. • Skilled trades such as electrical work, plumbing, and HVAC.
Retail and sales	Skills required: • Sales techniques and customer service expertise. • Experience in retail management and inventory control. • Knowledge of marketing strategies and market analysis. • Strong communication and negotiation skills. • Ability to work in a fast-paced, customer-focused environment.
Skilled trades	Skills required: • Technical expertise in specific trades (e.g., electrical systems, plumbing). • Certification and hands-on experience in the trade. • Knowledge of safety standards and regulations. • Problem-solving skills and ability to perform repairs and maintenance. • Strong work ethic and attention to detail.

9. Proposed recommendations for reforming the labour market in Egypt

Skill gaps in the labour market arise from multiple factors, including shortcomings in the education system, institutional frameworks, labour market policies and structures, economic strategies, geographical disparities, technological advancements, and financial resources. These gaps may be influenced by one or several of these factors concurrently.

The following recommendations outline strategies to bridge skill gaps and propose reforms and initiatives to enhance the employability, skills, and training programmes for youth and women, thereby improving their access to decent work in Egypt's formal economy:

- **Strengthen public-private partnerships in skill development** : Foster collaboration among government entities, educational institutions, and private sector employers to ensure training programmes are aligned with industry demands and labour market needs. Encourage private sector participation in curriculum development, apprenticeship programmes, and on-the-job training opportunities.
- **Expand access to Vocational and Technical Education and Training (TVET)**: Increase investments in TVET infrastructure, particularly in rural and underserved areas, to improve accessibility for youth and women. Promote TVET as a respectable pathway to skill development and decent employment while addressing societal perceptions and gender biases.
- **Emphasize soft skills and entrepreneurship training**: Integrate the development of soft skills—such as communication, problem-solving, and teamwork—into training programmes to enhance employability. Additionally, incorporate entrepreneurship education and support services to foster self-employment and micro-enterprise development, with a particular focus on empowering women.
- **Enhance career guidance and job matching services**: Develop comprehensive career guidance systems aimed at helping youth and women identify suitable career paths and training opportunities. Additionally, create effective job-matching platforms and services that connect skilled individuals with employers and quality job opportunities in the formal sector.
- **Promote digital literacy and E-learning initiatives**: Strengthen digital skills training to prepare youth and women for the digital economy and emerging employment opportunities. Utilize e-learning platforms and online training programmes to broaden access to skill development, especially in remote areas or during crises.

- **Address sociocultural barriers and gender disparities:** Launch awareness campaigns and initiatives to challenge stereotypes and advocate for gender equality in education and employment. Moreover, develop policies and support systems that enable a work-life balance, including flexible work arrangements and affordable childcare options.
- **Foster a supportive policy and regulatory environment:** Review and reform labour laws and regulations to ensure decent working conditions, social protection, and the formalization of informal employment. Establish incentives and support programmes that encourage employers to invest in training and skill development initiatives for youth and women.

Promoting recognition of prior learning (RPL) and skills certification:

- **Establish an efficient system for recognizing prior learning:** Implement a robust system that acknowledges informal and non-formal learning, including skills and competencies acquired through job experience, self-directed study, and community-based programmes.
- **Raise awareness of the benefits of prior learning:** Enhance understanding among key stakeholders—such as employers and educational institutions—about the advantages of recognizing prior learning. Emphasize its role in facilitating the transition from informal to formal employment.
- **Provide support and guidance for individuals:** Offer mentoring services, preparation courses, and guidance programmes to help individuals navigate the prior learning process. This will equip them with the necessary information to enhance their competencies.
- **Encourage collaboration among stakeholders:** Foster partnerships among government institutions, established employers (such as the Federation of Egyptian Industries and the Egyptian Federation of Tourist Chambers), and training providers to create and implement a widely accepted framework for recognizing prior learning across various sectors and regions.
- **Develop standardized assessment and certification processes:** Align assessment and certification procedures with industry standards and the National Qualifications Framework. Ensure that employers recognize these skills within the formal sector.
- **Establish accessible assessment services:** Create prior learning centers or facilitate access to assessment services, particularly in rural and underserved areas. This will increase access to recognition of prior learning for diverse groups, including informal workers, youth, and women.

By implementing a strong prior learning recognition system, Egypt can unlock the potential of its informal workforce and acknowledge the diverse skills and experiences they have gained through various channels. This recognition will help facilitate their transition to formal employment opportunities, address skills shortages in the labour market, and promote lifelong learning and continuous skills development, providing pathways for individuals to build on their existing competencies and pursue further education and training.

Specific recommended programmes for implementation

- **Skill gap assessment:** Conduct a thorough evaluation of the current skill requirements in Egypt to identify skill gaps and in-demand competencies. This assessment should distinguish between skills that are broadly applicable horizontally across various industries and those that are more specialized. It must align with local development plans and consider global technological advancements in the sector. Given the dynamic nature of industries, skill assessments should be updated periodically.
- **Training and upskilling for government institutions:** Provide training programmes for governmental bodies responsible for defining skill standards, overseeing technical education and vocational training, and conducting monitoring and evaluation (e.g., the Ministry of Trade and Industry, Ministry of Education, and Ministry of Labour), including capacity-building for educators.
- **Comprehensive Labour Market Information System:** Design a robust labour market information system that collects and updates data related to skill requirements for various occupations. This system should leverage big data technologies to analyze market trends and skill needs effectively.
- **Restructuring government training centers:** Restructuring governmental training centers to ensure their financial sustainability while enhancing the quality of training they provide.
- **Collaboration agreement for student data sharing:** Facilitate an agreement between large enterprises with private technical schools and smaller enterprises within the same field to share student information, ensuring all legal requirements are met, including obtaining student consent.
- **Training subsidies:** Implement subsidies to reduce training costs for technicians, especially in advanced technology fields. As the project progresses, these subsidies can be adjusted to encompass a broader range of skills and occupations, particularly those with transferable competencies across various roles.
- **Digital skills training programmes:** Offer training programmes focused on digital skills, particularly in collaboration with the Ministry of Telecommunications, targeting rural areas to enhance access to digital literacy.

References

- Assaad, R., & Arntz, M. (2005). Constrained geographical mobility and gendered labour market outcomes under structural adjustment: Evidence from Egypt. *World Development*, 33(3), 431-454.
- Assaad, R., & Krafft, C. (2015). Is free basic education in Egypt a reality or a myth? *International Journal of Educational Development*, 45, 16-30.
- Assaad, R., & Krafft, C. (2021). Labour market dynamics and youth well-being in Egypt: Evidence from the 2012 and 2018 waves of the Egypt Labour Market Panel Survey. *Economic Research Forum Working Paper Series*, No. 1505.
- Ghada Barsoum (2022). The Demand for Domestic Workers and Factors Influencing Employment in the Informal Economy: Evidence from Egypt. *IZA Discussion Paper No. 15147*.
- Krafft, C. (2016). Why is female labour force participation in Egypt so low? *Economic Research Forum Policy Brief*, No. 10.
- Nazier, H., & Ramadan, R. (2016). Factors affecting women's labour force participation in Egypt: Evidence from the 2012 labour force survey. *Economic Research Forum Working Paper Series*, No. 1069.
- Wahba, J., & Assaad, R. (2017). Flexible labour regulations and informality in Egypt. *Review of Development Economics*, 21(4), 962-984.
- Barsoum, G. (2016). Exploring the Challenges to Decent Work in the Informal Sector in Egypt. *Economic Research Forum Working Paper Series*, No. 1050.
- «Flexible labour regulations and informality in Egypt» by Jackline Wahba and Ragui Assaad. <https://bit.ly/41G3myo>
- Brouse, C. H., Basch, C. E., LeBlanc, M., McKnight, K. R., & Lei, T. (2021). Barriers and facilitators to vocational and technical education for informal sector youth in developing countries. *International Journal of Educational Development*, 83, 102357.
- ILO. (2021) "Shaping skills and lifelong learning for the future of work". <https://bit.ly/4bshheC>
- Calleja, J. (2022). Competency-based training for informal workers: Implications for youth employability. *International Journal of Training and Development*, 26(1), 74-90.
- GIZ. (2019). Technical and Vocational Education and Training (TVET) Reform Programme. <https://bit.ly/41oLRRR>
- ILO. (2020). Skills for Trade and Economic Diversification (STED) Programme in Egypt. <https://bit.ly/41G4gLi>
- ILO. (2021). Skills for Employment and Productivity in Sub-Saharan Africa.

- MSDE. (2022). Pradhan Mantri Kaushal Vikas Yojana (PMKVY). <https://bit.ly/4krtRyI>
- NSF. (2023). National Skills Fund. <https://bit.ly/4h8VbPF>
- World Bank. (2022). Technical and Vocational Education and Training (TVET): Transformation and Resilience during Uncertain Times - Lessons from the Training Assessment Project (TAP) and Global Good Practices. <https://bit.ly/4h2UbMQ>
- ETF (European Training Foundation). (2020). Covid-19 mapping exercise_ e-learning response. <https://bit.ly/4knBuWS>
- GIZ. (2019). Technical and Vocational Education and Training (TVET) Reform Programme. <https://bit.ly/41oLRRR>
- OECD. (2017). Enhancing advanced skills to better meet labour market demand <https://bit.ly/3F6RfBG>
- ETF (European Training Foundation). (2021). Working together to improve technical and vocational education and training in Egypt. <https://bit.ly/4bqvicC>
- EBRD. (2022) "EBRD boosts tourism sector skills in Egypt Tourism Skills Council. <https://bit.ly/3QK4U3U>
- ILO. (2020).» Bridging the skills gap for informal economy workers» <https://bit.ly/41jWW6p>
- LinkedIn Corporation, Global Green Skills Report 2022. <https://bit.ly/4i8WD5o>
- Barsoum, G. (2016). Exploring the Challenges to Decent Work in the Informal Sector in Egypt. Economic Research Forum Working Paper Series.
- ETF (European Training Foundation). (2020). Covid-19 mapping exercise_ e-learning response. <https://bit.ly/4knBuWS>
- IFC (International Finance Corporation). (2022). Digital Skills in Sub-Saharan Africa. <https://bit.ly/41GVzQX>
- ILO, (2017), "Towards Evidence-Based Active Labour Market Programmes in Egypt. Impact Report Series, Issue 4. <https://bit.ly/3F3W8eE>
- Krafft, C. (2016). Why is female labour force participation in Egypt so low? Economic Research Forum Policy Brief.
- OECD, ILO. (2020). Enhancing Workforce Skills for the Labour Market in Egypt.
- World Bank, the ILO, and UNESCO. (2023). "Building Better Formal TVET Systems: Principles and Practice in Low- and Middle-Income Countries". <https://bit.ly/41DEBme>
- ILO. (2015). Recognition of Prior Learning: Key Success Factors and Guiding Principles. <https://bit.ly/3F31tmt>
- Singh, M. (2015). Global Perspectives on Recognizing Non-formal and Informal Learning: Why Recognition Matters.
- UNESCO. (2018). Global Inventory of Regional and National Qualifications Frameworks 2017: Volume I. <https://bit.ly/43sHtnc>

- European Union. (2021). Technical and Vocational Education and Training Reform Programme (TVET Egypt). Retrieved from <https://bit.ly/3QFOIGx>
- USAID. (2022). Skills for Success Programme.
- UNESCO. (2023). “Enhancing TVET through digital transformation in developing countries. <https://bit.ly/4iovb3s>
- World Bank. (2024). Employment Promotion Project. Retrieved from <https://bit.ly/4imbaL6>
- ILO. (2020). Decent Jobs for Egypt’s Young People (DJEP). Retrieved from <https://bit.ly/4i4MXJm>
- European Bank for Reconstruction and Development (EBRD). October, 2023.” Advising the Ministry of Education and Technical Education on the Impact of Covid-19 on Future Skills Requirements and TVET Strategy Re-Prioritisation in Egypt”. <https://bit.ly/41Jrb8A>
- ETF (European Training Foundation). (2023). The Future Skill Needs in The Egyptian Energy Sector. <https://bit.ly/41HtB7i>
- Ministry of communications and information technology. August 2014. “ITIDA, IFC Help Improve ICT Skills in Egypt”. Retrieved from <https://bit.ly/4i9mPNq>
- International Labour Organization “ILO”,2015.»Enhancing the employability of individuals and the productivity of enterprises- the importance of core work skills. Retrieved from <https://bit.ly/41mbDWN>
- International Labour Organization, 2021, Global framework on core skills for life and work in the 21st century. <https://bit.ly/41aRnak>
- United States Agency for International Development “USIAD”.: April 2022, Workforce Egypt Assessment of Sector Skills Councils.



 **This publication was co-funded by the European Union. Its contents are the sole responsibility of the ILO and do not necessarily reflect the views of the European Union.**