



CBI
Ministry of Foreign Affairs

Value Chain Analysis IT Outsourcing sector Egypt

Commissioned by The Centre for the Promotion of Imports
from developing countries (CBI)

GPI Consultancy

June 2020



Value Chain Analysis

IT Outsourcing sector Egypt



23 June 2020

Prepared by Paul Tjia
GPI Consultancy, Rotterdam

Table of Contents

Terminology & abbreviations

1. Introduction

2. Management Summary

3. Export market and VC competitiveness

3.1 IT Outsourcing sector of Egypt

3.2 European Market Demand

3.3 Trends on the European market

3.4 European Requirements

3.5 Comparative and Competitive Position

4. Structure, governance and sustainability of the VC

4.1 Visualisation of the Value Chain

4.2 Exporters

4.3 Governmental organisations

4.4 Business support service providers (including commercial providers)

4.5 International organisations

4.6 European trade and industry

5. Opportunities and Obstacles in the Value Chain

5.1 Opportunities

5.2 Obstacles

6. Possible Interventions and Support Activities in the Value Chain

6.1 Possible interventions in the core Value Chain

6.2 Possible interventions in the Supporting Functions

6.3 Possible interventions in the Rules and Regulations

6.4 Tables

7. Conclusions

Annex A. Market Systems Development perspective of the ITO sector in Egypt

Annex B. Literature

Terminology & abbreviations

BPO: Business Process Outsourcing. The outsourcing of business processes such as customer interaction services (contact centres) and various types of back office work (e.g. accounting, market research, tax preparation). The generic term ITES (IT Enabled Services) is also used to describe this diverse range of activities.

Captive centre: a client-owned-and-operated service delivery centre, typically in a low-cost location, that provides service resources directly to their organisation. Although the work is done abroad, the foreign entity is owned by the own company and the foreign employees are own employees. This is not outsourcing.

EITESAL: Egyptian Information, Telecommunications, Electronics, and Software Alliance

Embedded software: specialised software for the particular hardware that it runs on. It is used to control the functions of hardware devices and is not directly employed by users.

GCC: Gulf Cooperation Council, consisting of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

IP: Intellectual Property. Refers to rights of ownership in an asset such as a software product.

ITIDA: Information Technology Industry Development Agency

ITO: Information Technology Outsourcing. The use of external service providers to deliver IT-specific business processes. ITO can be divided into Cloud Services, Infrastructure Outsourcing and Application Outsourcing. The focus of this report is on Application Outsourcing (e.g. programming, testing of software or building websites and apps).

KPO: Knowledge Process Outsourcing. This relates to specific, high-end knowledge work, such as Research & Development, Intellectual Property research and legal support services.

Ministry for Communications and Information Technology (MCIT)

MENA: Middle East and North Africa.

Nearshore: from a European perspective, outsourcing destinations in Central or Eastern Europe or North Africa are referred to as 'nearshore'. The opposite is 'farshore'.

Outsourcing: the tasks and processes that are contracted to be performed outside the boundaries of the firm: they are to be performed by a third party. This external party can be located in the own country, or abroad.

Offshore outsourcing: the work is done by a third party abroad, and in a cheaper location (e.g. a developing country).

Offshore sourcing (or offshoring): the generic term for using employees from developing countries, where the labor costs are much lower. This can be done in the form of outsourcing, or by using a captive centre.

SSC: Shared Services Centre. A centre (mostly a captive centre in an offshore location) that provides business services to different parts of a large organisation or a group. Unlike outsourcing, this involves the centralisation of an organisation's administrative and back office functions.

1. Introduction

CBI (Centre for the Promotion of Imports from developing countries) is part of the Netherlands Enterprise Agency, funded by the Netherlands Ministry of Foreign Affairs. The mission of CBI is to connect Small and Medium-Sized Enterprises (SMEs) in developing countries to the European market and thereby contribute to sustainable and inclusive economic growth. (Note: for this report, SMEs are companies with 25 – 500 employees).

CBI does so by implementing 3 – 5-year projects in a specific export value chain (VC) in a specific country, focusing on seizing opportunities for exports to Europe and tackling obstacles hindering these exports. CBI projects are integrated, meaning they involve both SME exporters and the export enabling environment. The IT Outsourcing (ITO) service sector in Egypt has great potential for further development, and would fit well in the CBI programme portfolio.

Within this context, a Value Chain Analysis (VCA) has been carried out in order to identify opportunities, which obstacles SMEs operating in this segment face and which interventions are needed. This specific VC has been selected because:

- Egypt has a significant IT outsourcing sector with potential to further develop, thereby creating jobs
- CBI is interested in including IT outsourcing in its programme portfolio, and Egypt offers opportunities in this sector
- It is unknown which specific services offer the best potential for CBI interventions, and answering this question is one of the main goals of this project.

The assignment builds on the previous stages in the research process, in particular the fact-finding mission that was carried out in August 2019. Based on this mission, the focus for this VCA has been set to cover the ITO sector, excluding the Business Process Outsourcing (BPO) sector, based on the findings that BPO is quite developed in Egypt and consists of larger companies with large multinationals as clients.

The ITO sector, on the other hand, consists of SMEs with less experience and visibility in Europe, with potential for CBI to have a greater impact. Startups have also been included in the research.

This report has four major elements:

1. export market and VC competitiveness
2. structure, governance and sustainability of the VC
3. opportunities and obstacles in the VC
4. possible interventions and support activities in the VC

The report has been made through a combination of desk research, meetings with relevant stakeholders and a VCA mission, which took place in March 2020. The desk research included a review of existing research reports related to the Egyptian outsourcing sector (an initial list of documentation is presented in Annex C).

It must be noted that statistical data about the Egyptian IT sector is not always (publicly) available.

2. Management Summary

IT Outsourcing consists of a range of IT-services; the main topic of this report is application outsourcing, such as software support and custom application development. Thousands of Egyptian IT companies are active in this field and are working for domestic clients. Hundreds of Egyptian firms are also offering these services to foreign markets, especially to clients in the Gulf region (GCC). The European markets are served on a much more limited scale.

The Egyptian IT sector was already becoming interested in exporting its services to foreign markets around the year 2000. As a matter of fact, also in the year 2000, CBI started to support a small number of Egyptian IT companies. This was, however, in a very early 'infant' stage; providing outsourcing services to foreign clients became more common around 2008. Up until 2011, Egypt had a fast-growing IT export industry, primarily focused on serving clients in Europe and the Middle East. However, the political turmoil of 2011-2013 negatively affected the outsourcing sector. In recent years, the industry has shown growth again.

Because of the growth for outsourcing in the main export markets, the outsourcing sector in Egypt is expected to grow over the coming years – provided the internal political situation does not deteriorate.

The current Egyptian IT exports are valued at around EUR 712 million, creating a total of 161,000 jobs.

The United States and European markets are the key markets for outsourcing services, while the market share of Europe is around 30% of the worldwide market. The European market for IT outsourcing is also expected to grow over the next three years. Any company from a specific country, including Egypt, that can deliver either sector or domain competencies, has a distinct advantage in Europe. It is important to specialise in something specific and remain one step ahead. Egyptian IT companies have experience with several of the new trends, such as big data, mobile application development, Internet of Things and Virtual and augmented reality.

Companies in Europe have been using foreign ITO suppliers for more than 30 years. India has been the pioneer and is still the market leader as an outsourcing destination, but projects have also been conducted in many other countries. A relatively limited number of service providers from the Middle East or North Africa are targeting Europe.

Egypt has potential to be a serious outsourcing destination, and the country has a number of strengths. It has invested in developing local physical infrastructure to provide better utilities and telecommunications connectivity. The available talent pool is a corner stone of Egypt's unique position among the global outsourcing destinations: out of the annual pool of 500,000 university graduates, nearly 50,000 have IT-related degrees. There is also the possibility of cost arbitrage, due to Egypt's competitive labour rates and the floating of the currency.

Egypt has now a large number of IT firms, and those working for foreign clients mainly target the Middle East and North Africa region. Others have clients in Europe (even with local representations). While global services delivery operations have been mostly concentrated in Cairo, other large cities such as Mansoura, Asyut, Alexandria and Luxor also have well-developed local economies and provide access to large talent pools. Egypt is also one of the fastest-growing entrepreneurship regions in the Middle East and North Africa.

In the Value Chain, governmental organisations play an important role, such as the Ministry for Communications and Information Technology (MCIT) and the Information Technology Industry Development Agency (ITIDA) for spearheading the development of IT in Egypt. The

Egyptian Information, Telecommunications, Electronics, and Software Alliance (EITESAL) is a private sector, non-profit entity of IT-related companies.

Dozens of multinational IT companies, such as IBM, Dell EMC and Microsoft, have invested in Egypt as part of their global operations. Most of these are American and are used as captive centres (working for internal clients). There are also European entities based in Egypt, such as Valeo from France or CrossWorkers from Denmark.

There are opportunities for the growth of Egyptian outsourcing services to Europe. European firms are increasingly becoming interested in outsourcing. A main reason is that the demand for IT professionals in Europe is very high, resulting in a shortage of staff. Cost reduction is another reason for clients to outsource to developing or emerging countries. Egypt has a specific advantage, compared with many other outsourcing destinations: it could be used as a gateway for European companies to larger export markets such as the Gulf region.

There are also key obstacles that hinder doing business with Europe. For example, Egypt is not well known in Europe as a potential outsourcing destination. For most Egyptian companies, exposure to European markets has been limited. Only a limited number of Egyptian firms are conducting systematic marketing and branding activities in Europe, or can make use of a subsidiary or marketing office.

For CBI, there are interventions and support activities possible in the Value Chain. CBI could consider support in the field of coaching and training, since many Egyptian SMEs have insufficient business and marketing skills to market their ITO services and to attract clients in Europe. There are currently barely any specific export trainings being offered in this field (except for a new export readiness training to be offered by EITESAL).

Since a main obstacle for Egyptian companies are the difficulties in penetrating European markets, CBI could consider facilitating a B2B matchmaking project, where the actual marketing is also done via external brokers and agents. CBI could also offer advice and support related to strategy and branding, including organising workshops in Egypt.

When designing the actual activities, the Market Systems Development approach will be taken into account. It should also be complementary to existing activities done by business support organisations such as ITIDA and EITESAL, while it is also important to evaluate similar activities that have been conducted in the past.

Note: impact of the corona crisis.

This report was compiled at the beginning of the coronavirus outbreak. This pandemic will have a serious economic impact, depending on several factors, including the duration of the lockdowns.

So far, the global IT sector has been less vulnerable than other sectors in the economy. Working from home is becoming standard, so other forms of remote work - including offshore outsourcing to foreign countries - will be less difficult to sell than in the past. In an economic recession, the number of (new) IT projects will decline, but because of the need of cost reduction, the interest in service providers from developing or emerging economies (including Egypt) could grow. Among this group, there will be a need for partners based in Europe, in order to improve their marketing and sales activities - also because of the difficulties in travel and personal meetings.

3. Export Market and Value Chain Competitiveness

In order to gain an understanding of the potential the European market offers for the services in the Value Chain and the competitiveness of the VC in Egypt, various indicators have been addressed. The focus of the value chain is on IT Outsourcing: the use of external service providers to deliver various types of IT-services. The European demand for these services will be described, including the latest trends. This will be followed by the comparative and competitive position of Egypt, as a potential provider of these outsourcing services.

3.1 IT Outsourcing sector of Egypt

IT Outsourcing consists of a range of IT-services, such as cloud services, infrastructure outsourcing and application outsourcing. The main topic of this report is application outsourcing. Application-related IT services include software support and installation, application consulting and customisation, custom application development, and application management outsourcing services.

Tens of thousands of Egyptian IT companies are active in this field and are working for domestic clients. Hundreds of firms are also offering these services to foreign markets, especially to clients in the Gulf region (GCC). These firms are serving European markets on a much more limited scale. Egyptian firms are active in various horizontal markets, such as programming, customised software development, software maintenance, testing of software, website design & development, mobile applications development, augmented & virtual reality services and embedded software development. Other categories are system integration, Big Data and Business Intelligence and cloud solutions.

A broad range of buyers are being served, and examples of the vertical markets (types of industry) are finance, banking, insurance, government, education, telecom, tourism, fashion & retail, hospitality, construction, real estate, manufacturing and health care.

The Egyptian software sector was already becoming interested in exporting its services to foreign markets around the year 2000. As a matter of fact, also in the year 2000, CBI started to support a small number of Egyptian IT companies. This was, however, in a very early 'infant' stage; providing outsourcing services to foreign clients became more common around 2008. In that year, the international promotion of Egypt as an outsourcing destination was done on a more active scale, when various organisations became actively involved in international promotion, using the branding campaign 'Egypt On'. One of these organisations was ITIDA (Information Technology Industry Development Agency, see chapter 4.3), together with ITEC (Information Technology Export Community)¹.

ITEC consisted of almost 100 companies focused on IT (and BPO) export and international business development, with a total employment of around 15.000 IT professionals. Around 50% of the business volume was generated in international markets. ITEC's vision was to increase IT export sales by 50% every year until 2015; brand Egypt as a top quality destination; position IT as a main revenue stream for Egypt and promote Egypt as a gateway for Africa and the Arabic world. (Note: ITEC had to cease its promotional activities in 2011, since no funding was available anymore, and it is not possible to check on all its accomplishments. Any institutional knowledge was not stored centrally).

At that time, and supported under President Mubarak, trade missions took place to Europe (e.g. Germany, Ireland, UK), the US and especially to the Gulf countries. Dozens of B2B events were organised, with support from the Egyptian Diplomatic Missions (economic

¹ ITEC ceased its activities around 2011; discussions took place with former representatives

councillors) abroad. ITEC estimated that the revenues in offshore IT services were around EUR 130 million in 2005 and EUR 260 million in 2010² (note: this figure rose to EUR 712 million in 2017).³

Up until 2011, Egypt had a fast-growing IT export industry, primarily focused on serving clients in Europe and the Middle East. However, the political turmoil of 2011-2013 negatively affected the outsourcing sector. This was not because of the civilian protests, since these had less impact than perceived on the global delivery of services. The providers were able to continue serving their existing clients who continued their contracts, since disruption to services was minimal. However, potential new clients in Europe and the US were very sceptical due to the political instability and new customer business grew at a much slower pace. (Note: at that time, the Indian IT export sector saw an annual growth rate of around 10%). Because of these negative buyer perceptions and challenges, Egyptian service providers focused on business in the Middle East and Africa, where a client base already existed.

Over the last years, the industry has shown growth again (it is not clear when this started). There are now over 100 countries being served from Egypt (both ITO and BPO), and the service delivery takes place in over 20 languages. There are no statistics available about the export volumes to the different destinations, but the regional markets are the most important⁴.

Because of the growing demand for outsourcing in the main export markets, the outsourcing sector in Egypt is expected to continue growing over the coming years – provided the internal political situation does not deteriorate.

A study by Capgemini Consulting⁵ in 2017 estimates the total IT market size in Egypt in 2016 at EUR 2.18 billion (of which EUR 518 million domestic and EUR 1,6 billion in exports). It is expected that the industry would reach about EUR 2.3 billion in exports by 2020, creating a total of around 161,000 jobs.

Currently, Egypt's ICT sector (including ITO and BPO) is the fastest growing sector (16%) and largest contributor to GDP growth – in 2013, it was responsible for 4,4% of the GDP⁶.

According to this study, the provision of software-related outsourcing services and embedded software has been identified as a potentially interesting opportunity for Egypt's ICT export endeavours. By positioning itself as an outsourcing provider in this market, Egypt could profit from an export market growth of more than 7% and take advantage of the rising cost pressure, need for faster time-to-market and skills shortage in the embedded software segment.

There are no statistics available on the value of exports to individual export destinations, or on the market developments over the years. It must also be noted that other reports are using different figures⁷. According to a report of IDC⁸, the combined IT, BPO, and KPO

² figures are from ITEC presentations

³ IDC. Egypt: The Journey Toward Becoming the Preferred Offshoring Hub (2018)

⁴ for the 100 participating companies in the Export-IT rebate programme of ITIDA, the top exporting destinations were USA, UAE, Canada, China and UK

⁵ Capgemini Consulting. Embedded Software and Software Outsourcing to Egypt (2017)

⁶ <https://opentoexport.com/article/ict-sector-in-egypt/>

⁷ reasons for the different figures: countries do not always collect data; companies do not make the figures available; no systematic research is being done; no standard research questions and definitions

⁸ IDC. Egypt: The Journey Toward Becoming the Preferred Offshoring Hub (2018)

export market in Egypt is forecast to grow from USD 3.2 billion (EUR 2.9 billion) in 2017 to USD 4.1 billion (EUR 3.7 billion) by the end of 2019 and USD 4.7 billion (EUR 4.3 billion) by the end of 2020. (Note: these IDC projections were made on 13% growth rates, while the sector's growth figure recorded by MCIT was 16% in 2019).

The size of the Egyptian BPO exports is much larger than the export of IT services:



Figure 1. Egypt's Export Market Size, 2017 – 2020 (USD million)

In above figure, the IT exports (USD 771 million, or EUR 712 million, in 2017) consists of both IT Outsourcing (offering services to external foreign clients) and the work done by captive centres (mostly offices of multinational, working for internal clients only).

The captive IT services market in Egypt totaled USD 464 million, or EUR 428 million, in 2017 and is slated to grow to USD 571 million, or EUR 527 million, in 2020. Especially leading multinational IT companies such as IBM, Mentor Graphics, Dell EMC, and Microsoft have established large centres in Egypt. These captive centres are mainly working for users within the own organisation. The number of European captive centres is more limited (one of the largest is Valeo from France).

According to the IDC report, the offshore IT services market in Egypt stood at USD 306 million USD (EUR 282 million) in 2017 and is forecast to total USD 402 million (EUR 371 million) in 2020, representing a Compound Annual Growth Rate of 9.4% over that period. Application-related IT services, which include software support and installation, application consulting and customisation, custom application development, and application management outsourcing services are the most widely offshored IT services.

The main markets are the Gulf countries, where the main reasons for the export success are similarities in language and culture, existing personal networks (and where many Egyptian IT staff is employed) and where visas can easily be obtained. But there is also a lot of competition in the region, and the business is not always sufficient to sustain the company. In EU, the projects can be more profitable than in the Gulf countries and are also more professionally organised.

In general, even if an Egyptian IT company has foreign clients, it will also work for domestic clients (IT Worx⁹ is one of the few Egyptian firms working only for foreign clients). This is a different situation than many other outsourcing destinations, where IT companies are often 100% export oriented.

The providers of outsourcing services are mostly Egyptian-owned. Only a limited number of foreign companies have established an office in Egypt in order to offer services to external clients. Some of these are (partly) US-owned. Andela, the American outsourcing firm for software developers, has extended its reach to North Africa by launching a fully remote centre in Egypt in November 2019. Andela already has an estimated 1,200 software engineers with teams across Rwanda, Nigeria, Uganda and Kenya.¹⁰ One of the best-known European outsourcing providers is Cross Workers from Denmark¹¹.

Within outsourcing, the interaction between Egyptian provider and the foreign client can differ. Some companies only hire staff on behalf of the client, while the client manages the IT projects directly with these remote employees. Other Egyptian companies manage the projects themselves, with their own staff (consisting of Egyptian project managers and developers).

3.2 European Market Demand

The various reports about the size of the markets all expect growth in the global and European markets, but it must be noted that they give different figures. (Figures can differ because of various reasons; for example: there is no systematic research on IT Outsourcing; different sub-sectors are or are not included in the report, etc.)

According to Deloitte¹², the value of the global ITO market in 2018 is EUR 378 billion; this is expected to grow to EUR 478 billion in 2023. Application outsourcing (e.g. software development) is one of the main sectors within IT outsourcing. A different figure is provided by IDC¹³: the global offshore IT services market totalled EUR 63 billion in 2015 and is expected to expand at a Compound Annual Growth Rate of 9.7%, to EUR 90 billion by the end of 2019.

The United States and European markets are the key markets for outsourcing services, while the market share of Europe is around 30% of the worldwide market. The European market for IT outsourcing is also expected to grow over the next three years. However, Europe is not a uniform market for ITO providers. In general, the three most important factors that determine whether countries are important target markets are market size, IT skills shortage and openness towards international outsourcing (which also has a cultural background: Western European countries are, for example, more likely to use outsourcing services from abroad than Southern European nations).

The European Commission expects there could be up to 756,000 unfilled vacancies for IT professionals in Europe by 2020. Because of this shortage, 40% of European companies have difficulties finding IT specialists. While this situation used to be common for Western Europe, this shortage has also become apparent in Central and Eastern Europe. The IT skills

⁹ <https://www.itworx.com/>

¹⁰ <https://www.itida.gov.eg/English/PressReleases/Pages/Andela-Launches-Egypt-as-First-Fully-Remote-Center.aspx>

¹¹ <https://www.crossworkers-egypt.com/>

¹² Deloitte. Outsourcing and Shared Services 2019-2023. Global, Middle East and UAE industry outlook (2019)

¹³ IDC. Egypt: The Journey Toward Becoming the Preferred Offshoring Hub (2018)

shortage depends on the country and sub sector, and is expected to increase as a result of the ageing European population and decreasing interest in IT education. Other aspects, beside skill shortage, can also play a role in deciding to outsource IT to an offshore location, such as focusing on core competences, cost structure optimisation, flexibility and scalability of operations, as well as to speed up time-to-market cycles.

From a market size perspective, the United Kingdom, Germany and France are the largest markets; together, these countries represent more than 60% of the total European market. Compared with the US, European companies are quite conservative regarding offshore outsourcing. They would often prefer to bring in people from other countries rather than move their software production to an offshore location.

It must be noted that Europe cannot be considered a 'single' outsourcing market: every country is different. Openness towards outsourcing strongly depends on culture, language, proximity and historical ties. The United Kingdom is most open to outsourcing and least sceptical towards developing countries, followed by Sweden, Norway, Finland, Denmark and the Netherlands (given its small size, Denmark is already quite active in Egypt). Germany and Eastern Europe are less open to working with a foreign provider, and will limit themselves to outsourcing to a local supplier. Nevertheless, Central and Eastern European countries are increasingly being considered potential partners rather than competitors, mainly because they too are experiencing increasing skill shortages and rising salaries. France is quite reluctant to outsource except when it is to French-speaking countries. Spain is open to Latin American countries. When deciding on a new target market, Egyptian companies will have to conduct serious market research. Often, already having a client or a local person who is willing to assist in marketing and sales activities will make the selection for a specific country easier.

Regarding the **vertical markets**, the financial services sector is the sector where most ITO takes place, followed by the manufacturing, energy and travel, transport and leisure sectors. The greatest growth in ITO can be found in business services, financial services (FinTech), health care and pharma, and retail.

Among the largest **horizontal segments** in the ITO market are Big Data, Blockchain technologies, Internet of Things, Machine Learning & Artificial Intelligence, Mobile Applications, cybersecurity and Virtual Reality / Augmented Reality.

The potential and demand for different ITO services in Europe depends on company size, as large and small companies outsource different services. In general, service providers focusing on niche markets, innovative emerging technologies or offering significant software development capacity in areas where there is the highest demand/skill shortage will have the best chance of successfully entering the European market. Larger organisations seek significantly more artificial intelligence and automation/robotics experts than smaller organisations. These technologies are early in their development and attract investment from the organisations with the scale, and budgets, to experiment.

In addition to outsourcing behaviour, it is important to remember that working with large companies is different to working with small companies, as flexibility and efficiency do not equal up. Although there are some exceptions, the general rule is that large companies prefer to work with large companies and are not likely to outsource important software developments to small and medium-sized enterprises. For small and medium-sized enterprises from developing countries, it is recommended to focus on companies with 10 - 500 employees. Companies with more than 500 employees are difficult because they generally open their own offices abroad, as a captive centre. Otherwise, they will prefer to work with a very large outsourcing provider, and not a SME.

Any company from a specific country that can deliver either sector- or domain-competencies, has a distinct advantage in Europe. It is important to specialise in something specific and remain one step ahead.

3.3 Trends on the European market

There are several promising trends in the European (and also the worldwide) outsourcing market¹⁴. Big Data, 5G and Artificial Intelligence have served as triggers and enablers for several other trends and innovations. Currently, opportunities lie in big data, mobile and cloud application development, the (Industrial) Internet of Things, virtual and augmented reality, blockchain, machine learning and in the mastering of technologies related to these trends.

1. Big data revolution. Many European companies and organisations have enormous data sets that they do not and/or cannot use yet, but an increasing number of companies are adopting big data services. Further enhancement of machine learning technologies will also increase the potential of big data. The growing trend combined with a skills shortage and further developments in data collection services, including those related to the (Industrial) Internet of Things, means there are opportunities.

2. Demand for mobile application development. The use of mobile devices like smart phones and tablets has become commonplace in Europe, and the demand for mobile application development continues to grow. Many European companies outsource mobile application development to specialised service providers. The most promising strategy would therefore be to develop tailor-made mobile applications, focusing on niche market segments or company- and industry-specific solutions. The enterprise market is especially interesting because enterprise apps generate greater revenue than consumer apps.

3. The Internet of Things is on the rise, both with consumers and businesses. IoT refers to objects being connected and interconnected to the internet. These 'things' are embedded with electronics, sensors, software, actuators and network connectivity. It is estimated that, by 2025, there will be 5 billion connected devices in Europe. Germany, the United Kingdom, France and Italy show the highest level of IoT adoption in Europe. In 2019, their spending on IoT solutions was expected to exceed €31 billion, €22 billion, €22 billion and €17 billion respectively.

4. Virtual and augmented reality are becoming widely available. Virtual Reality (VR) technology uses software to replicate a real or imaginary environment. It allows a user to interact with this environment by simulating their physical presence. Augmented Reality (AR) technology overlays computer-generated information onto a live view of a real environment. Industry experts forecast exponential growth (e.g. the VR and AR market size is expected to increase from an estimated EUR 15.2 billion in 2019 to EUR 145 billion in 2023). European companies that use VR and AR technology do not always have the necessary expertise to develop their own system and content.

5. Blockchain technology is put into practice. Blockchain was originally created to record cryptocurrency transactions and has now become a hot topic with broader applications. There is a continuing discussion about whether blockchain is a fad or an opportunity. While blockchain technology is not (yet) widely applied, many industry experts think it has great potential.

¹⁴ CBI. Which trends offer opportunities on the European outsourcing market? (2019)

Egyptian IT companies have experiences with several of these trends, such as big data, mobile application development, Internet of Things and Virtual and augmented reality. There is currently not much experience with blockchain technology (these skills are more widely available in Eastern Europe or Asia).

According to IDC¹⁵, Egypt should focus on some niche skills such as product development and product engineering, R&D, big data, IoT, mobility, translation, and high-end KPO to distinguish itself and remain relevant in the global market.

In a recent report¹⁶, CBI stressed the need to become a specialised IT services company that combines technology know-how with domain knowledge. This also applies to Egypt, and examples of such combinations are the following:

- (Industrial) Internet of Things / Industry 4.0 with integration of Big data technology
- Virtual Reality/Augmented Reality/mixed applied in, for example, TravelTech with integration of Big data.
- Machine learning, robotics, Artificial Intelligence and Blockchain technologies.

It must be noted that there is limited supply in Europe because these specialised services are challenging to obtain and they require a high level of human capital. So Egyptian firms will also struggle to acquire and retain workers (due to brain drain) with that required level of human capital.

3.4 European Requirements

Service providers wanting to enter the European outsourcing market have to comply with several legal and non-legal requirements¹⁷. Examples of these requirements:

Copyright (legal protection of computer programs) is important. The European Union has established specific rules to protect computer programs by means of copyright. Companies have to make sure not to breach any copyright when developing software on behalf of clients.

Personal data protection, since privacy is highly protected in Europe. The European Union has several directives in place for this purpose. Providers that do not respect these directives may be subject to enforcement actions and/or possible claims, even if they are located outside Europe:

- The new General Data Protection Regulation (GDPR) came into effect on 25 May 2018. This regulation is designed to protect individuals in Europe from privacy and data breaches. These new rules were introduced to give people more control over their personal data and let businesses benefit from a level playing field. The GDPR applies to all companies processing the personal data of individuals in Europe, regardless of the company's location.
- The ePrivacy Directive (2002/58/EC), commonly known as the 'cookie law', contains specific regulations for data protection in the electric communications sector.

Clients can also have additional requirements. For example, a European buyer may only want to do business with companies that have a quality management system in place. Such

¹⁵ IDC. Egypt: The Journey Toward Becoming the Preferred Offshoring Hub (2018)

¹⁶ CBI. What is the demand for IT Outsourcing Services on the European market? (2019)

¹⁷ CBI. Which requirements must outsourcing services comply with for the European market? (2019)

a system shows that the provider is well organised and able to deliver the required service quality. There are several common options:

- The best-known quality management standard is ISO¹⁸ 9001:2015. It aims to ensure that the company can provide its customers consistent, good-quality products and services. It is possible to obtain an ISO 9001:2015 certification, but this is not always a requirement.
- Another option is the Capability Maturity Model Integration (CMMI), which has been adopted worldwide. There is a 1-5 maturity level rating, indicating the improvements in multiple process areas. CMMI Services helps to improve the capability to provide customers with quality services.
- Agile-related certifications, to be able to work professionally with methodologies such as Scrum, Kanban, Lean and extreme programming (XP).

Since international IT outsourcing is now more common, the demand for certain certifications is less important than it was in the past. There are also sector-specific standards. Sometimes, European buyers may require providers to comply with these standards or code of practice. Examples are:

- Basel II and Basel III - finance and banking
- HL7 - healthcare
- PCI DSS - payment cards
- COPC or ISO 18295-1:2017 - contact centres
- Code of Practice for Cloud Service Providers.

Training on these topics is available in Egypt (e.g. on Base, COPC) or in the region, such as in Dubai.

Data security is one of the main challenges for service providers. This includes both data protection and recovery systems. Many European buyers may prefer the implementation of an information security and management system, especially in industries in which security is essential, such as finance and banking or mobile applications. The ISO 27000-series contains common standards for information security.

Corporate Social Responsibility. Corporate Social Responsibility (CSR) refers to companies taking responsibility for their impact on society. It makes companies more sustainable and 'green'. Socially responsible companies pay attention to the following concerns in their policy: social; environmental; ethical and consumer and human rights.

CSR is becoming especially important to large companies and governments in Northern and Western Europe. Many European companies involve their suppliers in their CSR policies. In the future, CSR may well become a direct selection criterion. Having a well-documented CSR policy may therefore give a competitive advantage over companies without one. ISO 26000 provides guidance on CSR¹⁹.

The International Trade Centre (ITC) has the free online course 'Standards and Certifications for IT and ITES Outsourcing'²⁰, which examines the role of standards and best practices as keys to competitiveness for small and medium-sized enterprises involved in information technology (IT) and IT-enabled services (ITES) outsourcing. In addition to introducing the various ways in which enterprises can demonstrate compliance with specific organisational

¹⁸ ISO: International Organisation for Standardization

¹⁹ CSR in outsourcing deals with various topics, including promoting worker health and safety, community involvement, philanthropy and environmental responsibility

²⁰ <https://learning.intracen.org/course/info.php?id=207>

and individual standards or best practices, it gives SMEs the tools to evaluate whether or not certification is necessary for them and, if so, the best way of successfully achieving it. (Note: ITC offers more courses related to outsourcing, such as 'Cross-Border IT and ITES Outsourcing'²¹).

3.5 Comparative and Competitive Position

Companies in Europe have been using foreign ITO-suppliers for more than 30 years. India has been the pioneer and is still the market leader as an outsourcing destination. According to the Indian Association NASSCOM, the value of Indian IT exports in the year 2018 was around EUR 64 billion, with a growth of 7.7% since 2017. The main destination is the USA (61% of its exports), the UK (18%) and Continental Western Europe (12%).

European projects have also been conducted in other Asian countries, like Pakistan, Bangladesh, Nepal, China, Indonesia and the Philippines. Compared with India, however, these projects are much more limited in size and in number. Since the 1990s, among the European users of outsourcing services, the importance of the Central and Eastern European region has been rising, such as Poland, the Czech Republic, Serbia, Romania, Bulgaria and Russia.

A relatively limited number of service providers from the Middle East or North Africa are targeting Europe. Egypt has the potential to be a serious outsourcing destination, and the country has a number of strengths, including well-educated ICT graduates, competitive labor costs, a good command of English and many other languages, proximity and a same time zone advantage with Europe, and the support of the government. Some important factors are:

Human capital

Contrary to many West-European countries, Egypt has obviously no shortage of staff. The available talent pool is one of the cornerstones of Egypt's unique position among the global outsourcing destinations. It is the aspect that provides organisations that are already operating in Central or Eastern Europe the opportunity to scale further. Both Egyptian firms and European clients have mentioned that Egyptian employees are eager to learn and to improve themselves.

Egypt has more than 100 million inhabitants. With a quarter of the country's population between the ages of 15 to 28, it has one of the youngest populations globally, and a high number of students graduating from universities each year. According to World Bank data, Egypt has one the largest tertiary education enrolments across the Arab world and Middle East. According to MCIT²², out of the annual pool of 500.000 university graduates, nearly 50.000 have IT-related degrees. 40 - 50% of the graduates of computer science are women, but this number drops to 30% or lower in the IT workforce (in the BPO sector, such as call centres, the female participation is higher). According to EITESAL, the percentage of women working in the ICT sector is 20%²³. Note: the EFT (European Training Foundation) has made a comparison of women and work in Egypt between the tourism sector and the ICT sector²⁴.

²¹ <https://learning.intracen.org/course/info.php?id=179>

²² MCIT. EGYPT- the destination of choice (2018)

²³ <https://www.slideshare.net/EITESANGO/eitesal-gender-diversity-initiative-launching-day>

²⁴ ETF. Women and Work in Egypt Tourism and ICT Sectors: A Case Study (2011)

Figures about (youth) unemployment in the IT-sector have not been found, since there is no breakdown for the industry. There is however unemployment among this group. On a country level, the unemployment rate was 8% in the fourth quarter of 2019.

Academic curricula are steadily being altered to include the newest technologies. In addition, major enterprises such as Cisco and Microsoft are partnering with educational institutions to offer practical training programs and internships to technology students. The focus areas are primarily mobile development, big data, and IoT. For example, major research universities like Nile University have started offering diplomas in big data and analytics to students.

In addition, there are options for professional training and certification, and it is not difficult to find training. Every year, the institutions that focus on emerging ICT technologies receive thousands of applications for training programs that are supported by the government and international investments. Egypt has made a number of investments that are expected to boost the skills ecosystem in this regard, such as the ITIDA's Next Technology Leaders Initiative (NTL), which offers training in 43 Technology Tracks and provides government-funded degrees. For NTL from 2017 to date, 4,790 learners have graduated, and 1,450 are currently in training.

In 2019, ITIDA delivered technical training to 16,500 learners through its different programs, including their Software Engineering Competence Center (SECC), NTL, Next Coders initiative, the African App Initiative, etc. ITIDA is working on a new plan to build the capacity of 100,000 persons by next year. The plan for achieving this is still being discussed internally. As for other MCIT affiliates, in 2019, the ITI (Information Technology Institute) trained about 8,400 and the NTI (National Telecommunications Institute) trained 6,800.

Wages

Cost reduction is often a main reason for clients to outsource to developing or emerging countries. The possibility of cost arbitrage is due to Egypt's competitive labour rates and the floating of the currency. Because of its abundant supply of workers, Egypt offers competitive operating costs per full-time employee. The cost differences compared to other sourcing destinations in reach are high. Compared with labour cost for software development in popular nearshore locations for Europe, like Bulgaria, Romania or Poland, the savings reach up to about 60%. The average annual salary of the software developer position in Egypt is USD 7,500 USD (EUR 6,900) - in comparison, in Poland, the amount of such remuneration is estimated at around USD 24,000 (EUR 22,000) per year.

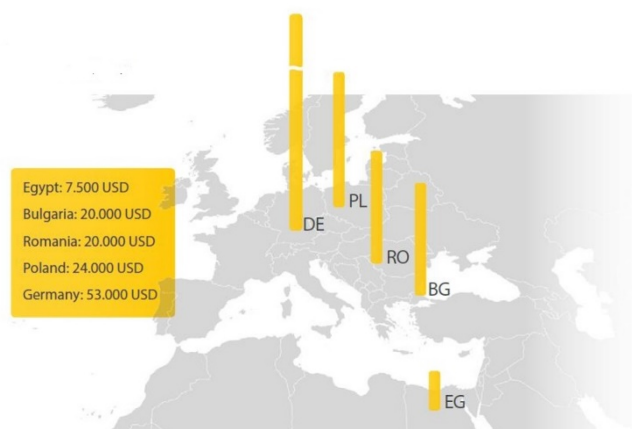


Figure 2. Average annual software developer salary²⁵

²⁵ source: payscale.com

The current average salaries of IT resources in Egypt are even somewhat lower than in other mature offshore destinations such as India or the Philippines. Additionally, the Egyptian pound has constantly depreciated over the past five years, significantly lowering the cost of operations in the country in comparison to many other nations (although these costs will slowly rise over the coming years). The Egyptian prices are competitive with regional players as well. However, because of the relatively low salaries in Egypt, there is a growing brain drain, where people are searching for employment in other countries.

Although the costs in Egypt are only marginally below India, an additional advantage is having both multilingual skills and cultural compatibility with Europe and the Middle East, a better command of English (no accents) and a closer cultural familiarity (compared to India).

Technological infrastructure

Egypt has invested in developing local physical infrastructure to provide better utilities and telecommunications connectivity. It now provides significant international bandwidth and a reliable power infrastructure. According to the World Bank's Doing Business 2019 report, Egypt held 96th position in the "Getting Electricity" measurement, representing an improvement from the 106th position it held in 2015. In this ranking, the score of India is 24, Romania 154, Serbia 104, Jordan 62, Lebanon 124, Morocco 59, Kenya 75, and the Philippines 29.

Several steps have been undertaken to improve the telecom infrastructure with planned to upgrade copper cabling to fibre optic. The existing eighteen global marine cables provide good connectivity to more than sixty countries, particularly on the Euro-Asian route. There are, however, some issues with high telecom costs for delivery to the Middle East.

With ongoing investment in highspeed broadband infrastructure, Egypt has one of the highest mobile phone penetration rates in the MEA region, and the number of mobile subscriptions per 100 inhabitants was 113% in 2017. In addition, 68.7% of mobile phone users in the country own a smartphone, which is an interesting statistic considering that 57% of the population live in rural areas. Commercial 4G services also launched in the country in early 2017. Major mobile telecom operators are: Mobinil, Vodafone and Etisalat.

In real estate, the rental costs are lower than Eastern Europe and other North African economies, with office space in major cities such as Cairo being competitively priced. By setting up technology parks, Egypt follows international best practices in providing a business environment conducive to ICT organisations, particularly international firms looking to establish a regional presence. It made it easier to attract leading American and European technology companies, offering a combination of high-quality infrastructure, local skills availability, and competitive costs compared to other parts of the region. Examples are the IT and BPO parks such as Smart Village and Maadi Park. SiliconWaha is developing "WE Parks" across various tier 2 cities like Borg El Arab, New Assiut, 10th of Ramadan, Sadat City, Beni Suef and Aswan. Compared with traditional offices in the cities, these modern high-tech parks are relatively expensive and are mostly used by large companies and multinationals; they are not easy affordable for the smaller companies.

The Egyptian Ministry of Communications and Information Technology also has plans to build a giant Datacenter Cluster. This cluster, which is to be established at the 60,000m² Borg El Arab Technology Park, will take advantage of Egypt's favourable position as a nexus between Asia, Africa, and Europe. It will also utilise the submarine cables connected to the country to improve efficiency, speed of response, and data transfer speed on a global level. Several global organisations have invested in datacentres in Egypt, including NxtVn 7, CloudFare, Giza Systems and Bright Computing.

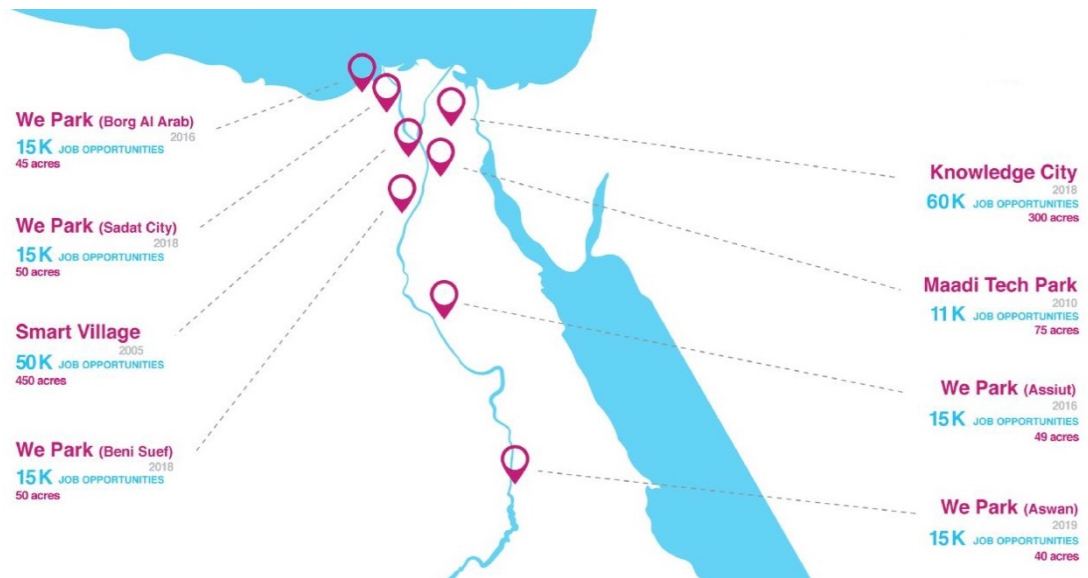


Figure 3. Tech and Knowledge Parks across Egypt

In the 2019 A.T. Kearney Global Services Location Index²⁶, Egypt ranked as number 1 across MEA and as number 14 globally (although it was number 4 in 2011). It is one of the 21 countries in the leading stage of the global cybersecurity index; demonstrating high commitment to the five pillars of the index. Egypt was also among the most-improved economies in the ease of doing business index, and is comparable to other global SSC (Shared Services Centre) locations.

²⁶ A.T. Kearney. Global Services Location Index (2019)

4. Structure and Governance of the VC and sustainability

The Egyptian Value Chain for ITO consists of different types of actors, influencers and supporters. The following are described: exporters, governmental organisations, business support service providers (including commercial providers), international organisations and European trade and industry.

4.1 Visualisation of the Value Chain

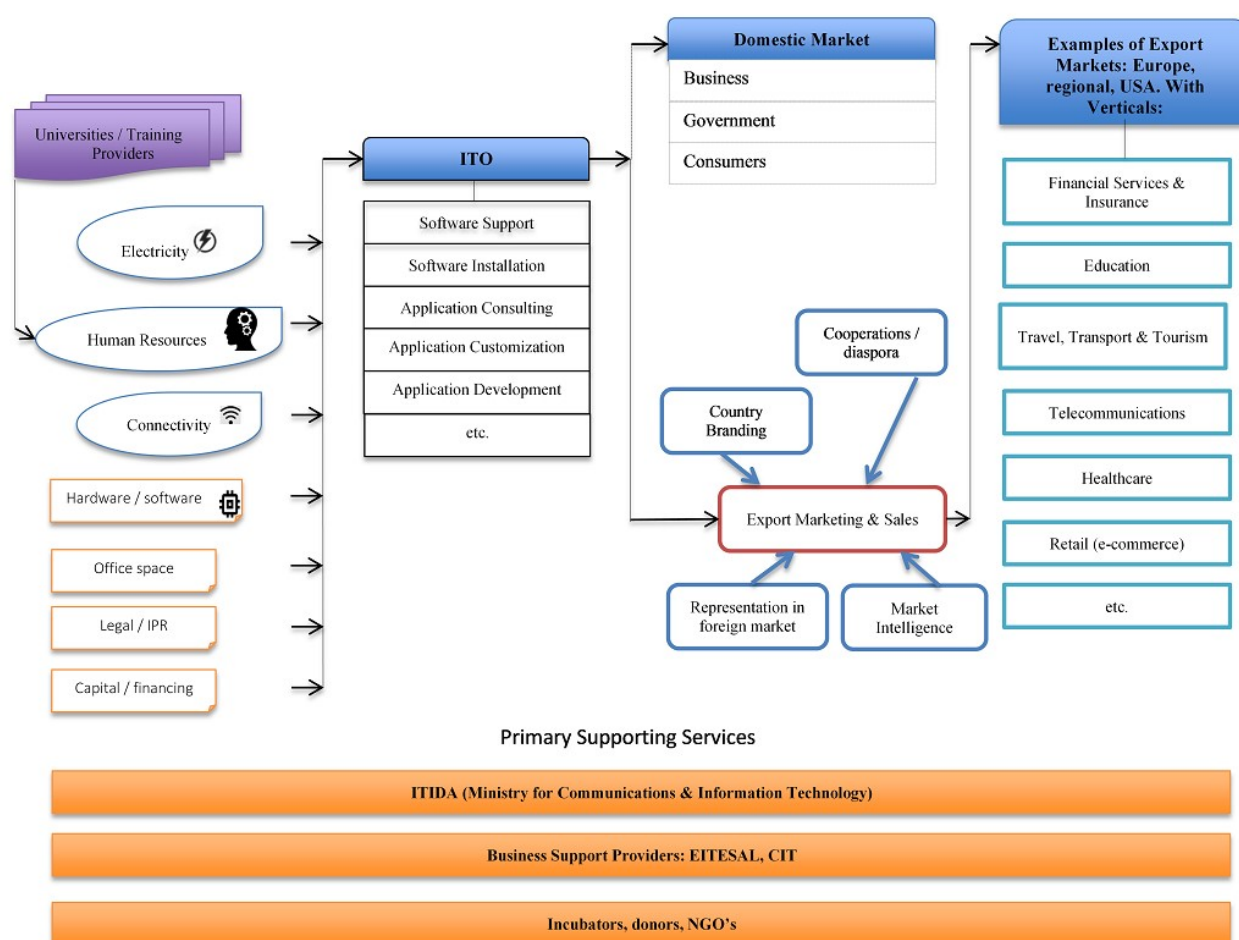


Figure 4. Visualisation of the value chain

4.2 Exporters

IT companies

The size of the IT companies in Egypt ranges from 1 to 5 staff members in startups to relatively mature firms with around 50 to 150 employees, and also a limited number of larger companies (some with more than 1,000 employees).

There are no public statistics available about the number of IT companies in Egypt. It is also difficult to estimate the number of exporting companies. The government (MCIT) tracks the new establishment of companies on a monthly basis. According to their 2018/2019 report, 1,418 new IT companies (majority SMEs) were established last year, in addition to 1,352 new companies established in 2017/2018.

One of the persons we spoke to conducted his own personal research in 2018, and estimated that the total number of IT firms in Egypt is approximately 14,000. Out of these, around 30% had contracts with foreign clients, mainly in the Middle East and North Africa region. These contracts are often one-off deals, with a short duration. Larger companies (50 – 150 employees) generally have more foreign clients; he estimates that 70% of this specific group do.

Various exporting companies are not offering IT outsourcing services, but are selling software products (or solutions) to foreign clients. Examples are in the field of fleet management, providing cloud services, facial recognition software and HR solutions.

The IT association ITIDA has a database of companies (around 1,850 firms)²⁷, which is publicly accessible. There is also a database of technology startups, maintained by TIEC (Technology Innovation and Entrepreneurship Center), with around 700 registrations. Those are companies who opt to register to benefit from ITIDA's programmes, but it is not an exhaustive list by any means.

While global services delivery operations have so far been mostly concentrated in Cairo, other large cities such as Mansoura, Asyut, Alexandria and Luxor also have well-developed local economies and provide access to large talent pools. These cities have lower costs of operation than Cairo.

According to MCIT²⁸, the companies employ more than 136,000 jobs in the outsourcing sector in 2017 (both ITO and BPO; the number of ITO workforce is not specified). Consulting firm IDC estimates the number of employees on export accounts (both ITO and BPO) to be 174,000 at year-end 2019, projected to reach 198,000 by the end of 2020. Another study²⁹ estimated the current employment in the outsourcing sector (both ITO and BPO) to be around 212,000 people in 2019, and the workforce will reach 240,000 FTEs in 2020. Most of these jobs are technical (e.g. software developers, business analysts), others are in support functions (e.g. business development, HR) or managerial.

²⁷ <https://login.itida.gov.eg/SimpleSearch.aspx>

²⁸ MCIT. EGYPT- the destination of choice (2018)

²⁹ OutsourcingVerband. Destinations EGYPT 2.0 - Outsourcing Destination Guide (2019)

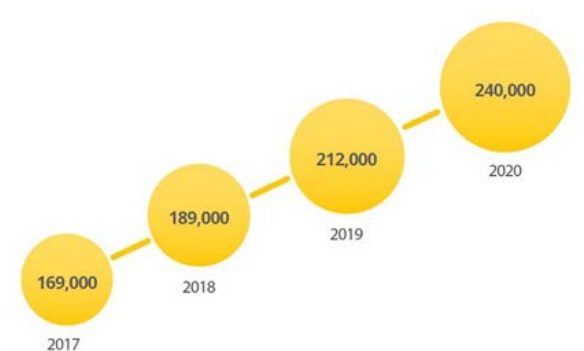


Figure 5. Total outsourcing industry workforce

Some Egyptian companies have representations in Europe, such as web design Robusta Studio³⁰ in Germany, and digital agency OrchTech³¹ with a (marketing) office in Switzerland.

As a result of unemployment in Egypt, freelancing by working remotely for foreign clients is becoming popular, especially with IT-related work. Because of language familiarity, they mainly work for Arabic clients. These clients are found using online matchmaking platforms such as Upwork, freelancer and Peopleperhour).

Depending on experience, remote work can earn reasonably well (EUR 8 – 40 per hour), which can sometimes be higher than with local firms, but because of the uncertainties (finding higher-paid projects is not easy because of the huge competition), employment within a company is often preferred.

The employee turnover rate in Egypt is relatively low compared with other offshoring destinations in Europe and Asia (e.g. India), ensuring better customer management and process continuity. The turnover in the IT sector is around 8 - 11% per year, and companies are facing the issue of brain drain.

In general, the turnover of women is higher than of men. Partly because women are entitled to up to three months' paid maternity leave and up to two years' unpaid leave to care for their child. Another reason is the fact that men are supposed to have the main responsibility for the family income. The labour participation of Egyptian women is significantly lower compared to men, and legislation, practices, and attitudes restrict women's rights and opportunities. This vulnerable position of women in Egypt is often a serious signal for their working conditions. One study from 2010³² in Egypt found that in the IT sector, the gender gap is slightly smaller than overall (women can constitute up to 30% of the workforce in IT, versus 22% overall).

Note: Egypt ranks low in gender equity compared to other countries worldwide³³. The 2015 Global Gender Gap Index, which measures disparities between men and women across countries, ranks Egypt at 136 out of 145 countries worldwide. Women have significantly lower participation in the labor force than men (26% vs 79%) and lower literacy (65% literacy for women vs 82% for males). The Organisation for Economic Cooperation and Development's Social Institutions and Gender Index 2014, which measures legislation, practices, and attitudes that restrict women's rights and opportunities, classifies Egypt to be

³⁰ robustastudio.com

³¹ orchtech.com

³² ETF. Women and Work in Egypt Tourism and ICT Sectors: A Case Study (2010)

³³ <https://www.usaid.gov/egypt/gender-equality-and-womens-empowerment>

among the countries 'very high' in gender discrimination, together with others in Africa and the Middle East.

Startups

Egypt is now - after Dubai - the fastest growing entrepreneurship region in the MENA, with a growth of 850% in IT startups since 2011. MCIT established the Technology Innovation and Entrepreneurship Center (TIEC)³⁴ with the primary objective to facilitate the development of IT-related business solutions and applications. The centre aims to support the entrepreneurial culture among the youth and promote startups in the ICT sector. It also provides co-working space to techpreneurs, investors, and tech startups that aim to help Egyptian youth build successful enterprises focused on third platform technologies such as AI, IoT and Big Data. It is located at the ITIDA building.

TIEC offers support in various stages: capacity building / competitions; pre-incubation (three months); incubation (one year); post incubation (e.g. consultation, coaching, access to markets via Gitex, Websummt, Slush, Sears). Most of the startups are software product/solution related (e.g. Instabug³⁵), and some are active in the field of outsourcing, such as Remote Platz³⁶, which assists German companies (mainly startups) in connecting with Egyptian developers.

Until few years ago, the only startup accelerator in Egypt was Flat6Labs (supporting firms such as Instabug, Nafham, and Taskty), but there are now many new accelerators helping startups. These include EdVentures, Falak (a government-run accelerator for early-stage firms), TechSpace (an incubator by Nile University for blockchain startups), and others. The Greek Campus is a tech park located in the heart of Cairo, which hosts different local, regional, and international stakeholders, including startups. From RiseUp and Udacity to MO4 and Flat6Labs, it is home to some of the most influential players of Egypt's startup ecosystem.

Egypt's government has been launching different programs to help startups. Most of these programs have been launched under the Ministry of Investment and International Cooperation's initiative, called Fekretak Sherketak³⁷. Egypt Ventures, which is a part of this initiative, invests in VC firms and accelerators. It is one of the investors of Flat6Labs. The initiative also runs a four-month acceleration programme, Falak Startups Accelerator, which offers funding, office space, and mentorship to early-stage startups.

There are several co-working spaces opening in different cities of Egypt. Regional and international players such as Seedspace, Startup Haus, AIMaqar and Urban Station are opening spaces in Cairo and other cities of Egypt.

In terms of NGOs, Endeavor Egypt and Injaz Egypt are active (they were not contacted during our research). Endeavor Egypt supports high-impact entrepreneurs in the country. Injaz Egypt, in collaboration with TechWadi, took 14 startups to Silicon Valley to help them further develop their entrepreneurial skills by networking with different tech companies there.

RiseUp Summit³⁸ is the biggest startup event of Egypt and is held on an annual basis at the Greek Campus in Cairo. It attracts thousands of founders, investors, tech enthusiasts and other stakeholders from MENA, Europe, the United States and even Asia.

³⁴ <https://www.tiec.gov.eg/English/Pages/default.aspx>

³⁵ <https://instabug.com/>

³⁶ <https://remoteplatz.com>

³⁷ <http://www.sherketak.com/>

³⁸ <https://riseupsummit.com/home>

A group of the biggest French companies in Egypt (including IT company Valeo) sponsored the 'France in Egypt Startups Competition' in November 2019³⁹. It targeted digital startups operating in the fields of Health, Fintech, and Sustainable Cities to compete on creating long-term solutions for smart mobility & transportation, smart energy, water management systems & smart waste, financial services & healthcare solutions.

4.3 Governmental Organisations

A number of governmental organisations play an important role in the Value Chain.

Ministry for Communications and Information Technology (MCIT)⁴⁰

In 1999, ICT was identified as a priority sector by the Government. Former President Hosni Mubarak announced the inauguration of a national programme to develop the information and communication technology sector in Egypt. The goals of the programme were to foster the development of an information society in Egypt and stimulate the growth of a strong, competitive, vibrant and export-oriented ICT sector. The cornerstone of this mandate is to support the development of the local ICT industry, thereby boosting exports and creating jobs, promoting the use of ICT nationwide as a means to achieve national development goals.

The MCIT formulated several strategic plans for the ICT sector.⁴¹ Its three-year plan in 2007 had a primary mandate to surpass EUR 920 million in terms of IT and BPO export revenues by 2010 (a target that was actually realised with an additional 10%, reaching EUR 1 billion by 2011 largely due to the growth rate in the sector, which had reached 14.9% in 2009 and the growing number of multinationals that had expanded their businesses and/or outsourced their operations to companies in Egypt).

The latest available strategy is the "National ICT Strategy 2012-2017. Towards a Digital Society and Knowledge-based Economy".⁴² Its mission is to develop a democratic, knowledge-based society that supports a strong Egyptian economy and is based on equitable access to information and communications services, guaranteeing the digital rights of citizens and the development of a national industry based on human talent and creativity. To achieve this mission, four strategic objectives have been identified:

- Supporting the democratic transition
- Promoting digital citizenship and information society
- Promoting sustainable development
- Strengthening the national economy.

Related to 'Strengthening the national economy', outsourcing has received specific attention. The strategy mentions that efforts must be made to enhance Egypt's position as a global leader in outsourcing. It aims to increase annual revenues from IT-related service outsourcing (both ITO and BPO) from EUR 1.2 billion to EUR 2.3 billion (and intellectual property to EUR 0.9 billion. The exports of software and embedded software should grow to EUR 460 million within two years.

³⁹ <http://startup.franceinegypt.com>

⁴⁰ <http://www.mcit.gov.eg>

⁴¹ various ICT Strategies are available at: http://mcit.gov.eg/ICT_Strategy

⁴² MCIT. National ICT Strategy 2012-2017. (2012)

Measures to achieve these goals include: establishing a national network of 20 technology parks; diversification of target markets for Egyptian outsourcing exports; promoting greater participation from small and medium-sized enterprises (SMEs) in IT service outsourcing; increasing the number of outsourcing professionals, with the aim of creating 75,000 direct job opportunities and 220,000 indirect job opportunities by the end of 2017; attracting more foreign investment through global promotional campaigns; and maintaining a strong Egyptian presence in regional and international fairs, trade missions and efforts to protect intellectual property rights and personal data.

As part of the main programme 'Outsourcing Industry Development Program', a specific executive programme 'IT Export Promotion Program' has been launched, with a group of nine projects designed to increase Egyptian ICT exports by:

- Promoting the ICT exports of Egyptian companies
- Enhancing call centre services
- Promoting foreign direct investment
- Supporting Egyptian participation in international exhibitions
- Supporting the participation of Individual companies in exhibitions and events
- Using foreign consultancy firms to assist in the execution of the strategy up to 2020
- Branding Egypt
- Establishing a photo library for ITIDA in cooperation with Smart Villages Company
- Subsidising business trips for ICT companies.

The upcoming strategy would be 'Egypt's ICT 2030 Strategy', to be ready at the end of 2019. At the moment however, the new strategy is not being worked on, and there are currently no activities planned for drafting an updated strategy.

ICT is still considered a priority sector for the current government. Most recently, as part of the national strategy to support capacity building, the president has ordered a doubling of the national training programmes that cater to digital skills, and has specifically emphasised the importance of artificial intelligence science and applications. The president has also ordered the acceleration of digital transformation across the government, due to its positive impact on development. In terms of government spending, the ICT sector will receive EGP 10 billion this year (300% increase from last year), to develop the sector and scale up the digitalisation of the government services.

IT Industry Development Agency (ITIDA)⁴³

The Information Technology Industry Development Agency (ITIDA) is the executive arm of the Egyptian Ministry of Communications and Information Technology that is responsible for spearheading the development of IT in Egypt.

ITIDA has taken an active role in developing IT (including ITO and BPO) capabilities within the country and positioning IT as a cornerstone of economic development and foreign investment. They focus on working with public and private bodies, industry players and associations, universities, and individuals to help grow the Egyptian IT industry and offer a wide range of services that helps build the capacities of the local IT companies, in addition to attracting and servicing multinational IT companies. Additionally, they help to expand local IT businesses by offering access to foreign markets through sponsoring and participating in the local, regional and international trade shows.

⁴³ www.itida.gov.eg

Established in 2004 and located in a modern business environment in Smart Village, ITIDA supports and develops the IT industry through five main segments: Talent Development; Innovation & Entrepreneurship Support; Investor Attraction & Support; Egyptian Companies Development, and Business Ecosystem Development. It has around 200 employees.

ITIDA plays an active role in improving the talent pool availability through training programmes such as 'Train for Hire' and other programmes to promote internationally accepted certification for local talent. In addition, MCIT works with local companies and multinationals in the ICT sector to ensure that the required balance of skills and capacities are embedded in the curricula or through additional specialised programmes such as Education Development in Universities of Egypt (EduEgypt). The programme aims to bridge the gap between the skills of Egyptian youth and the required competencies in the job market. The programme was created in 2007 by MCIT in collaboration with the Ministry of Higher Education and Scientific Research. The initial investment of EduEgypt is EUR 3.5 million, and the programme aims to train 8,000 workers as part of a total planned investment of EUR 60 million for human capital training and development. EduEgypt is an example of the efforts to continuously improve the export-oriented IT activities that represent the drive to create jobs.

Availability of qualified personnel for middle management roles is a common challenge in most emerging countries. ITIDA has launched a Middle Management programme, and the MCIT has partnered with a number of training institutes, such as ITI, SECC, NTI and ELCC. There are also a number of private training institutes, such as Orascom Training & Technology, American University in Cairo and AMIDEAST.

ITIDA has a number of specific programs and services, such as⁴⁴:

1. Egyptian Companies Development

- IT Academia Collaboration (ITAC): fosters collaboration between industry and academia to deliver innovative products by funding preliminary research projects up to product development.
- NGOs Support: support the sector's NGOs to provide services to local companies, including training & institutional development, market research, networking, etc.
- Export-IT: a cash rebate programme designed to incentivise ICT exports of local companies (eligible companies receive direct exports support on the collected proceeds of their value-added exports within a specified calendar year). A strength of Export-IT lies in the data gathered from participating companies covering their ICT exports. Based on the exports indicators, further comparative analysis is conducted covering global ICT exports, potential markets and opportunities through global forecasted ICT spending and market trends.

Until 2017, the programme involved 100 companies, of which 89 were MSMEs. Together, the 100 firms exported mainly three services: BPO (25%), software development (23%) and electronic design/engineering (20%). The primary markets were the Americas (40%), and the Gulf region (25%). Only 13% went to Europe (mainly the UK)⁴⁵.

2. Innovation & Entrepreneurship Support: Acceleration & Incubation - Acceleration & Incubation

- InnovEgypt: capacity building programme aimed at providing university students with the necessary skills in the area of innovation and entrepreneurship.

⁴⁴ ITIDA. Programs and Services (2018)

⁴⁵ ITIDA (2019). Export IT Rebate Program. www.itida.gov.eg/English/Programs/Export-IT%20Rebate%20Program%202017/Pages/default.aspx

- Ideation Marathon: creative thinking camps for youth on how to generate innovative solutions addressing Vision 2030 challenges.
- IBTIECAR: annual graduation projects competition held in cooperation with MNCs.

3. Innovation & Entrepreneurship Support: Acceleration & Incubation - Innovation Catalyst

- Innovation Clusters: fostering innovation through establishment of innovation clusters inside technology parks in collaboration with academia, private business, and startups.
- Community Innovation Hubs: to stimulate technology innovation and entrepreneurship across Egypt by establishing community innovation hubs inside universities with access to the local community.
- FekretakSherketakPartnership: partnership with GAFI to provide support in innovation and entrepreneurship throughout the value chain.
- UN Technology Innovation Lab (UNTIL)⁴⁶: UNDP selected Egypt to host its lab to build technology platforms and develop technology innovation supporting the SDG goals.
- VC Funding Program: establishment of fund to be invested in one of the leading Venture Capital funds in Egypt.

4. Capacity Building

- National Competence Framework (NCF): comprehensive and standardised framework of competencies to serve the industry through adoption in university curricula.
- Next Technology Leaders initiative (NTL)⁴⁷: a presidential digital training initiative providing fully funded training & certification on emerging technologies in collaboration with leading online platforms, top universities, and global tech firms.
- Software Engineering Competence Center (SECC)⁴⁸: ITIDA's SECC provides training and certification in multiple service lines and technologies as well as appraisal and consultancy services for process improvement and international accreditation for IT/ITES enterprises (e.g. CMMI and COBIT).
- Multinationals Academies: partnership with MNCs to train and hire talent in tier 2 cities.

5. Business Ecosystem Development

- Intellectual Property Rights Office: reinforces laws and administers a national copyright system and registration of software products and companies.
- E-Signature: ITIDA regulates the e-Signature services and operates the Egyptian National PKI Trust Center (Root CA) by offering a secure and legally viable medium for online transactions and documents exchange.
- Technology Parks: Spreading science technology parks across tier 2 cities through investment in Silicon Waha to develop a collaborative environment for business, academia, and entrepreneurs.

Related to the exports of the ITO and BPO-sector:

6. Positioning & Investment Support

- Positioning: engagement with analysts and influencers for positioning Egypt as a leading delivery destination for technology innovation and IT/IT-enabled services.

⁴⁶ <https://until.un.org/content/until-egypt-lab>

⁴⁷ <http://techleaders.eg/>

⁴⁸ <https://www.secc.org.eg/>

- Go to Market: a research-led initiative for supporting local companies in penetrating key markets through matchmaking and participation in global conferences and exhibitions. An example is the Go to GCC program, in cooperation with IDC⁴⁹.
- Investment Incentives: full-fledged support to attract foreign investors through a mix of financial and non-financial incentives, including market intelligence and due diligence support, as well as subsidising training.
- Aftercare Support: aftercare system providing logistical support to current investors. It also includes new hires training support, telecommunications special tariffs, office space support and help with removing many logistical obstacles when it comes to other governmental entities as NTRA for special R&D equipment import.

ITIDA has always been active in promoting the Egyptian ITO and BPO sector, with policies to gain international market access⁵⁰; examples are:

- Promotion: developing relationships with top global consulting firms and analysts to position Egypt on the global map
- Product champions: supporting and providing additional promotion for best products on the market
- Expatriates: engage Egyptian expats to help promote exports
- Outpost business: awareness programmes for selected commercial attaches on Egyptian IT products, trade missions to select geographies

One of ITIDA's branding campaigns has been "Time for Egypt"⁵¹, an in-house campaign that underscores the efforts and the newly adopted approaches in the outsourcing industry and ICT sector.

ITIDA organises road shows to demonstrate the potential of the software development companies in Egypt. It has also arranged missions to CeBIT Hannover and especially Gitex Dubai (where it has had a pavilion for 14 years). It is involved in arranging conferences in Egypt and abroad (e.g. sponsoring the German Outsourcing Verband, which has developed an outsourcing guide on Egypt. Egypt was also the partner country at its Berlin conference in June 2019). ITIDA was also supposed to participate at the Mobile World Congress in Barcelona in early 2020, but this event was cancelled due to the coronavirus crisis. In general, participating companies will pay for their own travel and stay, while ITIDA arranges a stand.

The demand always outstrips availability in terms of participation at these promotional activities.

In 2014, the IDC (International Data Corporation) launched a strategic programme ITIDA called 'Africa Together', which aims to help Egyptian ICT firms to penetrate high-growth markets in Africa through joint partnership and market development efforts.

ITIDA has also been very active in inviting foreign consulting firms to produce reports about the Egyptian outsourcing industry (probably more than most other outsourcing destinations); these reports are available online. Some remarks about Egypt from these analyst reports:

- "Primary Location for Outsourcing, Shared Services Centers and Captives in EMEA" - Gartner (2016 and 2017)
- "Outsourcing Destination of the Year" - Global Sourcing Association (2016)

⁴⁹ <http://beta.itida.gov.eg/En/OurPrograms/IndustrySupport/GotoMarket/Pages/default.aspx>

⁵⁰ ITIDA. Destination Egypt - value proposition (2011)

⁵¹ <http://timeforegypt.net>

- “This is a good TIME for investors to explore new investment opportunities in Egypt” - PricewaterhouseCoopers (2017)
- AT Kearney #1 Outsourcing Destination in MEA (2017)
- IDC - Offshoring Industry in Egypt Embraces 3rd Platform Technologies (2018)
- “Major Contender in IT Talent Availability” (2018) - Everest Group.

4.4. Business support service providers (including commercial providers)

Egyptian Information, Telecommunications, Electronics, and Software Alliance (EITESAL)⁵²

EITESAL is a private sector, non-profit entity of IT-related companies, multi-national corporations, organisations and institutions operating in Egypt. It started in 1997 in Cairo, and also has chapters in Mansoura, Alexandria and Assiut in Upper Egypt. It is a member of WITSA (World IT Services Association). It has around 620 IT members from the private sector. Members pay an annual fee (based on the size of the company), and there is also funding from ITIDA, USAID and the EU. ITIDA is their main strategic partner, and there are regular contacts with ministries.

One of the initiatives is ‘Women in ICT’, which aims to empower women in the ICT sector and to spread awareness of the importance of their roles, and encourage entrepreneurship. Women in the IT industry are facing the issue of balancing their social life with a business career and different ideas will be explored to satisfy this equation. It was observed that the ratio of females working in this field is less than the nominal ratio. One of the main goals of the initiative is capacity building of women to develop their managerial skills and to reduce the gap between the opportunities available for men and women. The initiative will be looking to combat any discrimination against women in business opportunities, and moreover, to offer them equal opportunities in the leadership hierarchy.

Most of the focus of EITESAL is on the domestic market. Capacity building is one of their main activities, such as a training session about investment readiness, or a workshop on Artificial Intelligence. At the request of members, a new export readiness programme is now being developed. The intention is to start in April 2020, with participants from 10 – 15 companies. The duration will be 3 - 4 months, with topics such as: how to develop a market strategy, how to find a foreign partner and dealing with contractual issues.

Related to international affairs and export promotion, the plans of EITESAL are to:

- position Egypt in the global market as a reliable ICT outsourcing hub;
- achieve Egypt’s national goal of increasing Egyptian ICT exports;
- organise EITESAL members’ participation in international conferences, trade shows and exhibitions to ensure Egypt’s strong presence in key global ICT events;
- ensure EITESAL becomes a member in key strategic global ICT associations to forge global strategic partnerships.

In order to promote exports, an eExport programme started three years ago. It was a one-year pilot with a focus on the GCC, and China (in electronics design). Currently, there is a new programme with a focus on the EU and US. Two sales agencies in the EU (one is from the Netherlands⁵³) and one in the US have been hired. A total of 55 companies applied; due

⁵² www.eitesal.org

⁵³ Eaxsus.com

to the available funding, only 5 could join. One of the participating companies (Softec) is focusing on the Dutch and German market

Monitoring of the programme is done by EITESAL, and it has a planned duration of 18 months. 75% of the monthly fee of EUR 3,500 is funded by EITESAL, and for the first six months, 25% by the participating company (to be increased to 50% for the next 6 months, and to 25% for another six months). In addition, there are travel costs involved to meet potential clients, which is time-consuming. This made the programme rather expensive, especially for smaller firms.

However, it seems the selected marketing agencies are not performing well: four participants have already left the programme after only four months: they are not convinced that they are getting a sufficient number of leads. It must be noted that this programme is meant for IT companies offering software products or solutions (as advised by the selling agents), but these do not appear to be easy to sell in these developed markets (selling IT services might have been less challenging).

It must also be noted that some of the participating companies did not have an export marketing plan (and expected the sales agent to make one). Others did not do any market research themselves. In general, it is always challenging for companies to invest in export marketing, while the results will not be visible in the short term.

EXPOLINK⁵⁴

The Egyptian Exporters Association – ExpoLink is a not-for-profit private sector association, founded in 1997 by the Egyptian private sector. It has four main pillars aimed at facilitating an efficient and sustainable value added export value chain: Export Promotion, Market Intelligence, Marketing Assistance and Capacity Building.

Expolink had some IT-related activities in the past, especially with the organisation of outgoing missions. For example, it organised a mission with IT companies to the CeBIT fair in Hannover in 2001. We contacted them during our research: it currently has no plans to become active in the IT sector.

Chamber of Information Technology and Telecommunications (CIT)⁵⁵

The CIT was founded in 1999 as a semi-governmental institution concerned with the development of the Egyptian information technology and telecommunications industry. CIT covers four lines of business: software, hardware, services and communications through 1,020 registered companies⁵⁶. Its focus is on the domestic market. The key themes mentioned in its latest Strategic Plan (2014 – 2017) are: capacity building of its member companies; attracting investments and mechanisms of capital increase and the opening of new sources of funding; business development; strengthening cooperation with government bodies.

CIT has organised a few missions in the past (e.g. to North Africa), but are currently not carrying out or planning any export-related activities.

Foreign trade training centre (FTTC)⁵⁷

⁵⁴ <https://expolink.org>

⁵⁵ www.cit-fei.org

⁵⁶ a member catalogue is available at: <https://cit-fei.org/en/Page/2017/catalog2017>

⁵⁷ <http://www.fttceg.org/Main/HomePage.aspx>

FTTC is a non-profit autonomous training institute under the auspices of the Ministry of Trade and Industry (MTI). It started in 2001, with funding from the Japanese Government. FTTC aims to develop Egyptian export competitiveness by providing training services to enhance and empower exporters' skills, knowledge and capabilities.

It conducts several training courses, such as the Export Basic Course, Trade Information Analysis, Product Quality, Export Costing & Pricing, Qualified Export Specialist and Training & Employment for Export.

It also offers trainings to improve access to market information, and how to analyse this market information. In the past, cooperation took place with CBI, but this was not IT-related. There is currently no specific IT-related training programme, although they would like to include the sector.

Digital Arabia Network (DAN)⁵⁸

DAN connects creative and digital innovators in the Arab world. As a platform for digital pioneers, it connects people in arts, education, business, economy, media, NGOs and politics. Since businesses and industries are being disrupted by new and emerging technologies, it focuses on industries being revolutionised by technology such as Agritech, Edtech, Fintech and Healthtech.

DAN aims to disrupt the immobility in the Arab World by connecting digital minds, creative individuals, inspiring initiatives and projects, strong businesses and active NGOs.

DAN believes in the potential of digital technology to foster gender equality and the social and financial inclusion of all communities in the Arab world. It also assists EU companies with digitalisation, using MENA partners.

One of its Steering Committee members is Rania Reda, CEO of Augmania⁵⁹, a female-led Egyptian startup company, incorporated in the US, with business developers in the US and Berlin and with 12 developers in Alexandria. It has built an app in the field of augmented reality, which is being used by Fanta, Daimler and BMW foundation.

4.5 International organisations

In the past, some donors were involved with (IT) export promotion projects. At the moment, donors from European countries are not engaged in specific IT outsourcing-related activities.

CBI had an ITO ECP (Export Promotion Project) from 2000 – 2004. It offered assistance to four Egyptian IT and IT-related companies. Two of these companies participated in a CBI 'Software Capacity Building Seminar' in Rotterdam (14 – 18 August 2000), but no other details could be found.

Danida (Denmark's development cooperation, which is an area of activity under the Ministry of Foreign Affairs) had a Business-to-Business programme (B2B) that ran from 2006 to 2011⁶⁰. This programme provided grant support to 445 partnerships between Danish companies in 19 countries, including Egypt. This was a broad programme, for different business sectors, but some of the matchmaking took place between IT companies (Cross

⁵⁸ <https://digitalarabia.network/>

⁵⁹ <https://www.augmania.com/>

⁶⁰ http://www.netpublikationer.dk/um/14_danida_btb_programme_2006_2011/html/helepubl.html

Workers eventually set up office in Cairo because of this matchmaking)⁶¹. Other Egyptian IT companies took part in a capacity building project, which included topics such as CSR, technical education (e.g. Sharepoint, Scrum agile) and some funding for hardware and software purchases.

ILO⁶²

The International Labour Organisation has no specific projects in the IT (software) sector, but they have been examining if the IT sector could be useful for people with disabilities, and for women. They were also curious if a hi-tech industry could be used to create jobs in remote regions.

At the end on 2019, within the framework of the ILO's project 'Advancing the Decent Work Agenda in North Africa- ADWA', funded by the Swedish International Development Agency (SIDA), Ericsson and ILO joined hands to enhance labour standards in the Egyptian ICT sector; the focus is on the hardware sector.

GIZ⁶³

Since 1956, GIZ has been implementing projects in all parts of the country on behalf of the German Federal Ministry for Economic Cooperation and Development. The priority areas agreed with the Egyptian Government are: Renewable energies and energy efficiency; Water supply and sanitation, irrigation and waste management; Sustainable economic development for employment.

Only limited activity took place with the IT sector: GIZ funded CapGemini research on the prospects for Egypt in embedded software. The GIZ regional programme 'Economic Integration of Women in the MENA Region' (EconoWin) signed a cooperation agreement for a joint Gender Diversity project with the IT solution provider Advanced Computer Technology (ACT) in January 2019. Over the course of one year, joint activities will be implemented to increase the share of working females in the company's labour force, which will set an example to follow for other private sector companies in the ICT field in Egypt. The opportunity is that – at least in this company – a higher level of diversity can be achieved. If successful, a similar approach may be adopted by more firms.

UNDP⁶⁴

UNDP has a large number of projects in Egypt. 'Using ICT for Comprehensive Community Development' has a focus on ICT, although not on outsourcing. One of the projects is 'Supporting the Activities of the Technology Innovation and Entrepreneurship Center (TIEC)', in achieving its mission to create an environment that nurtures talented ICT entrepreneurs with bright ideas.

IPD⁶⁵

The IPD (Import Promotion Desk) is an initiative established by the Federation of German Wholesale, Foreign Trade and Services (BGA) and sequa gGmbH – the development organisation and partner of the German private sector. It is funded by the Federal Ministry for Economic Cooperation and Development (BMZ). Egypt is one of the partner countries, but the support is limited to Fresh fruit and vegetables and Natural ingredients.

ITC⁶⁶

⁶¹ <http://egypten.um.dk/en/about-us/news/newsdisplaypage/?newsid=f16de494-0e95-4bcb-b0aa-526d30f92fa1>

⁶² <https://www.ilo.org/africa/countries-covered/egypt/lang--en/index.htm>

⁶³ <https://www.giz.de/en/worldwide/319.html>

⁶⁴ <https://www.eg.undp.org/content/egypt/en/home/projects.html>

⁶⁵ <https://www.importpromotiondesk.com/en/countries/egypt/>

The International Trade Centre (ITC) is the joint agency of the World Trade Organisation and the United Nations. It has conducted a number of export-related projects in Egypt, but these are now finished; IT Outsourcing was not included.

Note: as part of its Netherlands Trust Fund (NTF IV) Programme, a number of IT companies and startups from Uganda and Senegal are supported.

4.6 European Trade and Industry

Various multinational IT companies have invested in Egypt as part of their global operations. Most of these are American (e.g. IBM, Microsoft, Dell EMC) and are used as captive centres (working for internal clients). Andela is also American, but acts as an outsourcing enterprise, and started operating from Cairo in 2019.

There are also European entities based in Egypt, although smaller in numbers.

The largest one is Valeo⁶⁷ from France. Valeo Egypt was established in 2005 as a subsidiary of Valeo Group, to act as a R&D centre focusing on the design, development & maintenance of embedded software modules & systems for the Automotive. It serves many clients, including DAF. It uses two buildings in the Smart Village, and a third will soon be rented. In the beginning, it received support from ITIDA, and started with a working force of 25 engineers in 2005 and reaching 1600 in 2018 (29% females). During the early stages, the main service was system validation with less focus on full software development. Currently, it is the opposite: the full software services represent the major production part. Today, Valeo Egypt has evolved to be Valeo's main software R&D centre. Examples of work: parking systems, control panels, lightning, LED & laser. They are probably the best-paying employer in IT in Egypt, but they must keep targeting the young population to achieve cost effective operations.

The most well-known outsourcing company, which serves only foreign clients, is CrossWorkers⁶⁸ from Denmark. It has an office in Cairo and with clients in several European countries - based from a Danish HQ. Started in Egypt in 2014, the contacts between the Danish and the Egyptian partner were arranged through a B2B programme of Danida. They select the right candidates for any European company, using a database of 1000 persons. They do not do projects yet, instead putting together teams of programmers, working remotely as a dedicated team for clients. They conduct marketing activities in Denmark (and soon in Berlin) and also arrange short visits to Cairo for potential clients.

Another example is Evolve⁶⁹ from Germany. This IT company with a background in automotive already had an office in Ukraine (80 employees). In 2019, it opened an office in Cairo, and hired 4-8 engineers. Also having offices in Germany are TheD⁷⁰, Advintic⁷¹ and Pharos Solutions⁷².

Note: in IT outsourcing, there are two ways of collaboration between provider and client. Evolve employs staff in Egypt, who work under supervision of the foreign clients' project manager. It hires the required staff (selecting, assessing), provides them with office space and equipment, and handles the hour registration and administration. This is also known as

⁶⁶ <http://www.intracen.org/layouts/CountryTemplate.aspx?pageid=47244645034&id=47244650653>

⁶⁷ <https://www.valeo.com/en/valeo-egypt-expands-its-offices-in-cairo/>

⁶⁸ <https://crossworkers.com>

⁶⁹ www.evolve.de

⁷⁰ <https://www.thed.io/#/about>

⁷¹ <https://www.thed.io/#/about>

⁷² <https://www.pharos-solutions.de/en/about-us/>

'outstaffing' or 'onshore staffing'. A more intense collaboration takes place if the provider is also responsible for the software projects, for which it is using its own project managers.

There are currently only a few Dutch companies involved in IT-related activities with Egypt. An example is the Dutch social enterprise Tunga⁷³, which is in contact with IT professionals in Egypt (Alexandria), and also in Nigeria and Uganda. It tries to connect African IT professionals to the European market.

In addition, hundreds of Egyptian engineers are currently working and living in Europe, employed by European IT companies. An example of a well-known Dutch firm employing Egyptian software engineers is Booking.com in Amsterdam.

⁷³ <https://tunga.io/>

5. Opportunities and Obstacles in the Value Chain

There are opportunities for the growth of Egyptian outsourcing services to Europe and also key obstacles that hinder doing business with Europe. These will be described in this chapter.

Visualisation of Value Chain Opportunities and Obstacles

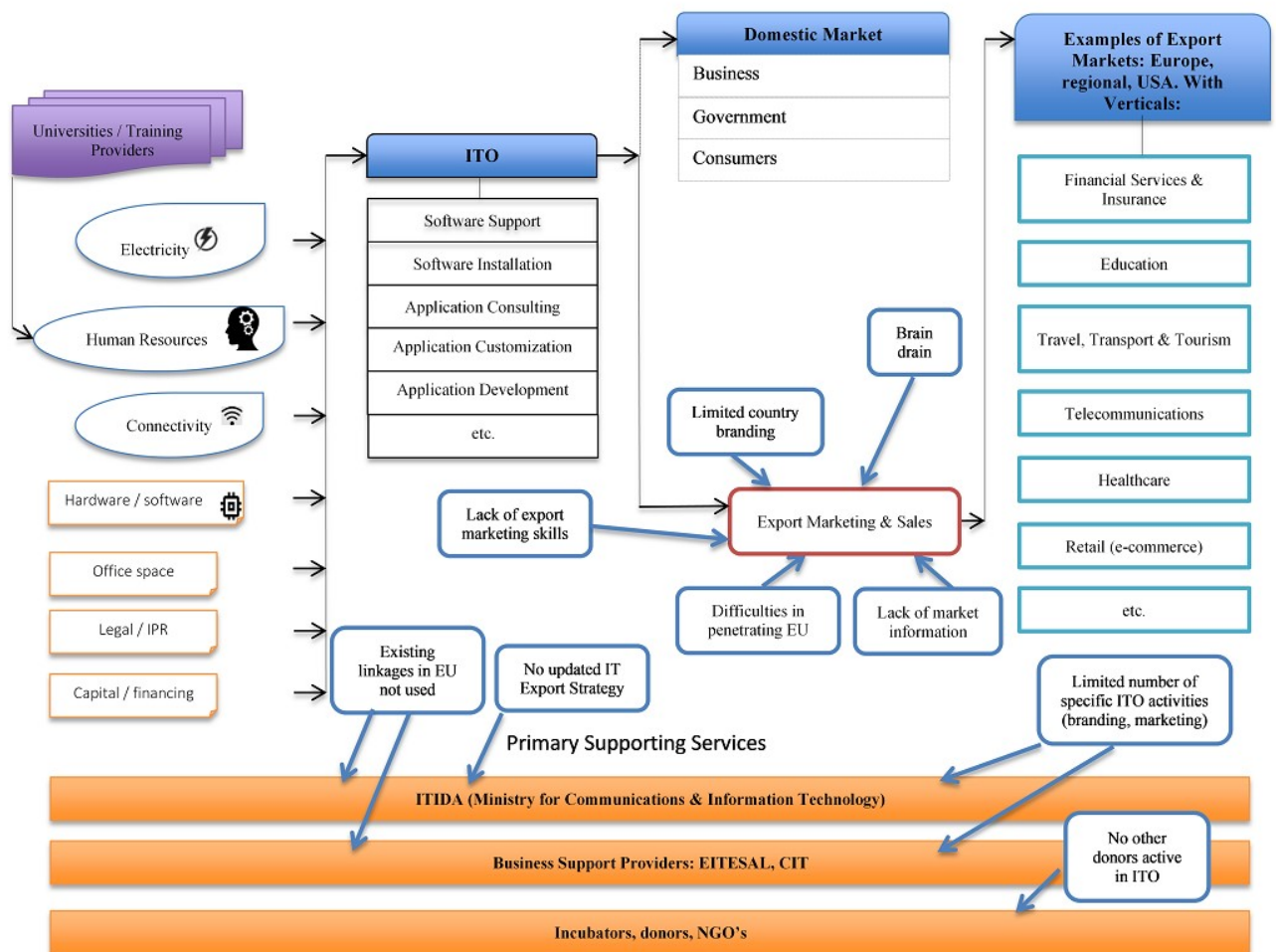


Figure 6. Visualisation of Value Chain Opportunities and Obstacles

5.1 Opportunities

Existing and potential markets for ITO

As the IT outsourcing market is maturing, European SMEs are also increasingly becoming interested in outsourcing. These SME clients often prefer working with smaller firms, as smaller providers are dedicated to only a few clients. Furthermore, the maturing outsourcing market makes nearshoring a more common practice. Central and Eastern Europe has, over the last twenty years, begun to establish a name as an outsourcing destination, especially for smaller and medium-sized offshore users. Because of its relatively short distance with Europe, Egypt can also be considered a nearshore outsourcing destination.

There are several advantages to working with a nearshore service provider. First of all, the shorter travel time makes personal visits easier. Because of the lack of a time difference, communication can be done more effectively. Also, the business culture is much more 'European' than, for example, Indian culture. Being a nearshore supplier is therefore an advantage of Egypt. Various European companies already had experiences with outsourcing IT work to Egypt. Egypt could also target the group of existing users of outsourcing services, who might be willing to diversify their outsourcing destinations, in order not to depend too heavily on one region.

Shortage of IT skills: a growing interest for outsourcing in Europe

The demand for ICT professionals in Europe is very high. The European Commission estimates that the number of unfilled vacancies for ICT professionals is expected to almost double to 756,000 by 2020. European demand is expected to remain high, at least in the near future. Cloud computing, for example, has the potential to generate about 2.5 million jobs by 2020⁷⁴, and companies across Europe are struggling to find the right ICT specialists to support them. This shortage of professionals is not only happening in Western Europe, but also in Central and Eastern Europe. This could be a reason for European companies to explore lesser-known countries such as Egypt. In addition, Egyptian firms could also be subcontractors for (competing) firms in Central and Eastern Europe.

Cost reduction

Cost reduction is often an important reason for clients to outsource to developing or emerging countries. The possibility of cost arbitrage is due to Egypt's competitive labour rates and the floating of the currency. In times of economic recession in Europe, cost reduction has often been the number one reason for European companies to consider outsourcing options (and in case the economy is doing well, the shortage of IT skills is an important trigger).

Diaspora connections

Connections emerge between individuals, between companies, and between nations due to geographical, cultural, linguistic, historical or ethnic connections. The effective use of connections can be an important success factor for developing an ITO export industry. Diaspora connections can also be a powerful success factor. Indians came to the US for advanced education, stayed and rose to influential positions in high-tech companies. They were instrumental in creating contacts, gaining initial sales contacts, or acting as marketing agents. The expatriates can also be helpful in order to understand the cultural differences when dealing with different countries. There are currently thousands of Egyptian IT professionals working and living in Europe, employed by European firms. This diaspora community could represent a natural channel for Egypt's marketing and support.

⁷⁴ European Commission (2016). A new skills agenda for Europe. Working together to strengthen human capital, employability and competitiveness. <https://ec.europa.eu/transparency/regdoc/rep/1/2016/EN/1-2016-381-EN-F1-1.PDF>

Existing partnerships with larger IT organisations

Various multinational companies have invested in Egypt as part of their global operations: IBM, Microsoft, Siemens, Ericsson and DELL EMC among others. Many of them are located in one of the eight high-tech Parks in Egypt. The presence of these international brands indicates the opportunities for Egyptian IT professionals and companies to link up to the international (European) market. Their positive experiences can be used in dedicated IT promotional material.

Africa as the next outsourcing region

Europe's traditional IT outsourcing destinations can usually be found in Asia and Central and Eastern Europe. These countries have often been offering IT services for decades. The lesser-known African countries are now becoming a potential IT outsourcing destination as well. A recent continent-wide study⁷⁵ compared the software development strength in a number of African countries. Egypt is ranked 6th, behind South Africa, Mauritius, Kenya, Morocco, and Nigeria. Egypt is considered to have a lot of potential with low average costs for hiring software developers and a "thriving local software development market".

Corporate Social Responsibility (CSR)

We see more collaboration activities in the IT sector because of a CSR approach within certain European companies. This is a complex area, and CSR activities vary from company to company. Most firms select their CSR activities through a variety of means, from structured strategies to the social interests of senior management. It can result in various types of collaboration, for example in conducting training, exchange visits, fundraising, the supply of hardware and software or mentoring.

A thriving IT outsourcing sector in a developing or emerging economy generates employment (also for women), without requiring a lot of investments. And since it is relatively environment friendly, CSR policy can sometime be a reason for a European enterprise to consider offshore outsourcing in countries with a lot of youth unemployment (sometimes known as 'impact sourcing'⁷⁶).

Egypt as a gateway to Africa and the Middle-East for European companies

In general, European IT-related companies do not export much to the Gulf region, although Saudi Arabia in particular has a high demand in the region for IT services and software products. The GCC has a huge market, which is yet to be tapped fully, and one of the important reasons for this is a lack of Arabic language skills and the lack of local contacts. Some of the bigger players have started to open up delivery centres in the region and hire locally to overcome this barrier. At the same time, many smaller firms that may not be able to afford an office in the region are looking for potential partners.

Egypt has a specific advantage, compared with many other outsourcing destinations: it could be used as a gateway for European companies to larger export markets such as the Gulf region. An alignment with the ecosystem of these companies is an opportunity for Egyptian firms to become implementing partners for new products for the region, or to be used for Arabisation services. Since a large number of Egyptian companies are already active in the GCC countries, Egypt can act as a regional hub for the Middle East.

5.2 Obstacles

⁷⁵ Tunga. Best African Countries for Sourcing Software Developers in 2019

⁷⁶ see for example GISC: <https://gisc.bsr.org>

Egypt is not well known in Europe as a potential outsourcing destination. Only a limited number of Egyptian service providers are conducting systematic marketing and branding activities in Europe. Due to the limited size of the companies and of the marketing budgets, and because of the lack of foreign sales offices, access to export markets is a main challenge.

In addition, there are obstacles in other fields that also hinder export to the EU. A number of these obstacles are described:

In the local environment:

No updated IT Export Strategy

The Ministry for Communications and Information Technology (MCIT) made the “National ICT Strategy 2012-2017”. The strategy mentions that efforts must be made to enhance Egypt’s position as a global leader in outsourcing. It also includes a specific executive programme ‘IT Export Promotion Program’, with a group of nine projects designed to increase Egyptian ICT exports.

An evaluation of this strategy and its activities (including an overview of main lessons) is not publicly available. At the moment, there are no concrete plans to draft a new strategy. However, an updated export-related plan, which could guide the sector and provide a road map for further development and expansion in foreign markets, would be important and useful.

Business support service providers: specific ITO export activities are limited

ITIDA is the most important **governmental** organisation when it comes to promoting and supporting the Egyptian ITO and BPO sector, with policies to gain international market access. They have relationships with global consulting firms and analysts to position Egypt on the global map. They are involved in conferences abroad, and organise missions abroad (e.g. to Gitex in Dubai). They also participated in a number of events in Europe (e.g. German Outsourcing Verband, Gartner, Mobile World Congress) as well as events for startups. It does, however, have to expand the promotional activities, since the number of companies that can participate is much lower than the demand.

However, since ITIDA needs to promote both the ITO and BPO sector, the number of specific ITO activities is limited (while there is more than sufficient demand among companies). In many analyst reports, the BPO and ITO sector are both combined, without specific and detailed information about the ITO sector. In addition, separate catalogues of Egyptian IT companies and their capabilities is not available. No specific IT outsourcing events are being organised in Egypt to which foreigners could be invited (for example, the annual CairoICT-event⁷⁷ does not deal with IT outsourcing).

Within the **private sector**, EITESAL has only a few specific activities related to export promotion. Since there is a lack of IT-related export training, a new export readiness programme is being developed. The duration will be 3 - 4 months, with the following topics:

- Partnership & Channel strategies
- Partner’s selection/recruitment
- Build knowledge to educate the channel/partner
- Opportunity management
- Performance evaluation
- Market research & product positioning
- Product/services support
- Pricing policies

⁷⁷ <https://cairoict.com/>

- Certifications & accreditations
- Technology contracting
- Banking processes
- Cultural gaps.

The intention is to start in July 2020, with participants from 10 – 15 companies. It is likely that there will be more interest, and the number of available places should be expanded.

There is also an eExport programme within EITESAL, which is currently focused on the EU and US markets. It employs two sales agencies in the EU and one in the US. A total of 55 companies applied, but due to the available funding, only 5 could join. Participation is rather expensive: EUR 3,500 per month (subsidised for 75% by EITESAL for 6 months, 50% for another 6 months and 25% for the remaining 6 months) and with additional costs for travel to Europe. The intent was to receive sufficient leads in order to get one client after 6 months, but the selected marketing agencies are not performing according to expectations, and four participants have already left the program. It must be noted that the focus is on selling software products and IT solutions, and not on outsourcing.

Limited country branding: Egypt is not well known as an IT outsourcing destination

Branding is another challenge. Egypt is already well known as a high tech destination in the Gulf region, but this is hardly the case in Europe. The country has to compete with many other offshore destinations, including the regional nearshore competitors such as in Central and Eastern Europe. Development of significant export growth will require the development of a positive Egypt Brand. Egypt must be known as a potential outsourcing destination, but this requires more branding efforts in Europe than is currently the case.

The country does appear in reports of major consulting firms such as Deloitte and IDC, but the focus is often on BPO; there are hardly any dedicated ITO reports. In addition, potential European clients are hesitant to work with Egypt because the messages about the country are frequently more negative than positive after the political developments in 2011. This negative country image is confirmed in Egypt's low position in the World Bank 'Ease of Doing Business' listing⁷⁸, where Egypt ranks 120 in the group of 190 economies in 2019.

Existing linkages in the EU are not systematically used

There are currently thousands of Egyptian IT professionals working and living in Europe, employed by European firms. This diaspora community could represent a natural channel for Egypt's marketing and support. This brain drain however has hardly translated into business development on behalf of Egyptian companies. Compared with the Indians, options for business leads will be limited (the Egyptians are scattered and mostly working in technical roles and in junior positions, and might be more individualistic), but there could be room for improvement. Activities could be considered to make this group more connected with the Egyptian IT sector.

Egyptian Embassies abroad are not active in promoting the outsourcing sector, and seem to have limited or no knowledge about this topic (there is more focus on traditional sectors, such as tourism, textile, etc.). ITIDA was considering an awareness programs for selected commercial attaches on Egyptian IT products and services, but this has not happened yet.

Within companies (the core VC):

⁷⁸ https://www.doingbusiness.org/content/dam/doingBusiness/media/Annual-Reports/English/DB2019-report_web-version.pdf

Lack of EU export market information

Egyptian companies lack the knowledge and awareness of export opportunities and export markets in Europe. Related to this, companies have little ideas about how to acquire this knowledge. Trade support institutions are currently not providing this type of information. Often, companies do not do any market research before engaging in export activities, resulting in ad hoc collaboration. Others lack the skills to use Market Information.

It must be noted that smaller companies do not have enough budget to pay for market research. Others need to be convinced that it is worth the money (is it up to date and of added value; understandable to all; accessible to all).

In the past, ITIDA, as part of its 'Go to Market' programme, hired consultancy firm IDC to conduct market analysis on the Gulf markets. A workshop presented the results of the analysis and provided market intelligence to Egyptian companies on how to tackle the GCC market, market demands of the potential GCC channel partners and information about the key inhibitors for Egyptian businesses in the GCC⁷⁹.

Lack of export marketing skills

Egyptian companies can be quite developed in terms of skills, quality of work and talent, but also have to position and market themselves in order to compete on the international offshoring market. Many Egyptian SMEs have insufficient business and marketing skills to market their services and attract clients in Europe. There is not enough export-related capacity like market analysis skills and research expertise. For SMEs, there is often an insufficient number of export marketing professionals.

Difficulties in penetrating EU markets

Many Egyptian companies are doing business in the region (e.g. Gulf markets, Saudi Arabia), but exposure to the European markets has been limited. In general, there are insufficient direct contacts with these export markets – often because of the lack of an existing (personal) network. Only very few services providers can make use of a subsidiary or marketing office in Europe, making reaching out to potential clients challenging. Many of the successful companies that sell externally have built contacts while their management was located in other countries or have sales people who can travel and meet easily. And due to the limited size of the companies and of the marketing budgets, access to new export markets in Europe is even more difficult. This is especially the case for SMEs.

In order to increase the number of business connections, companies need to invest more in marketing. Business relationships in the IT sector are best established through references, via own personal networks, or through contacts initiated by the ITO companies themselves. Creating new business connections through international trade missions or trade fairs can also be done, but without proper local preparation (e.g. pre-fair marketing; arranging meetings during the event, having a 'European Face' or local representative), the results are often disappointing and only a limited number of relevant business contacts can be made. If this kind of pre-marketing side is missing, the return on investment of this kind of mission seems to be low.

Even if companies already have a few customers in a European market, marketing and sales activities should continue. The dependence on a few buyers is risky, and new clients (in the same market or in a new market) should be found.

According to some, there are Egyptians who find it difficult to communicate with unknown persons, and they will not respond to emails or phone calls. Having a European office of

⁷⁹ <http://beta.itida.gov.eg/En/OurPrograms/IndustrySupport/GotoMarket/Pages/default.aspx>

sales partner makes it easier to communicate, and they can also deal with the 'lack of trust' that Egyptian providers experience when dealing with new European contacts. This has especially been an issue after the revolution in 2011.

It must be noted that cold calling (making phone calls, sending out emails) does not work, and even using Google Ads or LinkedIn has only limited success. Large-scale B2B activities, using various means, and ideally done in the target market, is the most effective way to build a new network. This requires a local sales partner, who can also be instrumental in organising events in Europe. Inviting potential European clients for a short visit to Egypt (including a visit to the pyramids) is considered very useful.

Also, European businesses are more conservative than American clients. For cultural reasons, it takes much more time to arrange business deals (but on the other hand, they will also stay longer as a client).

Startups

There is an ecosystem for startups in Egypt, including some VC's. Most high-tech startups are dealing with software products and solutions, and less with offering outsourcing services. In addition, international marketing is even more challenging for startups than for existing companies.

Brain drain / attrition

Because of the relatively low salaries in Egypt, compared with other countries, there is a growing brain drain. This was always the case with the Gulf countries, but in recent years we have also noticed this in Europe, since it is becoming easier to arrange a work permit. For example, representatives of Amazon Ireland are now visiting Egypt on a regular basis in order to hire staff to work and live in Europe.

In addition, employees want to change jobs after a number of years. This turnover has now become 'part of life', and some companies can deal with it by providing the employees with better salaries and interesting projects. Finding talents is 'hard but doable', and working with bootcamps, having contacts with universities and branding activities is helpful (but this is more difficult for smaller companies or startups). Since many IT firms rely on fresh graduates if the senior developers are going to leave the country for better work opportunities, it does give a risk of low-quality work during a certain period where additional training is required.

Other topics mentioned by some companies:

Capital

There is capital available in Egypt, but only if the company can prove an economic return. Also, the IT sector does not require major investments that could be used as collateral for loans, so there are few alternatives of accessing other than relying on their retained earnings to finance their investments. Especially if companies grow larger, it is difficult to attract capital (including Venture Capital), so growing from 150 employees to a larger number is difficult. For small enterprises, it is hard to get a loan.

Certifications to support export marketing

A related issue to skills is certification. Formal certifications for both the individual professionals and the organisations for which they work can be useful in that they indicate standardised levels of skills and knowledge. They also allow staff and companies to work on certain projects and environments otherwise not permitted. It seems most training for relevant IT-related certifications is available in Egypt (for example through ITIDA's Software Engineering Competence Center SECC). Some companies acquired ISO and CMMI certifications because of a request from their client.

There are also local certification organisations offering certification against subsidised costs.

Regulations / rules / IP

Some companies believe there should be more attention for the topic of protection of Intellectual Property. During business discussions with some potential European clients, it was noticed there were concerns about piracy, and that the code produced in Egypt would eventually be found on the Internet.

6. Possible Interventions and Support Activities in the Value Chain

VC opportunities connected to the interventions and support activities:

Observed opportunities in value chain (incl. CSR)	Critical opportunity? (Y/N)	Short-term benefit (Y/N)	Which (donor) organisation is providing or should be providing a solution for this opportunity? (CBI, or others)
Existing and new markets for ITO	Y	Y	Export promotion activities e.g. via EITESAL, ITIDA
Shortage of IT skills in Europa	Y	Y	Egypt has a large number of skilled and experienced IT staff. The required IT-related training is already available in Egypt
Need for cost reduction in Europe	Y	Y	Egypt has competitive labour rates
Diaspora connections	Y	N	They could be used for networking purposes. Not much connection with the diaspora yet; ITIDA could play a role
Existing partnerships with foreign IT organisations	Y	N	Case studies to be used for branding purposes (ITIDA)
Egypt as a gateway to Africa and the MENA for EU firms	N	N	New project to be initiated by ITIDA, in cooperation with others
Africa as the next outsourcing region	N	N	CBI, if it wants to create connections with its ITO programmes in Uganda and Senegal. ITC (Geneva) is also supporting this sector in Uganda and Senegal
Corporate Social Responsibility	N	N	Linking CSR with ITO (because of job generation) could be a donor activity (or by specific companies)

Table 1: VC opportunities connected to the interventions and support activities

In order to stimulate IT exports, there are several interventions and support activities possible in the Value Chain. For example, many Egyptian SMEs have insufficient business and marketing skills to market their ITO services and to attract clients in Europe, while there are

currently hardly any specific export trainings being offered. Another main obstacle for Egyptian companies are the difficulties in penetrating European markets, and the lack of matchmaking support. In addition, existing connections in the EU are not yet actively being used (e.g. the Egyptian IT diaspora, embassies). In these fields, Egyptian organisations such as ITIDA or EITESAL can play an important role, and their activities could be expanded.

International donors could also consider supporting export promotion. For example in the field of coaching and training, or to facilitate a B2B matchmaking project, where the actual marketing is done via external brokers and agents. They could also offer advice and support related to strategy and branding, including organising workshops in Egypt.

In the past, the traditional interventions of CBI related to IT Outsourcing were offered in the form of an ECP (Export Coaching Programme). Criteria for participation were: at least 51% local ownership; SME (15 – 500 employees); marketable services with a demand in Europe; having English language skills; existing capacities and skills; European market focus and a positive evaluation by CBI (based on intake forms and an on-site company visit by a consultant).

Such an ECP had a number of activities:

- identify and benchmark strong service providers in the selected country
- assist & coach IT service providers in order to build (and improve) marketable services and European market knowledge
- provide knowledge transfer and business information on offshore outsourcing (training, information on markets, marketing, technology trends, processes, project management, competition, etc.)
- assist IT service providers in their marketing efforts/provide access to matchmaking and promotion opportunities

The main activities within an ECP were:

- at the start of the program: participants took part in the EXPRO seminar (3 or 4 days)
- coaching and know-how transfer (including site visits by an external consultant)
- CBI to provide market and marketing information (through reports on the website)
- event participation support (especially CeBIT in Hannover; also MWC Barcelona)
- Support of marketing activities in Europe (e.g. local events)
- Support for quality certification (partly funded).

CBI already started offering these ITO ECPs at the end of the 1990s. CBI is currently preparing a new strategy for its programmes related to the ITO sector. Several changes are being discussed:

- offering services to a larger number of IT companies
- coaching is currently less relevant than it was in the past
- support for a shorter duration (four-year coaching of a single participant is too long)
- based on maturity of the firms, different programs could be made (e.g. export ready companies might already have marketing plans, but struggle with market entry)
- marketing should be done more on a group basis, instead of the individual firm
- participation at trade fairs is considered less useful than in the past (e.g. a major fair as the CeBIT does not exist anymore)
- organising events in EU countries should be considered, with more focus on campaigns towards local client firms
- these European events could include incoming IT delegations. Outgoing buyer missions from Europe to the target country are also effective.

Note: this VCA only gives an overview of possible interventions in the Value Chain, based on the observed constraints in the sector. It is not a description of a project proposal.

6.1 Possible interventions in the core Value Chain

CBI could consider several types of support, both in the field of training and coaching, and also related to the topic of marketing and matchmaking. When designing the actual activities, the market systems development approach will be taken into account (see also Annex A). It should also be complementary (e.g. to activities done by business support organisations), while it is also important to evaluate similar activities that have been conducted in the past.

CBI general offer for training and coaching

Many Egyptian SMEs have insufficient business and marketing skills to market their ITO services and to attract clients in Europe. There are hardly any specific export trainings being offered in this field, apart from a new (pilot) export readiness programme that is now being developed by EITESAL.

CBI could consider selecting a group of companies with export potential as participants for a new training programme in Egypt. The content of the training could be taken from the traditional EXPRO, which was always rated positively among former participants of the ECPs. The selection of the participants can be done in collaboration with a local organisation (e.g. EITESAL). Participants from Ministries and associations can be invited as well.

If the training is offered as a 'standalone' activity, a larger group of participants can be addressed.

In case some coaching will be part of the support as well, CBI could offer an 'ECP light' to the participants, which can be selected from companies with no or limited exports to the EU:

- conducting a basic assessment on firm level: what are the export opportunities? What are their services and export markets? How is their export promotion? What do they (not) know? What is missing? Similar as the traditional CBI Export Audits, but on a limited scale
- a limited capacity building program, for example based on the traditional 3-4 day EXPRO. With different topics around export marketing (incl. how to make marketing material, how to make an attractive e-mail, how to use social media, how to build a network, how to organise events, etc.). Case studies about actual market entry experiences (with examples of successes and failures) are interesting
- on request, additional training (customised or general training), could be offered separately. Part of the costs can be paid by the participants.

The traditional approach of coaching by CBI was the use of external consultants. It could also be investigated if a European firm is willing to coach a company from Egypt (as is sometimes the case in the startup scene), or if a retired manager can be matched (as the Dutch senior management organisation PUM⁸⁰ is offering).

⁸⁰ <https://www.pum.nl/>

The following figure gives an overview of the many marketing activities required in effective B2B marketing and sales:



Figure 7: many B2B-marketing and sales activities are required

It is extremely difficult to conduct these intensive B2B-activities if the company is located thousands of kilometres away. Successful service providers have all established their own offices in the foreign market. Only with a local presence, ideally with local staff, can marketing and sales be most effective.

A local base makes personal contacts and personal visits easy and enhances the understanding of the market. It is also an expensive way of doing business, since office space must be rented and a business development manager needs to be paid at European levels, considerably above any wage levels of the rest of the offshore organisation. If it is not financially possible to establish a sales office, the offshore provider needs to consider other means of local representation. For example, working with a local representative or agent (or member of the Egyptian diaspora) is a less expensive alternative.

EITESAL is currently conducting its eExport programme, with a focus on the EU and US. It employs two sales agencies in the EU. A total of 55 companies applied, but due to the available funding, only five could join. It has a duration of 18 months, and part of the costs is paid by the participants. This project is for IT products and solutions only.

In the past, ITIDA had its 'Go to market' programme, supporting Egyptian IT firms in penetrating the Gulf markets by providing a platform for partnerships with leading system integrators and channel partners in the GCC region.

CBI could consider facilitating a similar B2B matchmaking project (for IT outsourcing services), where the actual marketing is also done via external brokers and agents (it must be noted that CBI does not have the relevant contacts to identify these brokers yet, but is working on it).

This type of marketing work would also include the organisation of events and individual B2B matchmaking (which could be part of a market orientation mission). Especially European business missions to Egypt, in order to arrange personal meetings between potential clients and local entrepreneurs, would be useful. Professional marketing material (e.g. websites, social media, brochures, and video) must be available for the promotion and marketing activities.

One could also consider organising this exercise with a group of non-competing companies, by forming a consortium; the required business development expenses will then be shared with several others. A 'joint marketing office' in a specific EU market is also an option. Arranging such an IT export marketing forming consortium has never been tried in Egypt, and will be complicated (e.g. high costs; how to divide the work of the consultants between the companies).

Related to **startups**: there is already an ecosystem in Egypt for startups (these could also be a young company less than three years of age), including some VCs. Most high-tech startups are dealing with software products and IT solutions; only a small number is involved in offering IT outsourcing services. Export marketing is much more challenging for early growth companies (especially if they are very small) than for existing firms.

Although there is already a large number of established IT companies, CBI could consider options to support startups as well (e.g. in the field of mentoring, training, access to capital, access to EU markets). Since CBI has no experience yet in supporting the startup sector, no specific interventions for startups are proposed in this report.

6.2 Possible interventions in the Supporting Functions

EITESAL

At the request of its members, a new export readiness training programme is now being developed. The intention is to start in July 2020, with participants from 10 – 15 companies. The duration will be 3 - 4 months, with topics such as: how to develop a market strategy, how to find a foreign partner, and how to deal with contractual issues.

If CBI is willing to offer a limited **training programme** (e.g. starting with a similar training as in its 3 - 4 day EXPRO, see chapter 6.1), this can be done by supporting existing initiatives (complementary) such as the one by EITESAL. CBI might also be able to add specific content to the training program.

EITESAL is also conducting its eExport programme, with a focus on the EU (and US). It employs two sales agencies in the EU, for only 5 participants. This project is for software products and solutions only. CBI could consider supporting a similar B2B **matchmaking** project for IT outsourcing services, in cooperation with EITESAL.

In both cases, it will increase the service offerings of EITESA, and a much larger group of companies can be the beneficiaries.

In order to refine this report, CBI organised an online stakeholder meeting on 7 April 2020, for representatives of different stakeholder groups, such as ministries, associations, councils, NGOs and companies. This meeting served to validate the findings during the research phase regarding the opportunities of the European Market and the obstacles that hinder access to this market for Egyptian IT outsourcing SMEs. Given the interest for this online workshop, and since there are hardly any meetings being organised in Egypt related to IT outsourcing, EITESAL could organise a **round table** for its members at a later stage, with

input from CBI. It might also be possible for CBI to present the Projects Results Chain in Cairo.

The workshop could be followed by the set-up of a SIG (Special Interest Group) 'Exports to EU', for EITESAL members to discuss the topic of IT exports to Europe. The group could relate to both IT services and software products and solutions. Regular meetings could be arranged on different export-related topics (e.g. market information, export marketing experiences). The value of a consortium could also be investigated (as mentioned in the chapter 6.1).

ITIDA

As a government agency, ITIDA has been the most active organisation in promoting the Egyptian ITO and BPO sector, conducting a wide range of activities. However, the number of specific ITO activities could be expanded, to cater to a larger number of beneficiaries.

Related to training, CBI could also consider joint activities with ITIDA, such as described above for EITESAL, and support complementary training, such as the **EXPRO-type of trainings**.

CBI could consider an additional **training programme**, to be executed by sales staff from experienced European IT multinationals. In such a case, the example of "GrowIT" could be considered. In 2009, ITIDA launched its Enterprise Capacity Building Program "GrowIT"⁸¹ to increase the international competitiveness of 100 Egyptian IT companies that are either existing exporters or have export potential. It contracted a consortium led by ATOS Origin to offer consulting services to 100 selected companies. The eligible companies for the programme had the following criteria:

- Egyptian-owned company with more than 50% Egyptian ownership or under control of Egyptian Board for public companies.
- Headquartered in Egypt, at least 80% of company payroll is based in Egypt.
- Have at least 10 registered full-time employees.

A pool of national and international business consultants were assigned to collaborate with the beneficiary companies to help them achieve the following objectives:

- become more effective and efficient and increase their export potential;
- have the capacity to successfully manage the market-led development, production, and business management process of products/services;
- identify and implement potential improvements in operational marketing and financial areas.

To help encourage local companies to participate in the program, ITIDA subsidised 90% of the total cost of the consulting services rendered to companies.

Another type of involvement for CBI could be related to strategy. Since an evaluation of MCIT's previous strategy "National ICT Strategy 2012-2017" and its activities is not publicly available, a discussion about past lessons and experiences could be useful. ITIDA (separately or in cooperation with EITISAL) could organise a **round table**, with input from CBI.

⁸¹ <http://beta.itida.gov.eg/En/OurPrograms/IndustrySupport/Pages/GROWIT.aspx>

Branding is another challenge. Egypt is competing with many other offshore destinations, including nearshore competitors. Development of significant export growth will require the development of a positive 'Egypt Brand': Egypt must be known as a potential IT outsourcing destination, but this is hardly the case yet in Europe.

It is also recommended, if ITIDA could design a new branding and marketing strategy, to identify areas in which the country can be competitive and more visible. CBI could offer advice and support related to **branding**:

- providing relevant CBI market reports, for example about wages and tariffs in the EU, or what technology stack is being used
- improve professional marketing material (e.g. websites, social media, brochures, video), to be used for the promotion and marketing the ITO sector. This should also include case studies with examples of outsourcing collaboration
- catalogues of Egyptian ITO companies and their capabilities
- arrange press initiatives
- facilitating the organisation of market orientation missions to Europe, European business missions to Egypt and specific IT outsourcings event in Egypt, to which foreigners could be invited
- work with the Embassies of Egypt (e.g. training of commercial counselors)
- linking with the Egyptian IT diaspora in Europe (e.g. directory, events).

Egypt considers itself a **gateway to Africa and the Middle East**. In general, European IT-related companies do not export much to these markets, although the GCC has a huge market that is yet to be tapped fully. Positioning Egypt as a Gateway to Africa and the Middle East could be a special advantage for Egypt, but this is currently mainly a marketing slogan. This advantage needs to be developed (e.g. which countries to jointly penetrate, with which Egyptian firms), and CBI could offer assistance.

There are currently no **international donors** active in the Egyptian ITO sector. However, since CBI has a unique approach (e.g. a long history with ITO export promotion, working with different sectors in the same country, having a long-term approach, working with individual companies and business support organisations), other donors might be interested to explore forms of cooperation.

It is already possible to investigate options of more intensive collaboration between the current ITO-programmers of CBI (Uganda, Senegal) and the NTF4 Programme of ITC (International Trade Centre) dealing with IT and ITES outsourcing in Uganda, Senegal⁸².

Some European companies choose African outsourcing destinations not because of business reasons, but because of CSR (Corporate Social Responsibility) reasons. Working in IT outsourcing can have a number of positive social effects:

- it creates jobs in countries with high youth unemployment
- the jobs offer relatively high salaries
- the sector is accessible for women as well
- helps to develop both technical and managerial skills
- helps to put the African country on the map as a potential outsourcing location, using the brands of the clients
- supports the skill development of the employees and the education process.

⁸² <http://www.intracen.org/NTF4/>

Options to promote the **CSR approach** on a larger scale could be investigated by CBI as a separate project, in order to intensify connections between African IT providers and potential European clients.

6.3 Possible interventions in the Rules and Regulations

Based on the discussions, possible interventions for CBI related to rules and regulations have not yet been identified. Note: there are also many Egyptian IT companies that are operating informally, without any registrations.

6.4 Tables

VC constraints connected to the interventions:

Observed constraints / bottlenecks in value chain and how they limit export opportunities (incl. CSR)	Critical ⁸³ constraint? (Y/N)	Solvable in short term ⁸⁴ (Y/N)
No updated IT Export Strategy	N	Y
Specific ITO export support activities are limited	Y	Y
Limited country branding	Y	Y
Existing connections in EU are not actively being used (e.g. diaspora)	Y	N
Lack of EU export market information	Y	Y
Lack of export marketing skills	Y	Y
Difficulties in penetrating EU markets	Y	Y/N
Startup challenges	Y	N
Brain drain	N	N

⁸³ Critical means if the constraint is not resolved the project outcome is not possible, or significantly reduced.

⁸⁴ Short term means that the constraint can be addressed within the duration of the project.

Table 2: VC constraints connected to the interventions

Risk assessment matrix: Likelihood (of risk materialising) use: 5 = almost certain, 4 = likely, 3 = possible, 2 = unlikely, 1 = rare. impact (on project) use: 5 = severe, 4 = major, 3 = moderate, 2 = minor, 1 = negligible

Risk	Possible impact	Likelihood (1-5)	Impact (1-5)	Mitigation strategy
Currently, only limited ITO-related export activities by BSOs in Egypt	No clear results yet	4	4	Discuss the experiences and lessons with the BSOs
Export matchmaking support is complicated.	Waste of time and money (e.g. non-performing sales agents)	4	5	Proper selection of matchmakers
Brain drain: participants trained through the project will leave the company and find work abroad	Waste of time and money	2	5	Brain drain is mostly with IT professionals. Our target group is different: managers, marketing and sales persons
Negative image of Egypt/no brand in Europe	Makes it difficult to arrange connections in the European market	4	4	Branding activities should be part of the project
Africa is not well known either for ITO	Makes it difficult to arrange connections in the European market	4	4	Perhaps the promotion of Uganda and Senegal can be added? Or other donors can be added?
Impact of the corona virus is not clear yet	Difficult to predict the future market for ITO in Europe	5	5	Impacts on the markets must be closely followed (including the experiences of countries such as India)
CSR issues within companies not always addressed (e.g. gender gap)	No direct impact on an export-related project	3	2	Can be addressed with the participants
Existing Market Intelligence is limited	Not all reports have added value	3	2	Discuss the quality with the readers (including the CBI MI reports)

Value Chain Baseline Measurement:

Stakeholder	Indicator	Value (year)	Source
With SMEs	Number of SMEs operating in this sector	See 4.2; statistics not available	
	Number of SMEs with international business contacts (EU/EFTA and non-EU/EFTA)	See 4.2; statistics not available	
	Number of exporting SMEs in this specific value chain	See 4.2; statistics not available	
	If company audits are conducted: level of export knowledge and capacities, incl. reference to current growth (in turnover and/or export)	Company audits were not part of this study	
With BSOs and sector associations	Number of BSOs and sector associations active in this value chain	3	ITIDA, CIT, EITESAL
	Type of export-enabling services provided by BSOs and sector associations	Export training Matchmaking	But on a limited scale only
	Level of cooperation between the private sector, government, NGOs and knowledge institutions.	Reasonable	
	If BSO assessments and/or model is implemented: Management capacities of BSOs	Not done as part of this study	EITESAL and CIT less professional
With local government	Number of relevant export development strategies and international trade-related policies formulated and implemented	Latest Export Strategy is from 2012-2017	
	Level of access to finance for SMEs	difficult	
Contextual factors	Production figures of main products in this value chain (esp. those products that CBI would want to focus on) incl. product pricing	Data not available	
	Direct export to neighbouring and other non-EU/EFTA countries in volumes and EUR incl. growth in %	712 million Euro in 2017	Annual growth around 9%
	Direct export to the EU/EFTA in	Data not	

	volumes and EUR, incl. growth in %	available	
	Main export destinations	Gulf region / Saudi Arabia	
	Employment figures (if available)	212.000 in 2019	Includes both ITO and BPO
	Level of foreign investments	Data not available	
In this Value Chain	Main bottlenecks in this value chain for exporting SMEs	See chapter 5.2	
	Main certification standards in this value chain in this country	ISO 9001; CMMI	

Table 4: Value Chain Baseline Measurement

Stakeholder Assessment Grid. Stakeholder management is key to the successful implementation of projects. To effectively manage stakeholders, a stakeholder analysis is required:

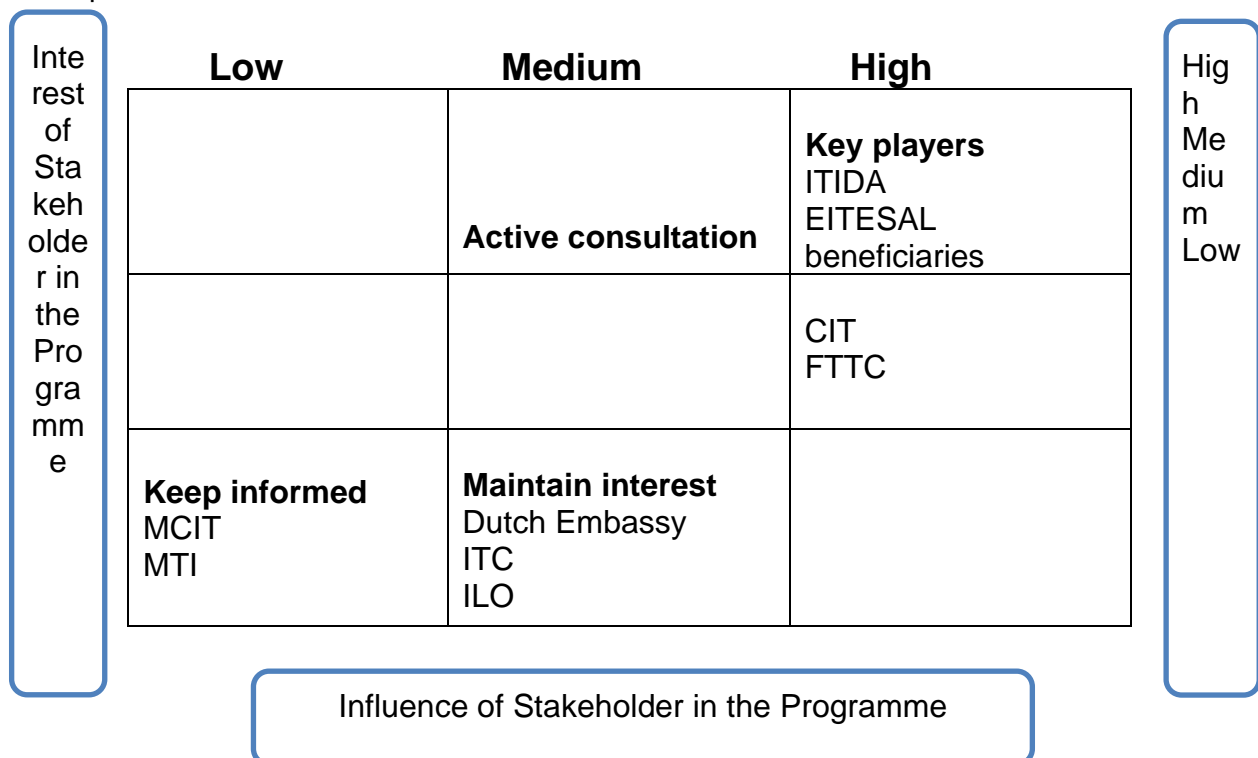


Table 5: Stakeholder Assessment Grid

7. Conclusion

Egypt is an IT outsourcing destination, and the country has a number of strengths. It has invested in developing local physical infrastructure to provide better utilities and telecommunications connectivity. The available talent pool is a corner stone of Egypt's unique position among the global outsourcing destinations: out of the annual pool of 500,000 university graduates, nearly 50,000 have IT-related degrees. There is also the possibility of cost arbitrage, due to Egypt's competitive labour rates and the floating of the currency.

While global services delivery operations have mostly been concentrated in Cairo, other large cities such as Mansoura, Asyut, Alexandria and Luxor also have well-developed local economies and provide access to large talent pools. Egypt is also one of the fastest growing entrepreneurship regions in the Middle East and North Africa.

The United States and European markets are the key markets for outsourcing services, while the market share of Europe is around 30% of the worldwide market. Any company from a specific country, including Egypt, that can deliver either sector or domain competencies, has a distinct advantage in Europe. It is important to specialise in something specific and remain one step ahead. Egyptian IT companies have experience with several of the new trends, such as big data, mobile application development, Internet of Things and Virtual and augmented reality.

Egypt has a large number of IT firms, but those working for foreign clients mainly target the Middle East and North Africa region. A more limited number have clients in Europe. There are opportunities for the growth of Egyptian outsourcing services to Europe. European firms have become increasingly interested in outsourcing. A main reason is that the demand for IT professionals in Europe is very high, resulting in a shortage of staff. Cost reduction is another reason for clients to outsource to developing or emerging countries. Egypt has a specific advantage, compared with many other outsourcing destinations: it could be used as a gateway for European companies to larger export markets such as the Gulf region.

There are also key obstacles that hinder doing business with Europe. For example, Egypt is not well known in Europe as a potential IT outsourcing destination. For most Egyptian companies, exposure to European markets is also limited. Only a relatively small number of Egyptian firms are conducting systematic marketing and branding activities in Europe, or can make use of a subsidiary or marketing office.

In order to stimulate IT exports, governmental organisations can play an important role, such as the Information Technology Industry Development Agency (ITIDA), or the Egyptian Information, Telecommunications, Electronics, and Software Alliance (EITESAL).

There are several interventions and support activities possible in the Value Chain. For example, many Egyptian SMEs have insufficient business and marketing skills to market their ITO services and to attract clients in Europe, while there are currently hardly any specific export trainings being offered. Another main obstacle for Egyptian companies is the difficulties in penetrating European markets, and the lack of matchmaking support. In addition, existing connections in the EU are not yet actively being used (e.g. the Egyptian IT diaspora, embassies).

International donors such as CBI could also consider supporting export promotion. For example, in the field of coaching and training, or to facilitate a B2B matchmaking project, where the actual marketing is done via external brokers and agents. CBI could also offer advice and support related to strategy and branding, including organising workshops in Egypt.

When designing the actual activities, the Market Systems Development approach should be taken into account. It should also be complementary to existing activities done by business

support organisations, while it is also important to evaluate similar activities that have been conducted in the past.

Annex A. Literature

- A.T. Kearney. Global Services Location Index (2019)
<https://www.kenney.com/digital-transformation/gsl/2019-full-report>
- Carmel, E and Tjia, P. Offshoring Information Technology - Sourcing and Outsourcing to a Global Workforce (2009)
www.amzn.to/xegoU9.
- Capgemini Consulting. Embedded Software and Software Outsourcing to Egypt (2017)
<http://timeforegypt.net/Docs/Capgemini.pdf>
- CBI. What is the demand for IT Outsourcing Services on the European market? (2019)
<https://www.cbi.eu/market-information/outsourcing/competition>
- CBI. Which trends offer opportunities on the European outsourcing market? (2019)
<https://www.cbi.eu/market-information/outsourcing/trends>
- CBI. Which requirements must outsourcing services comply with for the European market? (2019)
<https://www.cbi.eu/market-information/outsourcing/buyer-requirements>
- Deloitte. Outsourcing and Shared Services 2019-2023. Global, Middle East and UAE industry outlook (2019)
<https://www2.deloitte.com/xe/en/pages/technology/articles/outsourcing-shared-services-2019-2023.html>
- ETF. Women and Work in Egypt Tourism and ICT Sectors: A Case Study (2010)
https://www.etf.europa.eu/sites/default/files/m/E88B6660C198FDECC12578CC004C2796_Women%20and%20work%20in%20Egypt%20-%202011_EN.pdf
- IDC. Egypt: The Journey Toward Becoming the Preferred Offshoring Hub (2018)
<http://beta.itida.gov.eg/En/Brochures/IDC%20whitepaper%20-%20May%202018.pdf>
- ITIDA. Destination Egypt: value proposition (2011)
<http://docplayer.net/17179016-Destination-egypt-ito-bpo-value-proposition-march-2011.html>
- ITIDA. Programs and Services (2018)
https://www.itida.gov.eg/English/Reports/Lists/Reports/Attachments/23/ITIDA_Programs.pdf
- MCIT. National ICT Strategy 2012-2017. Towards a Digital Society and Knowledge-based Economy (2012)
<http://mcit.gov.eg/Upcont/Documents/ICT%20Strategy%202012-2017.pdf>
- MCIT. EGYPT- the destination of choice (2018)
https://www.ecrq.de/images/Download_pdf/EGYPT-ICT-Outsourcing_Destination_of_Choice.pdf
- NASSCOM. Egypt - An Emerging Global Services Location for Outsourcing (2010)
<https://xub.edu.in/jcr/JCR3.pdf>
- OutsourcingVerband. Destinations EGYPT 2.0 - Outsourcing Destination Guide (2019)
https://www.itida.gov.eg/English/Reports/Lists/Reports/Attachments/2/Destination_Guide_EGYPT.pdf
- Tunga. Best African Countries For Sourcing Software Developers (2019)
<https://tunga.io/whitepapers/best-african-countries-for-sourcing-software-developers-in-2019>
- World Bank's Doing Business 2019
https://www.doingbusiness.org/content/dam/doingBusiness/media/Annual-Reports/English/DB2019-report_web-version.pdf

