

EgyptBackground

Background				
Brief	:			
Population	:			
Economy	1:			
Sectoral contribution to GDP	10			
Poverty and inequality	1			
Foreign direct investment and remittances	2			
Trade	2:			
Education	2.			
Health	29			
Basic infrastructure	3:			
Agriculture	4:			
Endnotes				
Donors and Sponsors				
Reuse our work				
Cite this research				

Background

- Brief
- Population
- Economy
- Sectoral contribution to GDP
- Poverty and inequality
- Foreign direct investment and remittances
- Trade
- Education
- Health
- · Basic infrastructure
- Agriculture

Brief

Chart 3: National development plan



Source: Cube Consultants

Egypt gained independence from the United Kingdom following the 1952 revolution by the 'Free Officers' led by General Gamal Abdel Nasser. Nasser ruled the country until 1970, followed by Anwar Sadat, whose assassination in 1981 gave way to Hosni Mubarak's regime.[1]

The Arab Spring of December 2010 eventually forced Mubarak to resign in February 2011. Grievances such as corruption,

poverty and political oppression saw thousands of protesters in downtown Cairo and countrywide organise demonstrations. The Supreme Council of the Armed Forces eventually intervened, imposed martial law, suspended the Constitution and dissolved the People's Assembly. A transitional body held the fort for six months in preparation for fresh elections.[2]

The process towards fresh elections was characterised by a series of controversial events until, in June 2012, Mohamed Morsi was declared president. His reign was turbulent and short-lived. In June 2013, the military temporarily suspended (and amended) the Constitution and relieved Morsi of the presidency.[3]

In May 2014, Abdel Fattah Al-Sisi, a former general in the armed forces and minister of defence, resigned from the military to run in the election race and was declared winner. The elections were controversial, including his landslide win against his only opponent, leftist Hamdeen Sabahi.[4]

President Sisi has sought to restore law and order and has embarked on a broad range of economic reforms. His style of leadership has reduced the social turbulence that characterised the last decade but has also shrunk the democratic space in Egypt.[5] Controversial elections in 2018 saw him retain the presidency with 97% of the vote.[6]

In 2019, further constitutional amendments were undertaken and have cemented the role of the military in politics and public life. Also, the presidential term limit was extended to six years, but reaffirmed the two-term limit. (Although one of the amendments in this section allows Sisi, already in his second term, to run for a third six-year term in 2024.) The position of vice-president was reconstituted. The president also appoints judges and one-third of the members of the new upper chamber (i.e. the senate).[7]

The security situation has remained fragile, however, especially in the Sinai Peninsula, despite large security efforts.[8]

Nonetheless, the Government of Egypt (GoE) under Sisi has taken steps to restructure the economy, assisted by an International Monetary Fund (IMF)-induced reform package. It has passed laws to attract investment, introduced tax reforms, embarked on various austerity measures to rein in government expenditure, and on numerous large infrastructure projects to boost economic activity in the country.

Although the macroeconomic indicators have improved, the country still suffers from the impact of fiscal and monetary instability and is bogged down by the range of reform it has to pursue to unlock growth. Currency depreciation, inflation and budget deficits remain a challenge. Additionally, austerity measures such as cuts in subsidies and reduced spending on education and health pose challenges given Egypt's rapid population growth, high levels of poverty and unemployment.[9]

Sisi has placed a premium on economic growth[10] but the economy suffers under the inordinate role of the military in all aspects of life, monopolies/lack of competition and state control of the economy. The result is an inevitable cycle of protests and hard-handed reaction. [x]

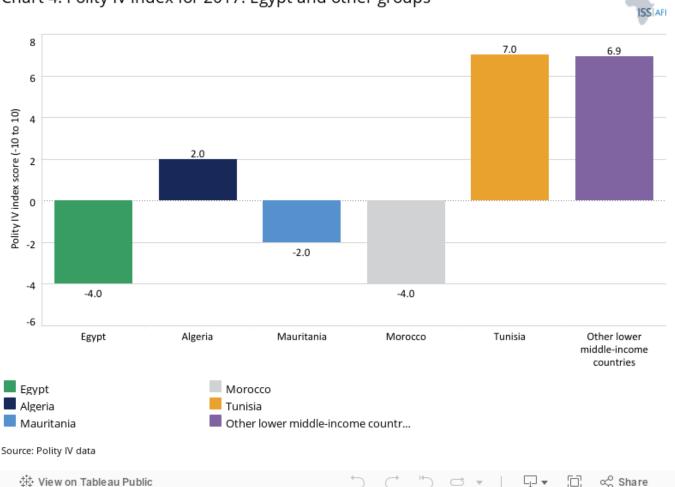
Even though Egypt is divided into 27 governorates, the administrative structure is centralised with governors and other executive officials being appointed by the president and thus serving at his discretion. Decentralisation is thus limited to administrative functions without the devolution of any real decision-making powers as envisaged in the Constitution.

Instead, the country is strongly hierarchical with the presidency at the helm. Revenue collection, for example, is centralised, with over 90% of the revenue collected by the central government.[11]





Chart 4: Polity IV index for 2017: Egypt and other groups



According to the Polity IV index of regime type hosted by the Center for Systemic Peace, Egypt ranks as an anocracy or mixed regime. In 2017, the country scored -4 on the Polity IV composite index on a score ranging from -10 (a hereditary monarchy) to +10 (a consolidated multiparty democracy).[12] Mixed regimes are inherently more unstable than a full autocracy or democracy because they have a combination of democratic and authoritarian components, reflecting weak institutions and personality politics that result in zero sum outcomes.[13]

Chart 4 below compares Egypt, other North African countries and the average of other lower middle-income countries (OLMICs) on the Polity IV index. Egypt's score ranks close to Morocco and is significantly below the average for OLMICs.

When it comes to corruption, Egypt ranks 117th out of 180 countries with a score of 33 out of 100, according to Transparency International's 2020 Corruption Perceptions Index. Compared to its North African neighbours, Egypt is more corrupt than Tunisia, Morocco and Algeria.[14]

Baksheesh (meaning payment — such as a tip or bribe — to expedite service) remains a huge challenge to the economy and investment. A poor legal framework and abuse of office by public officials make enforcement quite difficult even within the existing legislation which criminalises corruption under Egyptian law.[15]

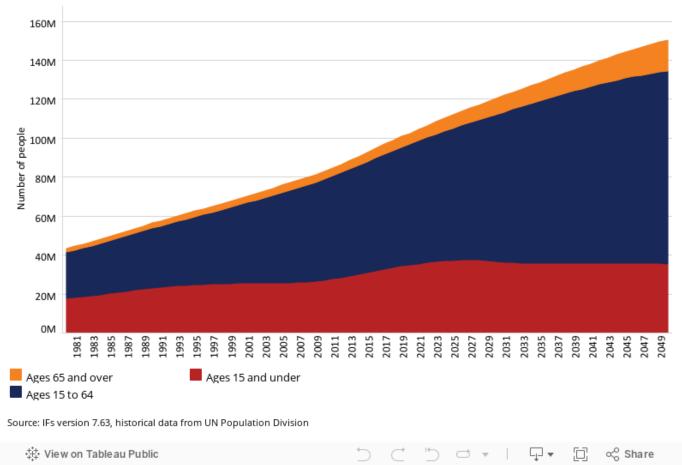
Today, Egyptians generally associate the 2011/12 revolution with political instability and economic downturn,[16] and achieving social equity and the general welfare of the population is their overriding priority. The level of trust in the government's political and administrative system is low, and the government's inability to deliver on major socio-economic issues for the population is slowly making its supporters passive and emboldening the stance of those opposed to the regime.[17]

The following sections will analyse how Egypt's governance and public policy choices have thus far influenced development sectors in population, education, health, basic infrastructure and agriculture.

Population

Chart 5: Population by age cohorts





Most of Egypt's population lives in the urban agglomerations of Cairo and Alexandria, and rural areas along the Nile. The population density along the Nile is among the highest globally at more than 2 000 people per square kilometre. Other small communities are spread throughout the desert around the oases and historic trade routes.

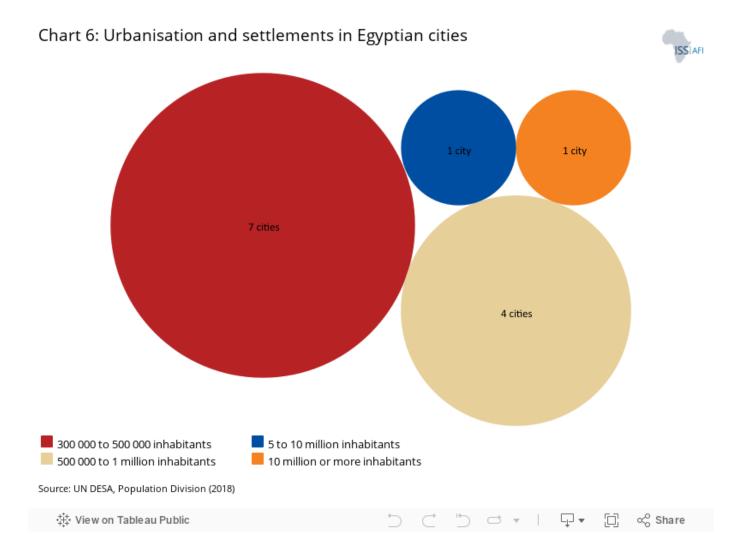
Egypt's population is currently estimated at 102.5 million, and by 2050, the country will have approximately 150 million people. This represents a 45.5% increase in the total number of people over the next 30 years. The country had an average population growth rate of 2.1% between 2010 and 2020, and is projected to average 1.3% between 2021 and 2050.

The population under 15 years old has been on an upward trend since 2008 and in 2020 accounted for nearly 34% of the population (34.7 million people). The proportion of this youthful and dependent population is expected to gradually decline to constitute 23% of the population, although the absolute number of people will remain fairly unchanged at 34.4 million by 2050.

The population aged between 15 and 29 years accounted for 24.5% of the population (25.2 million people) in 2020, and by 2050 will have slightly declined to account for about 23% of the population (34.9 million people). This relatively large youth bulge can increase the likelihood of instability if their needs are not accommodated.

About 36% of the population (37 million people) are aged between 30 and 64 years and by 2050 will account for nearly

43% (63.8 million) of Egypt's total population. The ratio of people aged 65 years and over is relatively small at 5.5%. But by 2050 it will account for 10.8% of the population (16.1 million people) — double the current rate — and represent about 10.5 million more people in this age cohort than in 2020. Chart 5 summarises the population cohorts in Egypt to 2050.



Most of the population live in rural (57%) rather than urban centres (43%), but the urban population is expected to outnumber the rural population by 2041, with 69 million people[18] living in areas categorised as urban.

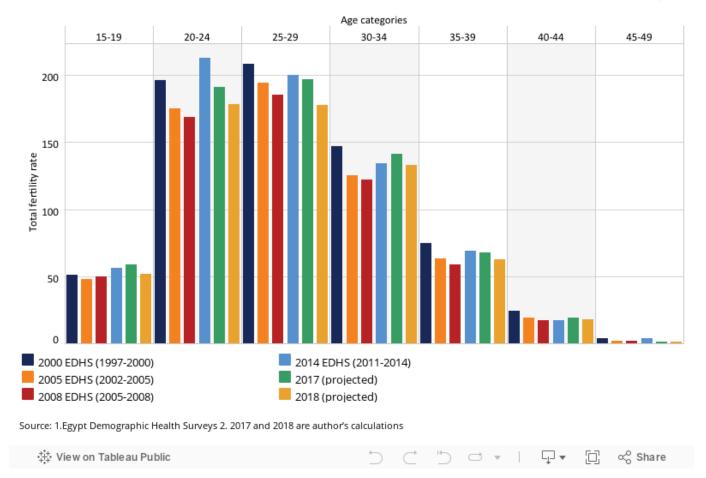
Only 13 of Egypt's cities have a population of more than 300 000. Eleven of them have inhabitants of under 500 000, while the two largest cities, Alexandria and Cairo, have five million and 20 million people respectively. By 2030, Cairo is projected to have 25 million people.[19]

Egypt currently has an annual urban growth of 2%, meaning that Egyptian cities need to accommodate nearly one million additional people every year. Cairo alone saw 500 000 new inhabitants in 2017, making it the fastest growing city in the world.

In the Greater Cairo region, nearly two-thirds of the population lives in informal settlements characterised by poor urban planning and low levels of access to water and sewage amid increasing droughts because of climate change. As a result, Cairo is considered to be one of the most threatened cities globally, especially because Egypt is forecast to experience a critical water shortage by 2025.[20]

Chart 7: Age-specific fertility rates (per 1 000 women) and total fertility rate for 2008-2018





The continued rapid increase in Egypt's population is a result of two things. First, high total fertility rates (TFR) in many parts of the country, particularly in the poorest governorates, are significantly higher than the national average of 3.2 children per woman of childbearing age. Most of these governorates are in rural Upper Egypt and informal settlements in cities.

A study by the United Nations (UN) Population Fund found that in 2018, fertility rates reached 2.75 in urban governorates, compared to 3.52 to 3.93 for both Upper Egypt and border governorates, respectively.[21]

Although the national TFR has been declining from the 1990s rate of five children per woman, it is still well above the rate needed to reach population stabilisation. In fact, between 2008 and 2014, Egypt's TFR increased from three to 3.5 per woman.[22] On the Current Path, Egypt is forecast to only achieve the replacement level of 2.1 children per woman by 2043.

Second is the phenomenon of population momentum since a large proportion of women are in their childbearing years. In Egypt, the total number of births is bound to increase even though the total number of children per woman of childbearing age is falling.[23]

Before 2000, contraception use had the largest suppressing effect on fertility. However, since then there has been no change in the impact of either the average age of marriage or contraception on fertility.

Findings suggest that access to labour market opportunities for well-educated women between 20 and 29 years could

postpone the decision to have children.[24]

The barriers to greater employment for women in Egypt include high cost of childcare and poor enforcement of anti-discriminatory laws.[25] In fact, many firms do not employ women because they do not want to give benefits like maternity leave and comply with legal frameworks that require an employer to have childcare when there are more than 90 female employees.[26]

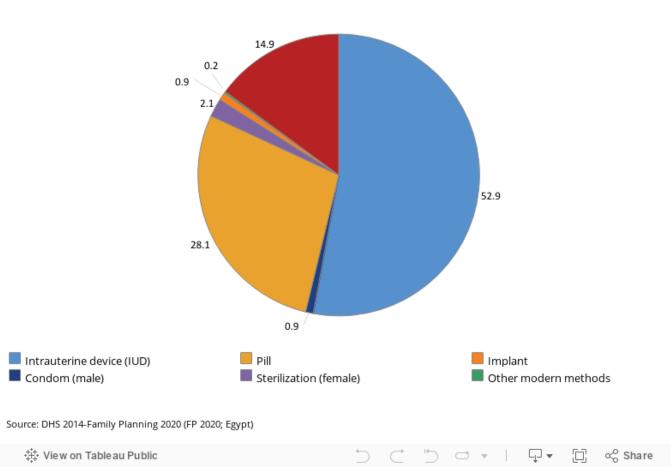
A 2012 study estimated that if female employment rates were to match male employment rates in Egypt, the GDP would increase by 34%.[27]

Even after Egypt reaches the replacement level in 2043, population growth will continue for a number of years, albeit much slower. IFs projects that between 2043 and 2050, Egypt's population will increase by about nine million people.

Rapid population growth as a result of high fertility rates and population momentum will have costly repercussions for Egypt's economy and human development prospects. It inevitably contributes to the deterioration of quality of life in terms of health, nutrition, access to employment and other basic yet scarce commodities such as water regarding which Egypt already experiences stress.







Although Egypt has a strong family planning programme and lower rates of unmet contraceptive needs than most countries on the continent and in the MENA region, a considerable portion of Egyptian women still do not use or have access to modern contraception.

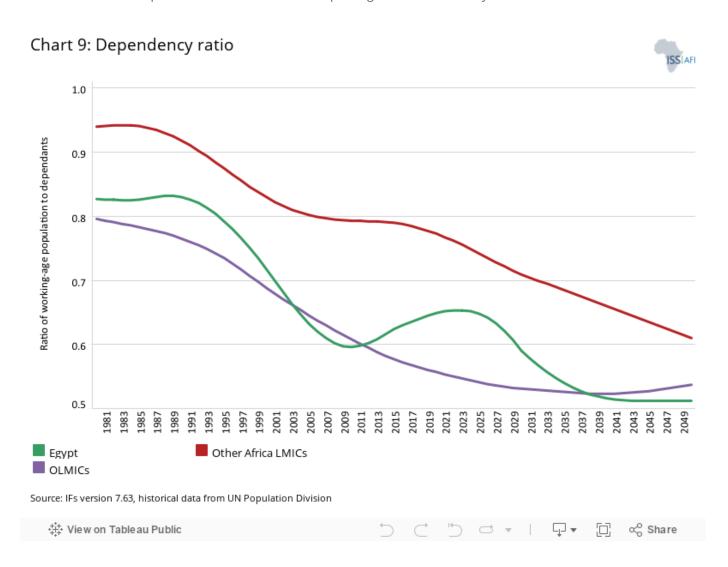
In 2014, unmet need for family planning was 12.6% and contraceptive use was 59%. In 2018, the overall prevalence rates of unmet need for family planning and contraceptive use in rural areas were estimated at 11.2% and 69.5% respectively. The total demand for family planning was 80.7%.[28]

Socio-economic factors are some of the reasons cited for women having unmet needs for family planning.[29] Some of the risk factors for unmet family planning needs include the perception that more than three children are ideal, lack of female empowerment with husbands still being the main decision makers and disapproving of family planning, and inadequate labour market opportunities for women.[30]

Finding the direct and indirect reasons hampering women from using modern contraception could help decision makers to address the challenge of overpopulation in the country and between regions.[31] Projections estimate that if use of modern contraception were to rise to 74.4% by 2030, TFR would decline to 2.1 children per woman by 2030.[32]

Enabling women to make decisions on their reproductive health issues and preferences could reduce population growth by reducing unwanted pregnancies, increasing the age of women at first birth and spacing between births. However, the onus of family planning should not lie only with women.

Chart 8 showing the mix of modern contraceptive use in Egypt indicates that methods such as sterilisation are only undertaken by women. Shared effort on family planning between men and women would probably result in healthier families and lessen the pressure on environmental and public goods for the country.



Slowing down population growth would particularly reduce the number of child dependants (under 15 years old) and burden on the working-age population (people aged 15-65 years old). Currently, the dependency ratio in Egypt is 0.65 — meaning that for every 100 working people there are 65 dependants, which is better than the average for OLMICs in Africa and globally but is still high.

The IFs forecast shows the dependency ratio will slightly decline, and by 2040 Egypt will have a dependency ratio comparable to the OLMICs average. By 2050, Egypt's dependency ratio will be lower (0.51) than the OLMICs average at 0.53.

For at least the next two decades, Egypt's working-age population will be encumbered with the responsibility of providing basic needs for its relatively large portion of dependants. This means that most families have limited disposable income to save or invest in themselves and the economy.

Decreasing the rate of population growth can thus have positive socio-economic benefits in the form of a demographic dividend. This is defined as the economic growth that can result from shifts in a country's population age structure when the working-age population is greater than the dependant population.

A demographic dividend or bonus (reliant on a healthy, and appropriately educated, population) can spur economic growth and create more job opportunities, thus reducing unemployment. In the long term, it can reduce the pressure on public goods and provision of basic services such as education, health and water.

Egypt experienced its first demographic dividend in 2010 when it reached a peak ratio of around 1.68 people of working age per dependant. This was slightly lower than the average peak of other North African countries at 1.97, and nearly 40% lower than the ratio experienced by China (2.7) and other Asian Tigers in the same period.

Egypt's prospects for another demographic dividend have, however, been on the decline since 2011, and IFs projects that the country will achieve its next demographic bonus only from 2030 and peak at 1.92 and remain steady through 2050.

The decline in prospects for a demographic dividend is associated with Egypt's fertility rate, which increased quite significantly between 2008 and 2014. The trend in increased fertility rates can in part be explained by the poor labour market situation for women[33] and the unrest that accompanied the Arab Spring.[34] If Egypt invests in quality healthcare, appropriate education and job creation, and manages to improve stability, it will benefit more from its favourable demographic structure in the long term.

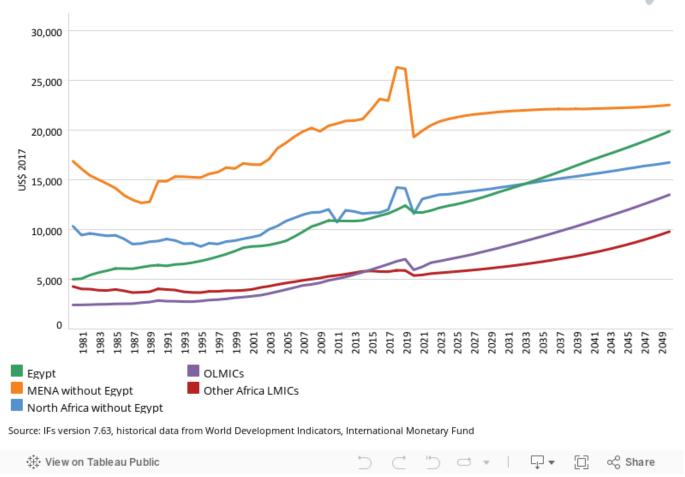
Current population projections show that Egypt will continue to have a relatively high rate of population growth. Although family planning efforts have been successful in the past and Egypt has actually reduced its TFR, more needs to be done to ensure that the unmet need for contraception and choice of contraception, particularly among women, is met. Providing greater economic opportunities for women and reframing the population growth rate narrative as a shared responsibility between men and women could also hasten positive change in the country's quest to reduce population growth.

The Government of Egypt should continue to make a push on its family planning prioritisation programme[35] if the country is to achieve other socio-economic development objectives related to its 2050 vision for the country.

Economy

Chart 10: GDP per capita (PPP), Egypt, other North African countries and OLMICs (





Although the process of economic liberalisation in Egypt (*infit*) began in the early 1970s, most important sectors of the Egyptian economy remain under government control. However, concerted efforts since the 1980s to create a more resilient economy have gradually paid off. These include reduced defence expenditure and increased financing towards infrastructure projects, the development of the natural gas industry and greater foreign trade.[36] By the late 1990s, Egypt was recording marked improvement in its per capita income, a trend likely to continue over the next 29 years.

The oil and gas industry has been a huge contributor to more rapid economic growth owing to discoveries of large oil fields and the establishment of a robust oil and gas industry with dynamic legislation. In fact, by the 1990s, the country was a strategic oil producer based on fields in four areas — the Gulf of Suez, Western Desert, Eastern Desert and Sinai.

By 1998, Egypt was producing 866 000 barrels of crude oil per day. Between 1999 and 2010, the total number of discoveries had reached 489, 311 of which indicated reserves of crude oil.[37] As of 2020, production of crude oil exceeded 65 000 barrels per day.[38] Egypt's total proven reserves of 4.4 billion barrels of oil (BBOE) are expected to last the country 14 years at the 2016 rate of consumption. Proven gas reserves stand at 77 trillion cubic feet or 13 714.3 BBOE as of 2017 and are expected to last the country another 38 years at current consumption levels.[39]

By 2011, the sector was growing at unprecedented levels. It constituted nearly 70% of Egypt's foreign direct investment and contributed 16% of GDP, yet most Egyptians experienced shortages in gas, power and cooking fuel owing to inefficient

and inadequate generation capacity amid rapidly rising demand.[40]

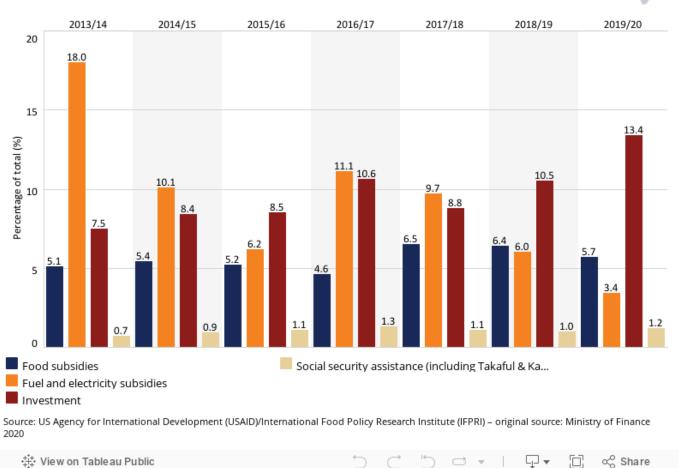
Although the contribution of the hydrocarbon industry has not dominated Egypt's GDP, it has been valuable as a foreign exchange earner. Despite significant production in the sector, Egypt became a net importer of both oil and gas in 2012. In fact, the low international oil and gas prices in recent years have upended the expectations of improved balance of payment and the anticipated positive economic results. This shows the extent to which Egypt is still relatively dependent on the oil and gas industry.

In addition, because the sector is capital-intensive it has contributed little to job creation. Consequently, Egypt's high growth rates have been accompanied by a commensurate increase in unemployment — against a requirement for at least 600 000 additional jobs annually.[41]

In a 2019 report, the IMF estimated that Egypt needed to create about 3.5 million jobs over the next five years to benefit from the potential of a demographic dividend and the required level of economic productivity.[42] In contrast, the precautionary measures to contain COVID-19 have resulted in a significant increase in unemployment since 2020, as reflected in the drop of per capita income in Chart 10.[43]

Chart 11: Government expenditure on social protection





Despite the projected positive trajectory in per capita income, the country's economic prospects remain modest and living standards are generally low. The government has however scaled up its social safety programmes to ensure that its large vulnerable population does not slide into extreme poverty.

Chart 12: Subsidies and transfers in Egypt

In the first half of the FY 2020/21, the Egyptian budget on subsidies, grants and social benefits rose by 32% to reach E£100 billion per annum, according to Egypt's Finance Minister.¹ Energy and food subsidies are the main items subsidised by the Egyptian government and are the lifeline of most Egyptians, but cost nearly a third of the government's budget.

Energy: As part of an economic overhaul to ease pressure on public finances, the government slashed projected fuel spending by about half for the FY 2020/21 from E£52.9 billion in FY2019/20 to E£28.1 billion. Prior subsidy cuts, the drop in global oil prices and price hikes for electricity companies have allowed the government to cut fuel subsidies, while reducing energy prices for manufacturers to assist with the COVID-19 downturn. ²
Food: The food subsidy system has been integral in supporting millions of economically vulnerable Egyptians. The Tamween ration card system benefits around 70 million people, while the bread subsidy benefits 83 million people, accounting for 5.7% of the government's budget, compared to an estimated 1.2% for other social security assistance, including the social cash transfer programme. Efforts to reform the system have been difficult because millions of people in the country depend on state-subsidised bread to survive³; reforms have thus focussed on fuel and electricity. Cash transfers: Egypt has been providing cash to poor households through its first conditional cash transfer programme, Takaful and Karama, inaugurated in 2015. ⁴ It is well targeted and has successfully increased consumption by households by about 8% compared to households not participating in the programme. ⁵ Social protection is crucial in Egypt's efforts to improve the welfare of its extremely poor but there is little evidence that the transfers have increased asset ownership or income generated to beneficiaries. This may be explained by the short time horizon of the analysis period and the challenging economic situation of 2016/17, and now COVID-19.⁶

- ¹ Egypt today, Egypt's allocations for subsidies, grants, social benefits in 6 months hit LE100B, 14 January 2021
- ² Enterprise, Egypt nearly halves fuel subsidy spending in 2020–2021 budget, 23 April 2020
- ³ Reuters, Egypt says restored food subsidies to nearly 2 million after Sisi tweets, 1 October 2019
- ⁴ Ministry of Planning and Economic Development, Egypt's 2021 Voluntary National Review, 2030 Vision of Egypt
- ⁵ 6 Symposium Policy Note 3, IFPRI MENA Regional Program Policy Note 13, USAID/IFPRI, November 2020.

Egypt's long-standing challenges have been further compounded by the COVID-19 pandemic. Due to slowed economic activity, the pandemic has worsened the high unemployment rate (from 7.7% in 2019 to 9.6% in 2020) especially in the formal sector, created a wider budget deficit, elevated debt-to-GDP ratio (projected at 90.2% of GDP in 2020 from 84.2% in 2019),[44] and a drop in foreign reserves, tourism, Suez Canal revenues and merchandise exports.[45]

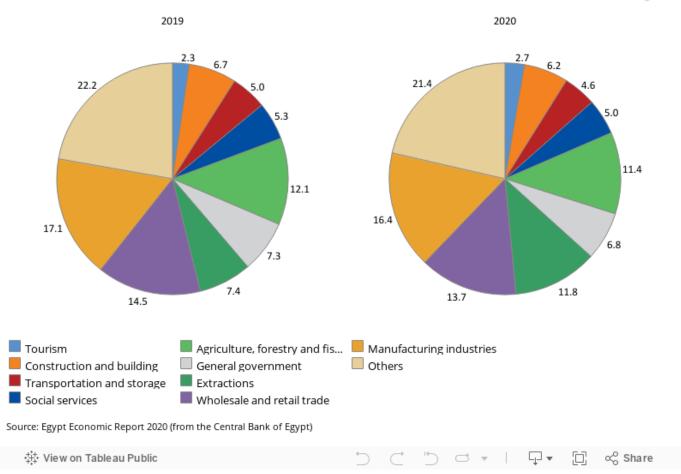
Despite the negative economic repercussions of COVID-19, Egypt's growth has maintained a reduced but positive outlook unlike many countries globally that have recorded negative growth rates. In fact, in June 2021, the government announced that the country's external debt had declined slightly for the first time in years.[46]

Nonetheless, the country faces many economic vulnerabilities, particularly on issues related to subsidies and social protection programmes, improvement of job creation mechanisms, the business development environment and provision of equitable health services.

Sectoral contribution to GDP

Chart 13: GDP breakdown by economic activity (FY 2019 and 2020)



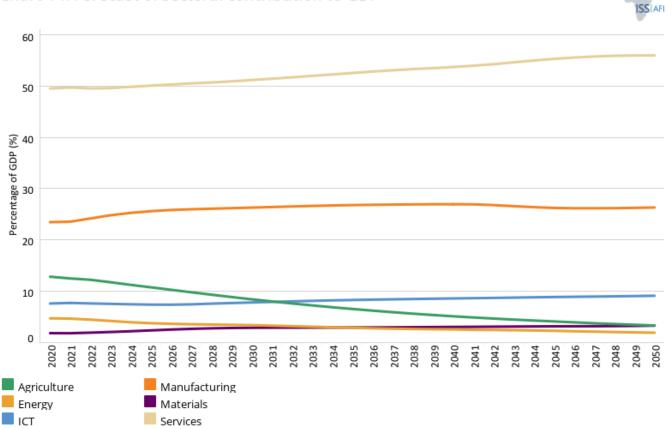


The size of Egypt's economy was estimated at about US\$348.8 billion in 2019 and US\$361.2 billion in 2020. IFs estimates that by 2030, the economy will be approximately 53% larger at about US\$562 billion and by 2050 reach nearly US\$1.33 trillion, 3.5 times more than in 2020.

Chart 14: Forecast of sectoral contribution to GDP

Source: IFs version 7.63, historical data from World Development Indicators

🛱 View on Tableau Public



The service industry comprises the largest sector at about 50% of GDP and is forecast to continue to contribute the largest share to Egypt's GDP. It employs nearly half of the population and is dominated by telecommunications and tourism.

The service surplus revenue has declined from US\$13 billion to US\$9 billion (a 31.2% drop) due to the COVID-19 pandemic. The tourism sector has borne the brunt of this decline with reductions of up to 54.9% in travel receipts between January and June 2020, and upwards of US\$7.7 billion in 2020.[47]

Manufacturing makes the second largest contribution to Egypt's GDP at about 17.1%. It is followed by the agriculture sector at about 12.1% of GDP. Agriculture's contribution to the economy is projected to decline in the forecast horizon to roughly 3.6% by 2050 as Egypt's economy shifts to higher value-added sectors.

According to IFs classification of sectors, information and communications technology (ICT) currently contributes about 7.6% to GDP and by 2050 will contribute about 9% of GDP. The energy sector contributes a meagre 4.7% of GDP and by 2050 will contribute only about 2% of GDP. Finally, materials contribute about 1.8% of GDP and will increase slightly to 3.3% of GDP by 2050.

Egypt also has a huge informal sector that is estimated to constitute over 50% of GDP.[48] Because it is not as oil-rich as most Gulf countries, Egypt relies heavily on the informal economy and remittances from abroad (mostly from the Gulf nations).

The informal sector is estimated to provide about 68%–70% of new jobs and increases by 1% every year relative to the

formal economy.[49] A World Bank analysis shows that Egyptian workers crave stability and job security, but most jobs lack any written contracts or social insurance. Most workers indicate that they are willing to work for even 20% lower wages in the formal private sector given the job security that comes with formal sector employment as opposed to employment in the informal economy.[50]

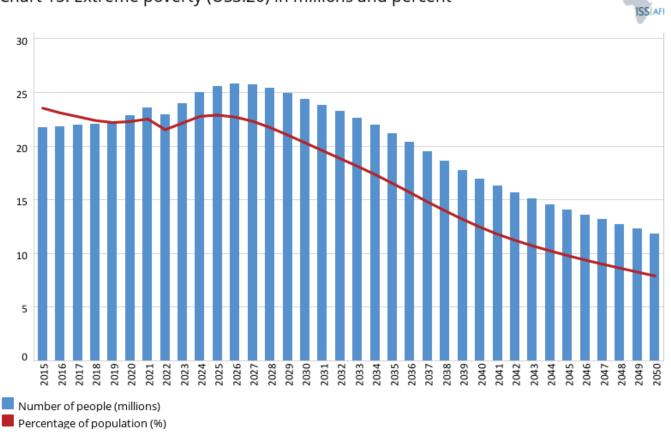
The informal sector challenge is two-fold: the country has many small unproductive firms that are not capable of offering formal employment to absorb the huge working population in Egypt. But the large firms do not offer formal jobs either. Only about half of employees in such firms have contracts and social insurance.[51] In fact, Egypt ranks in the top ten worst countries for working people at position five (out of 149 countries) in the International Trade Union Confederation's (ITUC) Global Rights Index report of 2021.[52]

Together with its large youth bulge, the survivalist employment in the informal economy could be a key driver for socio-economic unrest. In addition, reduction in worker remittances from the Gulf states owing to geopolitical and economic issues would also probably increase the risk of instability.[53]

The expansion of the informal economy in Egypt and much of the Arab world is generally a manifestation of the economic and social marginalisation suffered by a majority of the population.[54] Because informality is also associated with low levels of development and standards of life, Egypt should incentivise the formalisation of the economy by reducing the associated costs and hurdles, especially for small firms.[55]

Poverty and inequality

Chart 15: Extreme poverty (US3.20) in millions and percent



Source: IFs version 7.63, historical data from World Development Indicators



Most of the poor and vulnerable population lives in the governorates of Upper Egypt. The Government of Egypt is committed to its Haya Karima (Decent Life) initiative to accelerate poverty reduction, particularly in rural areas. As such, poverty at the national poverty threshold (E£736 per capita per month or US\$3.80 per day in 2011 US\$[56]) declined to 29.7% in 2020 down from 32.5% in 2018.[57]

On the US\$1.90 extreme poverty threshold, 2018 data in IFs shows that about 3.8% of the population were destitute and this represented roughly 3.8 million people in that year. On the US\$3.20 extreme poverty level used for lower middle-income countries, approximately 22% of the population lives in extreme poverty, equivalent to nearly 23 million people. This means a larger portion of Egyptians live just below the US\$3.20 extreme poverty line.

Owing to the effects of the pandemic and challenges related to a rapid population increase in Egypt, IFs projects that poverty will increase slightly only to return to its pre-COVID-19 rate in 2028 and then steadily decline afterwards. Therefore, in the short and medium terms, targeted social programmes are an essential component in the poverty reduction strategy.

Aside from income poverty, Egypt also experiences multidimensional poverty. Although Egypt's position has improved in the Global Multidimensional Poverty Index of 2020, it still has gaps in nutrition, school attendance, years of schooling, housing and even sanitation. Roughly 6.1% of the population is categorised as vulnerable and 0.6% are in severe poverty,

with these figures disproportionately affecting those in rural areas.[58]

When it comes to income inequality, studies indicate that the level of inequality in the country is probably underestimated and if left unaddressed could fuel social unrest and instability.[59] This is particularly so because the size of Egypt's youth bulge (per cent of the population aged 15 to 29 relative to the adult population), which is currently declining, is set to increase from 2024 for another 15 years.

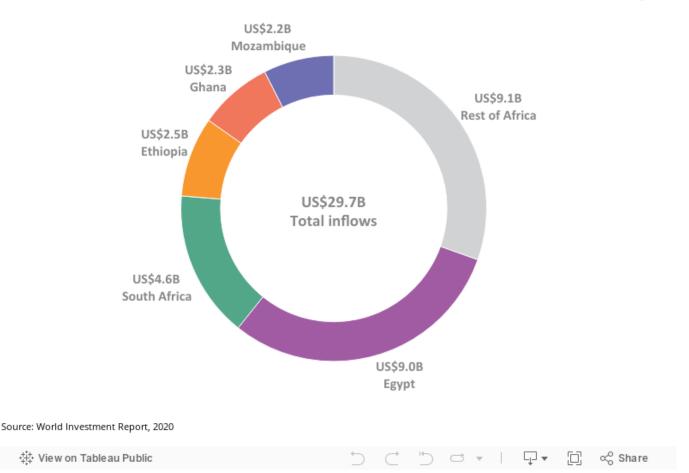
Regional inequalities and disparities also persist. The government reported that between the FY 2017/18 and 2019/20, household income in urban areas grew by 16% compared to 13% in rural areas. However, poverty rates in rural areas dropped faster than in urban areas, pointing to income polarisation and the difference in how people in rural and urban areas experience poverty.[60]

To reduce income inequality, the Government of Egypt has undertaken policies related to subsidies (in particular food subsidies), increasing the minimum wage and introducing progressive taxation to reduce inequality in the country. Also, efforts to promote localised development in regions and inclusiveness in government opportunities, including to encourage gender equality, are some actions being pursued by the country. [61]

Foreign direct investment and remittances

Chart 16: FDI inflows to Africa, 2019





According to the UN Conference on Trade and Development (UNCTAD) 2020 World Investment Report, Egypt was the largest recipient of foreign direct investment (FDI) in Africa in 2019. It increased by 11% from the previous year to US\$9 billion.

The increase can be attributed to economic reforms that improved macroeconomic stability and strengthened investor confidence in the country. In the World Bank's 2020 report on Ease of Doing Business, Egypt improved its rank to 114 (out of 190) from position 120 in 2019.[62] Most FDI still goes to the oil and gas industry, although investments have been made in the non-oil economy as well as in telecommunication, consumer goods and real estate[63] such as the construction of the new capital city east of Cairo.[64]

In addition, Egypt has seen sizable foreign funding in major infrastructure projects. For example, Egypt's first nuclear project was set at US\$25 billion, with most funding sourced from Russia.[65] Investors from the Gulf Cooperation Council states,[66] Asia (mostly China) and Europe are also investing in projects ranging from rail to oil.[67]

Egypt should make an effort to attract more FDI to other sectors like manufacturing to diversify and improve the value content of its exports and improve productivity and labour market outcomes, and thus avoid its recurring growth slowdowns.

Egypt is one of the leading labour exporting countries globally, and migrant remittances have been one of its main sources of external finance.[68] In 2018, remittances were the second largest factor in reducing the country's current account deficit, as they increased by US\$3 billion between 2017 and 2018.[69]

According to the Central Bank of Egypt, between January and September, 2020 Egyptian remittances (from abroad) increased by 11.6% compared to the previous year to reach US\$22.1 billion. This increase is also linked to the liberalisation of the country's exchange rate and makes a significant contribution to Egypt's cash reserves. COVID-19 has, however, seen Egypt's cash reserves dwindle as investors reduce their exposure to emerging markets, on top of the decline in tourism due to COVID-19 restrictions.[70]

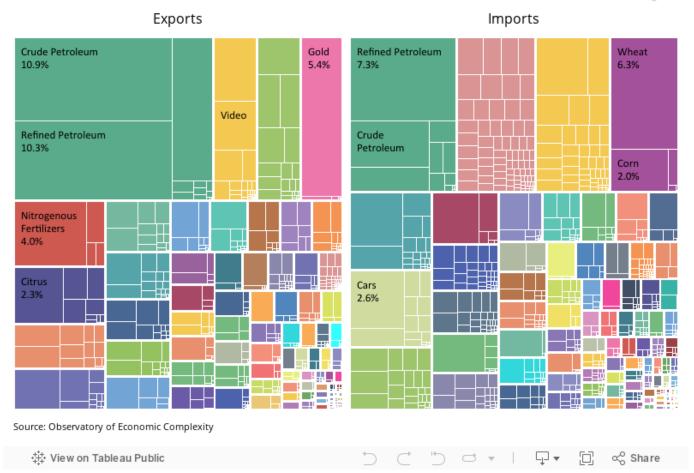
Although remittances are the second highest source of income after labour income for Egyptian households, most of it is used for daily household consumption expenses. In this way, remittances alleviate poverty, improve the overall welfare of Egyptians and indirectly impact the economy through increased consumption.

However, increased consumption in relation to investment has a negative long-term impact on economic growth. There is a clear opportunity for the Government of Egypt to encourage its expatriate community to invest in the economy through the establishment of diaspora bonds, as done by countries as diverse as Israel, India, Nigeria and Ethiopia, and to provide opportunities for small-scale investors.[71]

Trade

Chart 17: Export and import trade data for Egypt, 2019





According to Observatory of Economic Complexity data, in 2019 Egypt exported goods worth US\$36.7 billion and imported about US\$82.5 billion, recording a large negative trade balance, thus making it a net importer. Its largest exports were petroleum products, gold and nitrogenous fertilisers, while its top three imports were refined petroleum, wheat and cars. In fact, in 2019 Egypt was the world's largest importer of wheat. Top trading partners are the United States (US), United Arab Emirates (UAE), Saudi Arabia, Italy, Turkey, China, Russia and Germany.

Egypt's trading partners reveal its poor trade relationship with the North African and Maghreb bloc, as well as the rest of sub-Saharan Africa. Egypt has long recognised the need for greater trade integration on the continent and has signed the Tripartite Free Trade Area (TFTA) that seeks to facilitate movement of goods (largely on a tariff framework) among the signatory country territories.

The TFTA would essentially integrate three existing African trading blocs — the East African Community, the Southern African Development Community and the Common Market for Eastern and Southern Africa. This deal would harmonise trade in the three regions and eliminate overlapping trade rules to reduce the cost of doing business.[72]

Egypt has also ratified its membership to the African Continental Free Trade Area (AfCFTA) agreement, and it is expected that this trade agreement would allow and facilitate the entry of Egyptian goods into the sub-Saharan market.[73]

The AfCFTA deal offers significant opportunities for Egypt, which has established itself as an exporter of oil and mineral-related manufactured goods such as cement to Ethiopia and Kenya, in addition to agricultural and food products. It could help Egypt increase its trade volume with Africa, which currently stands at 3% of its total trade volume, particularly with sub-Saharan Africa, which has a large market size and currently constitutes only a fraction of Egyptian exports.[74]

With regard to the trilateral cooperation, most recently Egypt, Jordan and Iraq have agreed to improve the mobilisation of resources and the implementation of practical programmes in the areas of common challenges, especially on climate change, food security and livelihoods.[75]

Education

Chart 18: Education pipeline, 2018



	Primary			Lower secondary			Upper secondary		Tertiary	
Geography	Gross enrolment rate	Survival rate	Completion rate	Gross enrolment rate	Completion rate	Transition rate	Gross enrolment rate	Completion rate	Gross enrolment rate	Graduation rate
Egypt	106.3	97.0	102.3	98.9	79.0	92.0	87.9	65.1	35.2	17.7
Algeria	109.9	96.3	110.5	120.2	91.4	89.8	72.2	34.9	51.4	29.2
Tunisia	115.4	94.2	100.6	107.7	73.8	98.6	79.7	33.9	32.2	22.5
OLMICs	75.3	82.0	79.1	58.7	66.3	83.5	43.2	36.9	25.2	25.3

Source: IFs version 7.63, historical data from UNESCO Institute for Statistics (UIS) and Barro-Lee



Modern education was introduced in Egypt during the 1800s under Ottoman Muhammad Ali Pasha, who commenced a dual education system. One served the population attending traditional Islamic schools (*kuttab*), and another called *madrasa* (Arabic for 'school') serving elite civil servants. Training on vocational skills was passed on by means of informal apprenticeships. However, the sector suffered significant neglect and disruption under British colonial occupation.[76]

As a result of many educational initiatives and reforms since independence, the education system has made significant strides with improved educational outcomes over the past decades. The mean years of education for people aged 25 and above is almost a year higher than the average for OLMICs. The literacy rate stood at approximately 74% in 2020, while the number of elementary-age out-of-school children has dropped after skyrocketing following the 2011 revolution.

However, World Bank data shows a gradual increase in the number of out-of-school children between 2014 and 2019. In fact, in this period, the number of out-of-school children increased from 44 389 to 90 674, respectively. It is likely that with the COVID-19 pandemic, the current number of out-of-school children is much higher.[77]

The public education system in Egypt consists of four stages of learning. The basic and compulsory education stage for children between four and 14 years comprises kindergarten for two years followed by primary school for six years and preparatory school (ISCED Level 2) for three years. Then, the secondary school (ISCED Level 3) stage is for three years, for ages 14/15 to 17, followed by the tertiary level.

Despite many initiatives, including compulsory education, the sector still faces numerous challenges. Key among these is Egypt's rapid population growth, whose ramifications have been borne in the education sector through sharp increases and demand for enrolment both at primary and secondary level. This means greater funding requirements, capacity shortages and overcrowded learning facilities, particularly in denser regions like Cairo, Alexandria and Giza.[78]

Although the teacher-student ratio has risen in the past few years, teacher salaries have fallen; in 2017, the average teacher salary was about ££86 000 (US\$4 800). This is just 1.3 times the average GDP per capita of Egypt and way below the World Bank-recommended average teacher salary of three to 3.5 times the GDP per capita for a productive education system.[79]

Due to the inadequacy of the education system, many skilled teachers have turned to private tutoring, which pays better than the public education system. An estimated 42% of household income is spent on after-school tutoring, but some learners drop out of school because they cannot afford to sustainably access supplementary tutoring.[80] An estimated 30% of school children in Egypt, mostly living in rural areas, are considered to lack basic reading and writing skills.[81]

As a result, the World Economic Forum's Global Competitiveness Report for 2017/18 ranked Egypt's quality of primary education at position 133 out of 137 countries — only two positions ahead of war-ravaged Yemen. The number and availability of qualified teachers and desire for teacher training and deployment into public schools is dropping and will continue to do so if the issue of teacher remuneration is not addressed.[82]

Compared to other North African countries like Tunisia and Algeria, it is clear that Egypt's education system is lagging and that bottlenecks have emerged, particularly at lower secondary and tertiary level. Chart 18 shows Egypt's performance at various educational stages in comparison with Algeria and Tunisia, also both lower middle-income countries in North Africa, and OLMICs globally. It is colour coded in a traffic light system, with red indicating poor performance, intermediate performance between amber and yellow and good performance in green.

Chart 19: Education in IFs and definitions

Gross enrolment rate¹: The number of learners enrolled in a given level of education, regardless of age, expressed as a percentage of the official school-age population corresponding to the same level of education.

Completion rate¹: The number of persons in the relevant age group who have completed the last grade of the given level of education, as a percentage of the population at the theoretical graduation age for the given level of education.

Gross graduation rate¹: The number of graduates who have completed the last grade of a given level of education, regardless of age, as a percentage of the population at the theoretical graduation age for the given level of education.

¹ UNESCO glossary

The education system can thus be conceptualised as a ladder where learners advance from kindergarten (not shown in IFs) to primary, secondary and tertiary level (i.e. completion of one level enables transition to the subsequent level). The more pupils a country can enrol in primary school, the larger the pool of learners who can graduate and transition to secondary and tertiary level.

A good foundation right from kindergarten is crucial to future learning success. As such, any blockages in the system affect attainment of subsequent levels of education. This can be observed in Egypt's lower secondary and tertiary outcomes.

Although Egypt performs relatively well at primary and upper secondary levels, tertiary outcomes perform quite poorly relative to the comparison countries and groups. This is particularly problematic given Egypt's population crisis and the expectation that tertiary enrolment and graduation would be high to absorb and produce skilled graduates. As a result, the quality of education is also affected. In fact, the Global Competitiveness Report for 2017/18 ranked Egypt's quality of tertiary education at a lowly 130th out of 137 countries.[83]

Underfunding, inefficiency and outdated curricula are some of the key challenges in the higher education system in Egypt. This amid mounting criticism of a system that churns out graduates without the appropriate and necessary skills for employment in a modern economy. In fact, despite high unemployment rates, many skilled jobs remain unfilled because graduates do not have the technical and soft skills required to execute such jobs.[84] In 2015, learners burnt their higher education degrees in protest of joblessness, showing the gravity of the problem.[85]

Vocational training has always been a large part of Egypt's education system. Under Mubarak, one of the best-known schemes — originally called the Mubarak-Kohl Initiative, now known as the dual system — was launched in 1994 by the Ministry of Education and the *Deutsche Gesellschaft für Internationale Zusammenarbeit* to promote technical training.[86]

Since 2015, other technical and vocational education and training (TVET) schemes such as the 'Integrated TVET scheme' and 'Life-long learning' (Oumal System) have been rolled out by the government, with a strong emphasis on apprenticeship. Although these efforts have scaled up TVET programmes, increased training opportunities are still needed in Egypt. The government envisions a 50% increase in the dual education system in all schools by 2025. This would be a huge increase in the number of trainees undergoing TVET training.[87]

Egypt's government is aware of the need for reforms in the education sector, especially in light of youth unemployment and the associated propensity for political instability. Sisi declared 2019 as 'the year of education' and increased public education spending by 8% in the 2018/19 financial year.[88]

In the 2020/21 financial year, the government budgeted for 6% of GDP towards the education sector.[89] The country's strategic vision for education to 2030 seeks to increase funding and boost tertiary enrolment, improve teacher–student ratio, quality and accreditation mechanisms, reform curriculum to match labour market needs and expand TVET programmes.[90]

In its effort to expand capacity in the tertiary sector, Egypt has successfully sought to establish itself as a major higher learning destination (after Saudi Arabia and the UAE in the Arab world). It has attracted many foreign learners from the MENA region and sub-Saharan Africa. Low tuition, living expenses and free admission of non-citizens and international partnerships and scholarships are some of the incentives fuelling Egypt's attraction as an education hub.

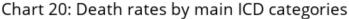
The country also hosts many reputable international universities like the American University in Cairo, the German University in Cairo, the British University in Egypt, and the Université Française d'Egypte. Furthermore, in 2018, Egypt enacted legislation to attract more international universities to establish their foreign branches in the country with more

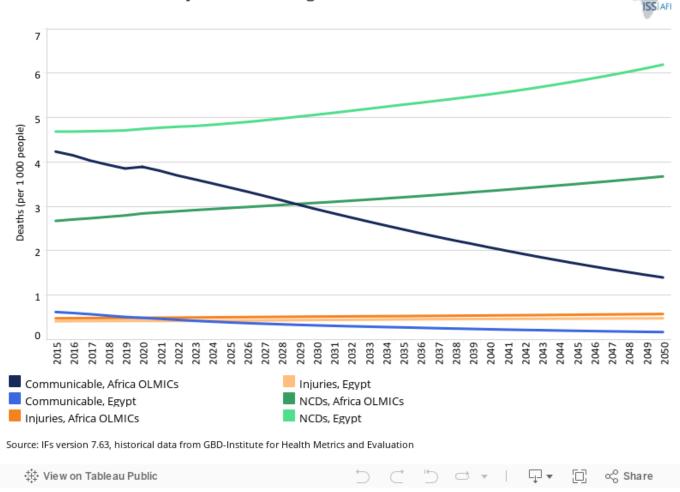
streamlined licensing procedures, affordable real estate, tax breaks and requirements to teach the same programmes as in their home countries.[91]

These policies are meant to enhance the global competitiveness of Egypt's education system, increase capacity and intake, enhance performance of domestic universities by increasing competition, foster research collaboration and inbound student mobility, and ultimately improve the stock of human capital in the country.[92]

The government is seemingly aware of the challenges and opportunities that exist in the education sector. Owing to the protracted period of time it generally takes for the impact of formal education to manifest and change the structure of an economy, speedy action is required to fix and transform the country's education problems.

Health





Egypt's health indicators have improved significantly since 1960 and the current health profile largely mirrors that of developed countries. Some of the key accomplishments include a drastic decrease in rates of maternal and child deaths and chronic malnutrition. They also include the elimination of diseases like polio in 2006 and the establishment of a community health worker programme as a primary foundation towards equity in the provision of healthcare services.[93]

Egypt's commitment to developing its healthcare has ensured that nearly 95% of the population lives within a 5 km radius of a health facility, family planning services have expanded to over 50% of primary care facilities, and the government has adopted a national plan for family planning. It has also implemented the Social Health Insurance law towards universal health coverage for its population.[94]

The success of Egypt's long-running reforms has manifested in reduced incidents of communicable diseases, longer life expectancy of about 72.7 years (projected to reach 77 years by 2050) and economic benefits such as increased household incomes.

The country has essentially met the Sustainable Development Goal (SDG) of reducing child and neonatal deaths to at least 25 and 12 deaths per 1 000 live births. Maternal mortality was 37 per 100 000 births in 2017[95] and by 2030 it is projected at three per 100 000 births. Egypt has essentially met the global target of fewer than 70 deaths per 100 000 live births. [96]

However, alongside the successes, a range of other health issues plague Egypt's ambition of an efficient health system beyond primary care services. Some of the challenges include population pressure and the impact of an increase in the total fertility rate since 2008, which do not bode well for the health system in terms of the demand for services and expenditure that will be required.

Furthermore, due to urbanisation and a rise in disposable income, Egypt faces a high prevalence of non-communicable diseases (NCDs) like cardio-vascular-related illnesses, strokes, cancer, diabetes, respiratory infections[97] and other lifestyle diseases that are inherently more expensive to treat.

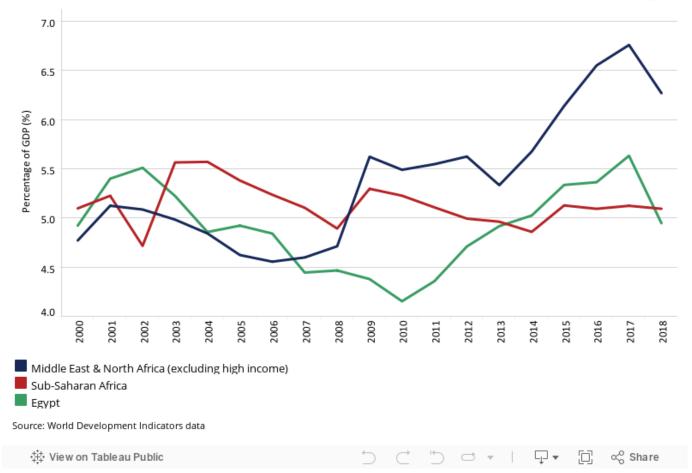
According to the international classification of diseases (ICD), NCDs have been on the rise in Egypt, particularly since 1990, and are forecast to remain the leading causes of deaths in the country well beyond 2050. The World Health Organization estimates that more than 85% of total deaths in Egypt are caused by NCDs, and this is exacerbated by the prevalence of other behavioural and biological risk factors like smoking, unhealthy diets, physical inactivity, obesity and hypertension.[98

Smoking for example is widespread, with roughly 20% of the population using tobacco products daily.[99] A study conducted in 2010 showed that raising the average cigarette tax to £E4.08 per pack (US\$0.23, 70% of the retail price) could prevent over 600 000 premature deaths in current and future smokers and raise cigarette tax revenues by almost £E5.2 billion (US\$294 million).[100]

The NCD death rate (per 1 000 people) in Egypt is currently more or less on par with the global average for OLMICs, but it will surpass the OLMICs average by around 2033. However, the NCD death rate in Egypt is significantly higher than the average of other lower middle-income countries in Africa, as shown in Chart 20, which includes a forecast of death rates by main ICD categories to 2050.

Chart 21: Health spending as a percent of GDP





In 2015, it was reported that the prevalence of diabetes was 16.7% in people between the ages of 20 and 79, representing 7.8 million cases at the time. Obesity among adults was over 33% higher than in some developed countries and one of the highest in the MENA region. The rate of hypertension among adults stood at nearly 25%, one of the highest in the world.[101]

The increase in NCDs is particularly alarming in light of the infrastructural, funding and management challenges faced by the country's health system. In 2016, it was estimated that Egypt had only 1.5 beds per 1 000 people relative to the global average of 2.7 per 1 000 people. Only about 57% of the population was insured, mainly with two public insurance companies.

Services in the public health sector are generally of low quality due to underfunding, lack of medical equipment and qualified personnel, poor sanitation and safety measures (especially in rural areas). Because of this it is expected that the private sector will be encouraged to take a leading role in providing health services to keep up with the healthcare demands of the country's large and growing population.[102]

Egypt's healthcare spending has been rising since 2010 but fluctuated after 2018 (Chart 21 shows the trend since 2000). The government has indicated that health spending will constitute 3% of GDP in the FY 2020/21.[103]

However, invariably the level of health spending in itself does not lead to tangible improvements. Although a large portion of health spending is directed toward salaries and wages, healthcare workers often hold more than one job at a time to make a decent income.[104]

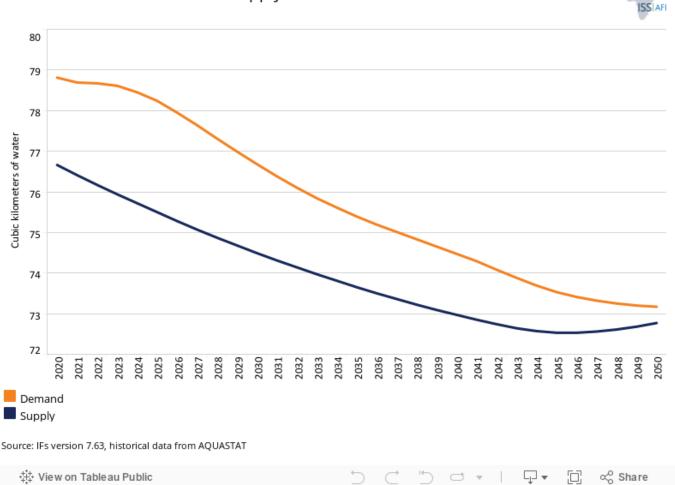
As a result of the system's inadequacies, Egypt has been facing an unprecedented emigration of its doctors. The Egyptian Medical Syndicate estimates that between 2016 and 2019, out of the 220 000 registered doctors, 110 000 left the country. This means that Egypt has only 10 doctors per 10 000 people, trailing the global average of 32 per 10 000 people.[105]

The COVID-19 pandemic has further strained and exposed a struggling health system. The World Bank has provided financial assistance to support the country's COVID-19 Emergency Response project[106] and the implementation of its Universal Health Insurance System.[107]

The implementation of the Universal Health Insurance Law, family practice programmes and other efforts to bridge the public-private gap will make healthcare accessible and equitable to all. However continued and even greater effort to reform the sector should be a top priority for the national social development agenda.

Basic infrastructure

Chart 22: Water demand and supply



Basic infrastructure discussed in this section includes access to water and sanitation, electricity, roads and ICT.

According to the Africa Infrastructure Development Index (AIDI) of 2020, Egypt (with a score of 88.39) ranks second after Seychelles (96.73) in infrastructure development. AIDI consists of four composite indicators — transport, electricity, ICT and water supply and sanitation needs.[108] Although Egypt has made significant strides in improving the quality and quantity of basic infrastructure, the country's infrastructure stock is limited and aged.

The sector also faces low levels of investment. An Organisation for Economic Co-operation and Development report estimates that for the country to meet its investment gap, it would need to dedicate about 5% of GDP to this sector until 2040 to adequately improve its infrastructure connectivity.[109] In light of rapid population growth and the accompanying demand, infrastructure development is an essential and critical aspect to enhancing productivity and sustainable long-term growth in Egypt.

Beyond the basic infrastructure components outlined, the construction sector is projected to achieve 9% growth between 2020 and 2024. Real estate, long considered a preferred destination for investment in the country, has maintained strong growth. The growth is mainly driven by public-private partnerships, and largely skewed towards high-income buyers.

Nonetheless, Egypt's government is a massive investor in the construction industry. It is building smaller and more

affordable housing units primarily targeted at poor and low middle-income groups to provide the 12-20 million Egyptians estimated to live in informal settlements with decent housing.

In addition, the government is planning to build 14 new smart cities and is currently in the process of building a new administrative capital 35 km east of Cairo. This city was expected to house all government ministries and authorities by 2021. Other upgrades on airports, ports, railway and transportation networks are also planned throughout the country.[110]

Water

The Nile Basin is Egypt's largest water source, with an allocated annual flow of 55.5 billion cubic metres, according to the Nile Waters Agreement of 1959. Ground and surface water sources account for about 0.5 billion cubic metres. The Nubian Sandstone Aquifer System in the Western Desert is also an important water source, but this is fossil groundwater which comes with the risk of contamination.[111]

Egypt requires about 90 billion cubic metres of water annually to meet its national needs and at the current water supply records a deficit of about 34 billion cubic metres. In 2018, the annual per capita share of water declined to 570 m³ which is below the set international standard of 1 000 m³.[112]

Egypt recycles its water, and treated wastewater is often used for irrigation. In 2014, the country produced about 3.5 billion cubic metres a year of municipal wastewater and treatment capacity was about 1.6 billion cubic metres a year. An additional treatment capacity of 1.7 billion cubic metres was targeted by 2017.

Although the planned capacity increase was significant, it is not enough to deal with the projected increase in wastewater production from municipal sources. This means that the amount of untreated water released into water bodies might not reduce. It was also estimated that treatment plants served only 55% of the population in towns and cities.[113]

Egypt has about 146 wastewater treatment plants in total, and since FY 2018/2019, 52 wastewater treatment plants with a capacity of 418 million cubic metres per year have been under construction in Upper Egypt. Consequently, the percentage of total treated wastewater in the country had increased to 68.7% in 2019. In 2020, the country announced its plan to build the largest wastewater treatment plant in the world (the Bahr al-Baqar water station) with a capacity of five million cubic metres a day.

According to the Government of Egypt, treated wastewater from the plant will be used for agriculture (342 0000 acres) as part of the Sinai Peninsula Development Program.[114] Egypt also has 58 desalination plants with a combined capacity of 440 000 cubic metres a day, and 39 more desalination plants are under construction.[115]

The country has been under water stress, which is likely to be exacerbated by the upstream conditions regarding the Nile and the GERD. Agriculture consumes over 85% of water, followed by municipalities (8%), industry (6%), and navigation and hydropower.

In addition, Egypt faces issues of water quality and its impact on the environment and human health. It also experiences water pollution from a range of sources including chemicals like pesticides and herbicides. Water pollution has led to diseases like bilharzia, especially in rural areas.[116]

Despite the challenges, Egypt's water infrastructure has grown significantly, and in 2017 the United Nations Children's Fund (UNICEF) estimated that 97% of the Egyptian population had access to piped water, meeting the associated SDG target in urban areas.

However, a significant number of people in rural areas and urban slums did not have access to water. In total, about 7.3 million Egyptians did not have access to safe water (5.8 million of them in rural areas and 1.5 million in urban slums). Additionally, in urban slums, only about 77% of the population had access to piped water and most times these were illegal connections.[117]

According to IFs, Egypt has achieved universal access to safe water, although this will decline slightly over the next decade. This is largely due to Egypt's large and increasing population, limited water resources and inadequate investment in water infrastructure. It will then resume an upward trajectory to reach 100% access in 2050.

Meeting the population's water demand and bridging the rural-urban divide will require major investment. Between 2013 and 2017, only about 2.3% of Egypt's total infrastructure investment was directed to water. In the FY 2020/2021, the Government of Egypt allocated 25.9% of total public investments in the urban development sector to water and wastewater projects.[118]

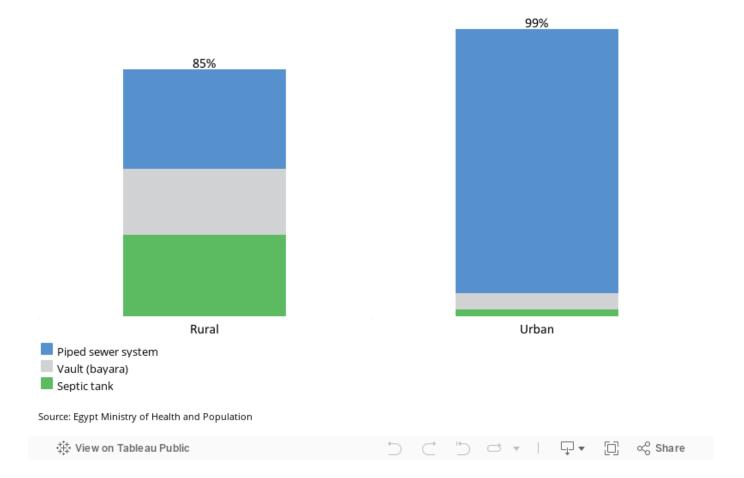
Access to water is critical, especially for desert rural communities that also rely on agriculture for their livelihoods.[119] IFs projects that water demand will continue to outpace the level of water supply Egypt can provide based on its exploitable water resources.

In summary, the development plans envisioned for Egypt cannot be achieved and are not sustainable without adequate water supply. The government has signed numerous agreements and seeks more funding to build desalination plants in recognition of the important role this would play in the long-term sustainability of water access in Egypt.[120]

However, these must be accompanied by a drive for better water management and more efficient use of this scarce resource, especially in the agriculture sector.[121] Without closing the water supply and demand gap, Egypt is facing an inevitable crisis.

Chart 23: Access to improved sanitation facilities





Sanitation and hygiene

According to UNICEF'S survey of 2014, 8.4 million Egyptians did not have access to sanitation facilities. Compared to 1% in urban centres, 15% of Egyptians living in rural areas did not have access to improved sanitation facilities.[122] Sanitation is a major concern in rural places like the Nile Delta where the Nile spreads and drains into the Mediterranean Sea.

Traditional bayaras (sanitation trenches used as septic tanks) are failing because the water table is high and soil percolation is low. In fact, to prevent sewage overflows, families are forced to part with nearly 5% of household income to clean their bayaras nearly every week, thus making it even more expensive than conventional sanitation solutions.[123]

Data for 2020 by the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP) shows that at least 97% of the population now have basic access to improved sanitation, although the forecast shows a slight decline in access to improved sanitation in the short term. This is largely a factor of the population pressure in the country, showing that supply of such basic and crucial services will not keep up with demand.

Lack of access to safe water and sanitation leads to poor hygiene and contributes to the spread of diseases, which in turn negatively affects health and nutrition, particularly that of children. In Egypt, for example, diarrhoea is the second most common cause of mortality for children under five.

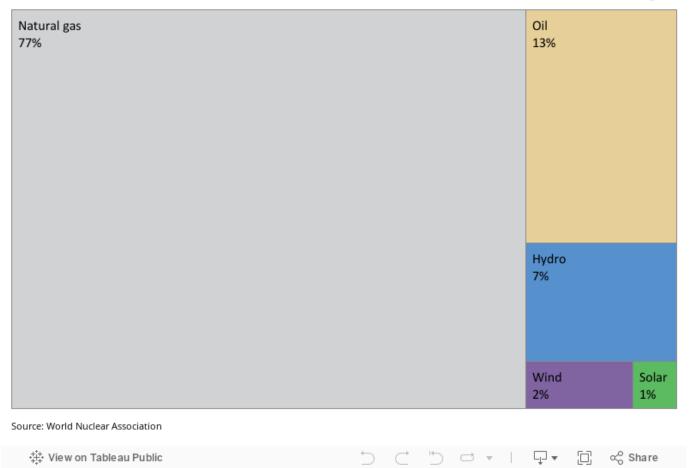
Investment in this sector is thus critical for sustained human development in Egypt. The National Rural Sanitation Program established by the Ministry of Housing, Utilities and Urban Communities has set a target to expand nationwide access to sanitation services from 34% currently to 60% in 2030. This would be through an integrated system of sewerage networks,

sludge treatment and wastewater treatment plants.

One of the initiatives under this programme, the Integrated Rural Sanitation in Upper Egypt-Luxor project, recently received a US\$129.8 million (€109 million) loan from the African Development Bank. This was to improve sanitation infrastructure and services to rural communities in Luxor Governorate in Egypt's Upper Nile region. This venture is expected to improve sewage coverage and services from 6% to 55% in the region. [124]

Chart 24: Egypt's energy mix, 2019





Energy and electricity access

Owing to increasing electricity demand estimated at an average annual rate of 7%,[125] Egypt has nearly tripled its installed capacity from 15 GW in 2000 to 42 GW by 2017. But even this increase has been insufficient to meet the high and rising demand to end electricity shortages in the country.

Of the 42 GW installed capacity, 91% consists of fossil fuel-based technologies and approximately 8.6% are renewable energy technologies,[126] 77% of which is hydropower. The country has largely developed all its major hydropower sites with little potential to expand further.

Nonetheless, Egypt has a relatively diverse energy mix and has seen significant investment in the sector, particularly after the 2011 revolution that saw increased generation capacity. In 2018, three new power plants came online to contribute an additional 14.4 GW to the country's power supply. In mid-2018, the government signed a deal to construct the Hamrawein coal-fuelled power plant expected to increase generation capacity by 6 GW.

Most recently, Egypt has started the construction of the El Dabaa Nuclear Power Plant in Matrouh Governorate on the Mediterranean coast.[127] The Russian State Atomic Energy Corporation (ROSATOM) is the developer and Russia is expected to fund approximately 85% of the project with a loan of US\$25 billion to be paid over 22 years at 3%. The rest of the 15% financing is to be raised from private investors.

The power plant is expected to generate a total capacity of 4.8 GW. The first unit was expected to be commissioned in 2026.[128] In July 2021, Egypt announced the postponement of the completion of the project to 2030 instead of 2028 following a row with Russia about the GERD.[129] However by August the deal was back on and Russia started equipment production for the plant.[130]

The strategy envisions that energy subsidies will be eliminated by 2022 so that other energy sources can fairly compete in the market, an ambitious and perhaps unrealistic target.[131]

Private sector funding has been the source of buoyancy in this sector and it will probably remain the driving force to greater renewable energy production and uptake in the foreseeable future.

Despite the increasing demand for electricity, Egypt achieved universal access to electricity in 2016, although the supply is not reliable. The IFs forecast is for a modest decline as demand for future connections is likely to outstrip the investment in associated infrastructure. Egypt is looking to be a regional leader in electricity supply over the next nine years, and the country is on track to generate an exportable surplus estimated at 74 GW by 2035. Moreover, the total installed capacity is expected to increase to 83 GW by 2025.[132]

Thermal power is expected to remain the dominant source of electricity at 82% followed by solar,[133] hydro and wind contributing between 4% and 6%. Nuclear power is expected to be introduced in this period, adding 1.2 GW to the total installed capacity by 2025, and ramping up to 4.8 GW by 2030.[134]

Due to falling costs for renewables, natural gas discoveries and environmental concerns over coal generation, the renewable energy sector will be the fastest growing energy segment between 2019 and 2028. Specifically, Egypt's non-hydropower renewable energy is projected to be the fastest growing market in the region.[135] In 2018, the country's total installed capacity of renewables amounted to approximately 3.7 GW (2.8 GW of hydropower and 0.9 GW of solar and wind power).

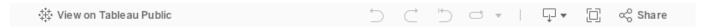
According to the Integrated Sustainable Energy Strategy (ISES) to 2035, the government has set the renewable energy target to account for 20% of the electricity mix by 2022 and 42% by 2035. Total installed capacity from renewables is currently expected to reach 8.5 GW by 2028 with an average growth rate of 22.1% year on year (from 2019 to 2028).[136]

Chart 25: Selected infrastructure indicators across selected peer countries



ІСТ	Egypt	Algeria	Morocco	Tunisia
Mobile telephone subscriptions (per 100 people) 2017	105.5	120.7	122.9	124.3
Individuals using the internet (% of population) 2018	46.92	49.04	64.8	64.19
Fixed broadband internet subscriptions (per 100 people) 2017	5.3	7.7	3.9	6.9

Source: OECD Investment Policy Reviews: Egypt 2020 (Table 8.1) and IFs



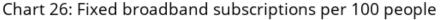
Information and communications technology (ICT)

A dynamic ICT sector is vital for a country that wishes to benefit from the digital economy. Egypt's government has long realised the benefit of ICT to its continued economic and social development and has over the years deregulated and liberalised the ICT sector while supporting multiple public and private entities.[137]

Egypt's Vision 2030 and 2050 consists of an ICT strategy towards a Digital Egypt under the Ministry of Communications and Information Technology (MCIT), which among other things is meant to streamline government services.

Some of the key priorities for Egypt in this sector include expanding ICT infrastructure, strengthening the regulatory framework and growing a pool of labour skilled in ICT. They also include achieving transition to a knowledge-based economy, ensuring cyber security, supporting research and development, and promoting Egypt's position at the regional and international levels in this sector.[138]

Although Egypt has made great strides in ICT diffusion, it trails significantly compared to most of its peer countries as shown in Chart 25.



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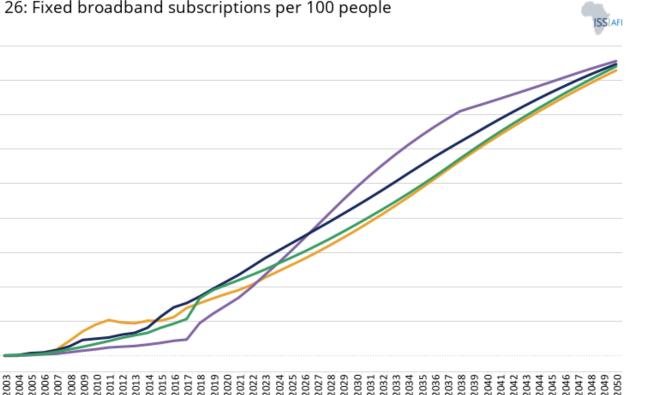
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Subscriptions per 100 people 25 20 15

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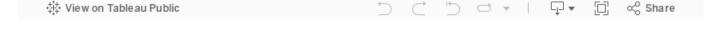
Egypt Algeria



Source: IFs version 7.63, historical data from International Telecommunication Union

OLMICs

Tunisia



In 2020, the MCIT reported that Egypt's ICT sector grew by 15.2%. The sector's share of GDP rose to 4.4% (£E108 billion) up from 3.8% (£E93.5 billion) in 2019. The ICT sector exports also increased in 2020 to US\$4.1 billion from US\$3.6 billion in 2019, representing a 13% rise. Additionally, investments rose by 35% from £E35.4 billion in FY 2018/19 to £E48.1 billion.[139]

Internet users as a per cent of population also increased to 57.3% from 47.6% in 2019 and the average Internet speed to 33.2 MB per second. Furthermore, 544 400 Egyptians had subscribed to Egypt's digital platform.[x]

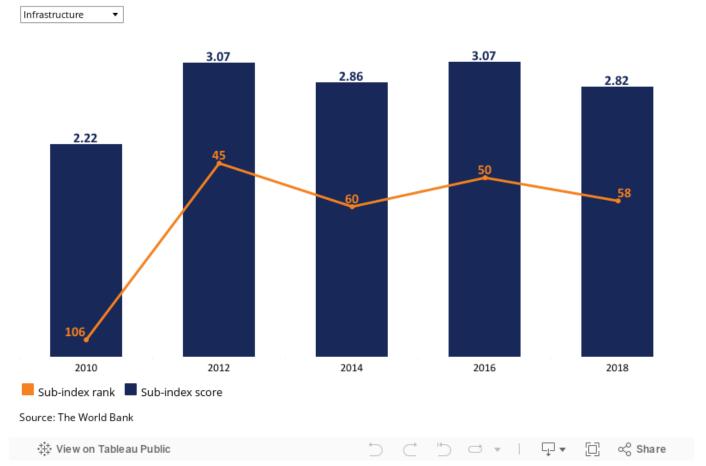
By 2050, IFs projects that the rate of fixed broadband subscriptions will be at just 42 per 100 people, but the country will be more or less on a par with its North African neighbours Algeria and Tunisia.

Owing to increasing demand, Egypt will need to grow its ICT capacity and inject more investments to improve the quantity and quality of services to enable the country to transition to the modern economy it envisions.

Chart 27: Egypt's Logistics Perceptions Index score and global ranking, 2010–2018



Score and rank by sub-index



Roads

The government has made efforts through the National Roads Project launched in 2014 with the goal of improving transport infrastructure and creating a more modern Egypt.[140] Since 2014, 4 800 km of the planned new roads have been constructed leaving 1 400 km that are currently being built. In addition, out of the existing 9 000 km of roads that needed improvement, 5 000 km have already been upgraded.[141]

The Nile River and Suez Canal are Egypt's major transportation arteries, while the Suez Canal and Sumed Pipeline are important routes for Persian Gulf oil shipments. Almost 10% of global trade, and 40% of European trade with the East, passes through the Suez Canal.

Egypt has improved in the World Bank's Logistics Performance Index (that measures the quality of trade and infrastructure) to score from 2.22 in 2010 to 2.82 in 2018 on a scale of 1–5 (worst to best). Its ranking has moved from 106th (out of 155) to 58th (out of 160). But the country still faces significant bottlenecks in its infrastructure, and as a result Egypt has significantly higher logistical/operation costs averaging about 20% of GDP compared to the global average of about 10%–12%.[142]

Improved road transport is expected to yield a range of economic benefits for Egypt, including in trade with the region. Recognising the potential benefits to expanded road transport, the government is undertaking major upgrades to highways, like the one connecting Cairo with the major Port of Alexandria, and the construction of a new tunnel link under the Suez Canal.

International connections include the highway linking Egypt with its North African neighbours, as well as the highway running north-south via Asyut, Sohag, Luxor and Aswan to the border with Sudan.[143]

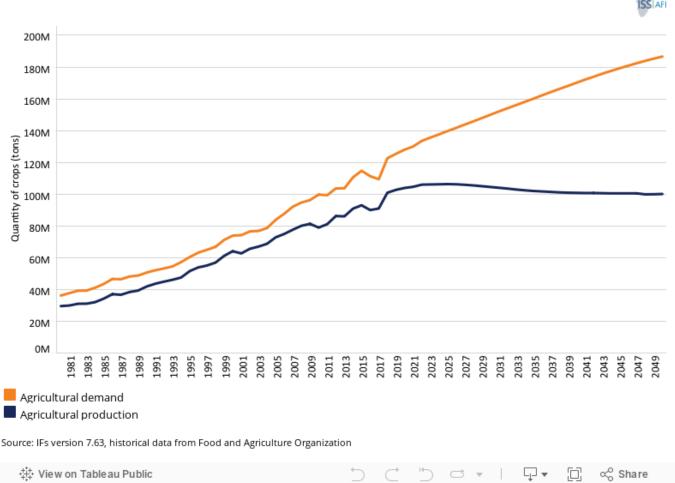
The Ministry of Transportation is also planning to establish a network of logistical areas and villages in Damietta, Sohag, 10th of Ramadan, Borg El Arab, Sadat and Beni Suef and 6th of October to promote industry and trade, increase investments and reduce logistical costs.[144]

Furthermore, the new road constructions and upgrades are expected to reduce congestion given Egypt's fast-growing population, and together with new traffic rules, reduce traffic accidents. This will over time improve the human capital contribution to growth.

Egypt's Central Agency for Public Mobilization and Statistics (CAPMAS) reported in June 2020 that the number of road accidents had fallen by nearly 30% from 14 403 in 2014 to 9 992 in 2019, indicating steady progress.[145]

Agriculture





The Nile's predictability and Egypt's fertile soil have allowed the country to build significant agricultural wealth over the years. The ingenuity of Egyptians to develop basin irrigation and to practise agriculture on a large scale allowed the country to grow staple crops like wheat and barley.[146]

Today, agriculture is still a major contributor to Egypt's economy at between 11% and 12% of GDP, mostly composed of small-scale farmers. It also accounts for about 28% of jobs, employs 45% of women, and over 55% of employment in Upper Egypt is agriculture-related.[147]

Wheat remains a major staple, and Egypt is largely dependent on imports (Egypt is the largest wheat importer globally) to run the bread subsidy programme, which is estimated to benefit over 70 million Egyptians.[148]

The food subsidy system is largely controlled by the government which purchases most of the domestically produced wheat at or above global market prices to promote domestic wheat production. The domestic and imported wheat is then sold at subsidised prices but the system is riddled with inefficiencies related to cost and physical loss.[149]

Despite these measures, poverty and related food insecurity still exist in Egypt. In fact, budget allocation to the food subsidy scheme more than doubled between 2009 and 2014 owing to a growing population, higher international food prices and wastage along the wheat value chain.[150]

According to the latest data from 2017, Egypt's average crop yield is about 26.8 tons per hectare. This is significantly higher than the African average at 2.04 tons per hectare and nearly seven times more than the average of the rest of North African countries (3.99 tons per hectare).

Sustaining Egypt's agricultural yields will prove challenging in the face of increased population growth, controversy about the Nile, and limited and declining agricultural land. It is estimated that Egypt's agricultural land in 2018 was 38 360 km², representing only about 3.9% of the country's total land area.[151] In fact, the area of cultivated land per person is only about 0.05 hectare, one of the lowest globally. Most of that is located in a narrow strip along the Nile Delta and 'new lands' reclaimed from the desert after the construction of the Aswan Dam.[152]

Although Egypt produces adequate amounts of rice, fruits, vegetables, poultry, chicken and dairy products, it relies on imports to meet demand for crops such as wheat, lentils, red meat, sugar and oils. Despite the fact that Egypt actually increased production and gains in exports of certain strategic crops, the country remains a net food importer, at an estimated 40% of its food needs.[153]

Chart 28 shows that the total agricultural supply has been trailing demand and the gap is projected to widen into the future. Agricultural production is projected to decline slightly and stay stagnant thereafter[154] in the face of increasing food demand, meaning that the gap will have to be offset by imports.

From a food security standpoint, greater import dependence makes Egypt more vulnerable to international price shocks and accompanying risks of disruptions in the global supply chains as seen during COVID-19. Also, reducing the import bill could allow channelling of resources to other productive sectors.

Additionally, production and consumption loss should be reduced. A 2015 study reported that out of the respondents surveyed, only about 14% indicated that they did not throw away food and that food waste increased during the fasting month of Ramadan.[155]

Now with a growing population, little rainfall, dispute over Ethiopia's GERD and the impact on its Nile water resources, agricultural fragmentation and shrinking land due to urbanisation, Egypt is at a crossroads to find innovative and effective solutions to its agricultural and food security system.

Chart 29a: Climate change

CO2 emissions in Egypt are largely from the energy sector. In 2018, Egypt emitted over 250 million tons (Mt) of CO2 and ranked 27th globally for energy-related CO2 emissions. This constituted 0.75% of global emissions and 2.5 tons of CO2 emissions per capita. Electricity generation accounted for approximately 40% of the country's total CO2 emissions. Other contributions to CO2 emissions were made by transportation (20%), industry (15%), residential buildings, i.e. real estate (5%), and other sectors (20%). Consumption-based emissions accounted for approximately 248 Mt of CO2. ¹ In 2019, fossil fuels and cement production alone accounted for about 247 Mt of CO2 emissions.²

According to the Global Carbon Project, cities are the hotspot of the global carbon cycle because they concentrate larger population sizes, economic output and energy use. With increasing urbanisation in Egypt, its major cities like Cairo and Alexandria are projected to continue the trend of increasing CO2 emissions.³ The impact of this is reiterated by the recent 2021 report by the Intergovernmental Panel on Climate Change indicating that it is likely that some aspects of climate change may be amplified in cities. This includes heat because urban areas are often warmer than their surroundings, and flooding from heavy precipitation events and sea level rise in coastal cities will occur.⁴

- ¹ M Crippa et al, Fossil CO2 and GHG Emissions of All World Countries 2019 Report, Publications Office of the European Union, Brussels. Consumption-based emissions are national or regional emissions adjusted for trade, i.e. territorial/production emissions minus emissions in exports and imports, 2019.
- ² P Friedlingstein et al, Global Carbon Project dataset, Global Carbon Budget 2020, Earth System Science Data, 12, 3269–3340, 2020.
- ³ Global Carbon Project, Global City Emissions.
- ⁴ IPCC, Climate change widespread, rapid and intensifying IPCC, 9 August 2021.

Furthermore, the country faces serious climate change risks. Flooding due to rising sea levels is affecting the Nile River Delta where Egypt grows most of its crops. About 12% to 15% of the country's fertile arable land in the Nile Delta will be negatively affected by sea level rise and salt water intrusion.[156] Moreover, hotter temperatures and reduced rainfall are projected to reduce agricultural productivity (including livestock rearing and fishing activities) by 15%–20% by 2050.[157]

Egypt's National Strategy for Adaptation to Climate Change and Disaster Risk Reduction released in 2011 lays out a strategy that gives a framework of its adaptation policy to deal with the effects of climate change. The 'Green' constitution predicated on the principle of sustainable environment and development as a human right also recognises and promotes responsible and rational use of the country's natural resources while ensuring food security for Egyptians.[158]

Chart 29b: Climate change

Trends show that Egypt has been warming significantly since 1960, with greater warming in summer (0.31 °C per decade). Between 1960 and 2003, the frequency of warm nights increased, while cool nights decreased. Between 2020 and 2049, maximum temperatures are projected to increase by 1.0 °C to 1.22 °C, and minimum temperatures by 1.09 °C and 1.32 °C for the RCP.1 By mid-century, mean annual temperatures are projected to increase by 1.64 °C and 2.33 °C for the RCP 4.5 and 8.5 median ensemble. ² Egypt will thus experience more severe and frequent flash floods but reduced rainfall and greater warming by mid-century. Future drought conditions will be extreme, and by 2030 the total Mediterranean Basin average sea level rise will be between 0.07 m and 0.18 m. $^{\rm 3}$ Egypt is thus highly vulnerable to climate change that poses a risk to energy, water and food security, and job and financial security. Key vulnerabilities include floods damaging property, claiming lives and displacing people, reducing agricultural productivity, and water and sanitation (WaSH) systems being affected. Egypt's dependence on the Nile means the country must adapt to varying levels of water flow. Some of the actions outlined in the Egyptian Intended Nationally Determined Contributions 4 include promoting resilience in agriculture, water use, energy, health and tourism.5 The Green Transformation Agenda is thus pivotal to planning and economic competitiveness for the country's future sustainable environment. Following the conventional development trajectory without a 'green agenda', Egypt risks losing energy independence, economic capital and investments. It also increases the risk of conflict over water and threats to industries such as tourism. The Green Transformation must therefore be framed with respect to job creation, poverty reduction, sustaining energy independence, mitigating and adapting to climate change, and meeting other national development objectives. 6

- ¹ The Representative Concentration Pathway (RCP) scenarios include time series of emissions and concentrations of greenhouse gases, aerosols and chemically active gases, and land use/cover. RCPs refer to the portion of the concentration pathway extending up to 2100, for which Integrated Assessment Models produced corresponding emission scenarios. RCP8.5 are generally high emissions and RCP4.5 are generally moderate emissions (IPCC AR5).
- ^{2 3} USAID, Egypt climate info fact sheet..
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In addition, the government through the National Water Resources Plan has long sought to improve overall water use efficiency in agriculture. This includes implementing more effective irrigation systems. According to Food and Agriculture Organization (FAO)-AQUASTAT data from 2015, Egypt's irrigation potential was estimated at about 4 420 000 hectares, and the total land area equipped for irrigation was 3 422 178 hectares in 2002. Of this, 85% was in the Nile Valley and Delta.[159]

The Government of Egypt is also on a drive to reclaim more land for agriculture with a target of an additional 150 000 acres (60 000 hectares) per year.[160]

Although the government is taking initiatives to boost domestic production and promote sustainable and green farming, much more needs to be done to make the agricultural system more efficient and better geared towards policies that incentivise farmers to focus on food products for which Egypt has a comparative advantage.

For example, Egypt has a comparative advantage in fruits and vegetables, which could potentially attract higher revenues and foreign exchange to then import wheat at global prices rather than at subsidised domestic prices. Such targeted reforms in the food subsidy system could help the country to achieve a productive and sustainable agricultural sector that advances food security.[161]

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Scenarios and forecasting can help Africa identify and respond to opportunities and threats. The work of the African Futures & Innovation (AFI) program at the Institute for Security Studies aims to understand and address a widening gap between indices of wellbeing in Africa and elsewhere in the world. The AFI helps stakeholders understand likely future developments. Research findings and their policy implications are widely disseminated, often in collaboration with in-country partners. Forecasting tools inspire debate and provide insights into possible trajectories that inform planning, prioritisation and effective resource allocation. Africa's future depends on today's choices and actions by governments and their non-governmental and international partners. The AFI provides empirical data that informs short- and medium-term decisions with long-term implications. The AFI enhances Africa's capacity to prepare for and respond to future challenges. The program is headed by Dr Jakkie Cilliers.

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