❯❯ TBR SPECIAL REPORT

EGYPT AND IT AT THE CENTER OF THE WORLD

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June 10, 2020

EGYPT AS AN OUTSOURCING DESTINATION

The Egyptian IT sector exported around $4.2 billion in services in 2019, according to the Egyptian Information Technology Industry Development Agency (ITIDA). The country's IT sector has become a substantial part of the overall economy growth, contributing both jobs and export revenues, primarily from BPO, software, application development and maintenance, and technical support services. TBR sees advantages for Egypt in the post-coronavirus world.

❯ WHAT MAKES EGYPT ATTRACTIVE

Egypt's growing IT services and technology sector has been built on important natural advantages and few forward-looking investments in recent years. The country's proximity to Europe, considerably large and educated talent pool, and relatively low costs compared to nearshore locations such as Poland, Romania and Bulgaria make Egypt a natural hub for IT services, just as it has been a hub for commerce for millenniums. In addition, multinational companies have long-established histories of doing business in Egypt, building up the trust and goodwill needed for large investments and sustained operations. IBM has had a presence in the country for 66 years, and in addition to its six regional delivery centers in Cairo, in 2019 it opened two new centers — an Innovation and Industry Client Center and a Marketing Services Center — to accelerate digital transformation for public and private sector clients through next-generation solutions such as AI, cybersecurity, digital technology, blockchain and hybrid cloud. Sharing a time zone with much of Europe provides Egypt with a natural advantage, particularly relative to India and the Philippines, two outsourcing megacenters.

Atop these advantages and potentially separating Egypt from other growing outsourcing locations has been active investment by the Egyptian government in developing a business ecosystem, creating jobs and exports, fostering entrepreneurship, encouraging foreign direct investment, and assisting Egyptians in innovation efforts. While this mandate may sound ambitious, Egypt, a country known for large projects, has kept a tight focus on successful development of IT services and technology exports.

❯ SUSTAINED INVESTMENT IN TALENT

Egypt's critical advantage could be its talent base, particularly due to the group's size, technology skills and fluency in multiple languages. According to the Central Agency for Public Mobilization and Statistics in Egypt, approximately 500,000 students graduate from universities in Egypt every year, of which around 90,000 speak English. To assist graduates in finding employment with multinational companies — and to help those companies develop their employees' skills — the Egyptian government, through ITIDA, partners with companies to provide mentoring, tools and competitions for startups as well as sponsor various hackathons and other initiatives.

In TBR's view, programs sponsored by multinational companies to ensure a ready and trained workforce have been commonplace for decades; what potentially separates Egypt, specific to IT services and technology in the current market, is the government's investment. Training, tax policies and infrastructure support contribute to the government's encouragement of the technology sector, including fostering technology hubs in second-tier cities. Recent examples of partnerships between the government and the private sector include working with Valeo to provide training opportunities on the latest ICT technologies in the automotive field, leveraging AI and digitization technologies, as well as providing support for research and innovation; Orange Egypt to train 1,000 people and employ 60% of them as well as train 50 developers annually under the Orange Lab summer accredited internship program, which covers the latest ICT applications, including smart cities, cybersecurity, blockchain and others; and Cisco (Nasdaq: CSCO) to implement a Country Digital Acceleration program, which includes elements of the Cisco Networking Academy and provides training and support to startups and entrepreneurs. Specific to emerging technologies, ITIDA, under the patronage of Egypt's president, has launched Next Technology Leaders, a national program to fund training and certifications of 10,000 individuals; thus far, around 5,000 Egyptian IT professionals have been trained in areas such as AI and machine learning, among 40 tracks on Coursera, Udacity, and edX platforms. In May, ITIDA launched the talent development initiative, Egypt FWD (pronounced "forward"), which stands for Future Work is Digital. The initiative targets 100,000 youths, offering scholarships to Udacity online training and certification in areas of data analytics, web development and digital marketing to promote remote work and freelancing.

As a result of the combined investment by the government and multinational companies, Egypt boasts more than 175,000 professionals in the IT and IT-enabled services space, a sizable enough talent pool for most companies looking for outsourcing or technology development capabilities. In contrast to India, which has attrition rates above 15% in the IT industry overall, and specifically in the mid to upper 20% in BPO, Egypt's IT attrition rate remains relatively low at between 5% and 11%. Overall, the long list of companies with resources in Egypt, including Uber (NYSE: UBER), Vodafone (Nasdaq: VOD), Atos (Nasdaq: ATOS), Amazon (Nasdaq: AMZN) and Dell Technologies (NYSE: DELL), indicates the local talent can deliver reliably and cost-effectively.

〉 SUPPORT FOR STARTUPS

Looking beyond the core IT services and technology outsourcing ecosystem, TBR examined Egypt's startup community and government efforts to foster innovation for both export and the domestic market, noting that other countries in Egypt's region, such as the United Arab Emirates, have been exceptionally active in this effort. With a dedicated center, called the Technology Innovation and Entrepreneurship Center, ITIDA supports the startup ecosystem through assistance to entrepreneurs, building awareness within universities of startup opportunities, and providing office spaces, seed funding, mentoring and networking to market linkages with potential international and regional venture capital firms. Egypt has become a substantial regional startup environment, birthing both business-to-business and business-to-consumer companies. For example, in 2018 Samsung acquired Egyptian-founded AI startup Kngine. In addition to working with startups directly, ITIDA works with multinational companies that have a presence in Egypt to support startup initiatives, particularly around emerging technologies. TBR believes this multipronged approach to the startup ecosystem echoes the Egyptian government's approach to developing talent and provides another attractive advantage for multinational companies looking to Egypt for IT services, outsourcing and technology.

TBR believes BPO is the natural first step in outsourcing when graduates want to leverage their language skills. With robotic process automation (RPA) and AI kicking into high gear in Egypt, and ITIDA accelerating investments in the space, long-term opportunities likely will stem from automation-augmented BPO services. Developing and managing chatbots will present an opportunity to local companies to bridge established BPO footprint with investments in new areas. Fluency in multiple languages will be critical as software engineers develop and train chatbots in particular

languages, which the humans (i.e., traditional BPO) will be able to manage. Here, too, Egypt has an advantage as the education system not only emphasizes English as a necessary business language, but also teaches other European languages to business-proficiency levels. German and French are common languages for outsourcing services and there is a wider language capability and country outreach, where companies are delivering services in Spanish, Italian as well as other less common languages.

As talent competition in the global IT services space continues to intensify, Egypt provides vendors with resource pools that can support growth areas and reduce the need to rehire, lowering companies' attrition rates. There is a focus on cultivating engineering skills through accelerated training as well as certifications for software engineering, RPA, data science and machine learning, among others, using a mix of physical and online courses. For example, Valeo Egypt is the Valeo Group's main software development center and currently develops 50% of the Valeo Group's software production globally. Valeo Egypt, with approximately 2,000 engineers, designs, develops, and maintains embedded software modules & systems for the automotive industry and has been an active innovation hub, developing IP and new products. Similarly, IBM leverages its resources in Egypt to drive innovation around disruptive technologies, including blockchain and robotics, enabling the company to keep its portfolio refreshed. The more accessible and common training resources throughout the region contribute to ongoing learning that provides vendors with skilled staff that can drive innovation in disruptive areas as well as enhance vendors' core strength areas.

⟩ AFTER COVID-19, EGYPT'S APPEAL MAY GROW

Always known as Um al-Dunya, Mother of the World, Egypt has been a global hub forever. Now, in the early 21st century, its regional cultural spread and ties support Egypt's efforts to expand its technology sector and boost exports, as it attracts capital from the region and from global companies. By building on rich traditions and advantages while investing in emerging technologies, Egypt has demonstrated it can be a reliable partner, leading global systems integrators and their clients to continue increasing their investments in the country.

While traditionally vendors generate the least amount of revenue from MENA and APAC, those regions remain the most dynamic in resource management activities, especially as vendors transform the traditional low-cost factory model with which countries like India and the Philippines have been associated. We estimate 1.4 million people are employees in India among the 14 vendors tracked in TBR's _Global Delivery Benchmark._ Departing from such a mindset, however, proves to be difficult, especially when it comes to building scale — something Egypt could be challenged to compete with in developing and deploying industry-tailored platform-based solutions. Egypt has an opportunity to learn from India's missteps for the past two decades as an outsourcing hub and position itself well as skills over scale matters in the times of increased automation and AI.

As COVID-19 leads every enterprise to consider supply chain diversity, every country that is not India or the Philippines will be arguing that their talent and technology infrastructure is comparable to or better than other options. Egypt potentially has an advantage in this race for new high-value, low-cost service delivery hubs, having invested smartly, with plenty of highly skilled professionals and a substantial local market. In the midterm, after the rush to recover from COVID-19 abates and operational cadences return to something closer to 2019's pace and priorities, a high-skilled, low-cost resource center close to Europe and with a relatively stable economy and government will further cement the appeal of Cairo to companies seeking technology support.