

Symposium I

The Egyptian Renaissance (2030): Miracle or Myth?

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Studying the Egyptian population is an integral part of analyzing Egypt's 2030 development vision. The Egyptians are the heirs and makers of one of the most glorious civilizations in human history. The ancient Egyptians were well known for their contributions to different fields of human knowledge, including astronomy, agriculture, engineering, medicine, and architecture. Though Egypt was subjected to several invasions, it was not affected by military colonization; instead, the colonizers came under the influence of the Egyptians.

In the late 19th century, Egypt witnessed an unprecedented but brief scientific revival. Many Egyptians have suffered from poverty for decades, which has led to two consecutive revolutions, in 2011 and 2013. Since 2013 Egypt has embarked on a new era of development and growth in different fields. The key question is, Will Egyptians be able to escape the historical ghetto and regain their prominence as a leading country in the Middle East and the most populous country in the Arab world?

The Egyptian Population

In 2014 Egypt's population exceeded 85 million. Most of the population is concentrated within the Nile delta valley, occupying no more than 10% of the country's total land area, and the country's rapid population growth is not matched by increases in arable land area or in economic resources. This mismatch has produced a wide gap between population growth and national revenue growth. The demographic problem of increasing population has resulted in high rates of unemployment, illiteracy, malnutrition, and poverty, as well as triggering daily problems with electricity supply, food shortages, and pollution. Other problems have also emerged, particularly the rarity of foreign currency because of large imports from abroad.

Thanks to high fertility rates and low mortality rates, the Egyptian

population is expected to reach 115 million by 2030, representing an annual increase of 1.25 million people. Birth rates are highest in poor areas in southern Egypt and the northern Nile delta. To control and constrain economic development caused by the increasing population, the government should pay more attention to social and economic development projects which will gradually lead to more prosperity. Such development will change the population's demographic characteristics and eventually reduce unemployment rates. New agricultural and industrial projects and more land reclamation far away from the Nile valley will increase the number and size of inhabited areas, easing the pressure on arable land. By 2030 Egypt needs to eliminate corruption by government officials and encourage foreign investments. The new projects will narrow the gap between rich and poor and as well revitalizing the economy and perhaps enhancing the fair redistribution of national wealth.

In this new spirit of change, President Abdel Fattah ElSisi declared in 2015 that Egypt will foster a suitable environment for foreign investors by creating new regulations untouched by and corruption. The new projects will employ large numbers of job seekers. The government began reclaiming 700 000 feddan (1 feddan is equal to 295 000 ha) of land in the western desert and Sinai in 2015; the construction of several new cities across the country will also expand, establishing mega-projects and new urbanized centres. This will lead to reduced unemployment rates and an increase in annual income to US\$12 000, making Egypt a middle-income country and decreasing poverty rates, particularly in Upper Egypt and other governorates in which 40 % of the population lives below the poverty line.

Population and Education

Education is a major variable that affects demographic characteristics on several levels. A highly educated population is associated with higher economic and social development rates. Egypt unfortunately still suffers from high illiteracy rates relative to other countries: approximately 15 million people (two-thirds of them women and girls) are considered illiterate, particularly in rural and poor areas in the south, and the high rate of illiteracy is connected with the increasing terrorist activities in these areas, as terrorist organizations tend to recruit the illiterate and the poor.

In 2030 and beyond, we can expect that increases in the education budget, development of the educational system, reduced class sizes, and the use of modern technology in schools, as well as a focus on educating

girls, will significantly reduce poverty and illiteracy. By 2030, the educational sector is expected to receive 15 % of national income, and Egypt's universities will be modernized to enhance the quality of training students receive. Egyptian universities are expected to regain their positions among the best 500 universities worldwide.

Public Health and Population

The last 30 years have seen unprecedented deterioration in Egypt's public health sector, increasing poverty and suffering in the overall population. The health service in public hospitals is rapidly declining, and corruption is becoming rife; endemic diseases such as flu, hepatitis, and chronic kidney diseases are spreading among the general population. Egypt has the highest incidence of hepatitis C virus in the world, estimated at 14.7 %; chronic kidney disease, schistosomiasis, bacterial diarrhoea, and typhoid fever are also rampant among poorer communities in rural Egypt. Non-communicable diseases such as hypertension and diabetes mellitus are also on the rise among the adult population in all socio-economic classes. The incidence of cancer is approximately 110–120 per 100 000 population, which is relatively high; the four most common cancer types in Egypt are breast, liver, bladder, and lymph node. One of the main causes of illness and suffering in children under age five is acute malnutrition.

By 2030, public health will be improved as a result of economic investment in the health sector (13 % percent of total annual income); hospitals will be renovated and new medical technology introduced, the number of beds will be increased, and nurses will be given more advanced medical training. We can expect that most Egyptians will have adequate health-insurance coverage and will have greater awareness of nutrition and health issues. As a result of these changes, we can expect that most chronic diseases will be significantly reduced and that infant mortality rates will decrease as life expectancy rises.

Population and Food Security

With the large population projected by 2030, Egypt will face a food-production problem resulting from continuous population growth on limited arable land in the Nile delta and valley, where urban sprawl is increasing at the expense of fertile soil. Arable land area declined from 0.5 feddan (about 295 000 ha) per capita in the 1950s to just 300 m² per capita in 2014. The government has put in place a plan to increase the limited cultivated land by reclaiming 2 million feddan (840 000 ha) in the western

desert (Toushky area), upper Egypt, Kom Ombo valley, and in Northern Sinai to increase the existing cultivated area to more than 10 million feddan (4.2 million ha). Using advanced technologies in agriculture, adjusting plant structure and cropping systems to improve land-use efficiency, planting modern high-yield varieties of seeds, and boosting the availability of fertilizers will double agricultural productivity to reduce the gap between population and wheat production. In addition, using modern machinery will help to convert vast areas that currently produce clover for feeding livestock to producing wheat for human consumption, and using new modern methods of irrigation in the valley and delta will save a significant amount of water to irrigate more new reclaimed areas in the desert. Egyptian farmers will be able to use agricultural biotechnology to increase the amount and value of selected fresh fruit and vegetable exports from small-, medium-, and large-scale producers and exporters. Enhancing productivity by diversifying crops and markets, improving yields and quality of crops, expanding farmers' access to export markets, and integrating the fresh and processing segments of the industry will increase farmers' income. By 2030, as a result of improvement in agricultural production, demand for Egyptian citrus, fruit, and fresh vegetables will increase both in the European market and in Libya and the Arabian Gulf states.

Population and Energy

A growing population, intense summer heat, and the increasing energy demands of new industrial projects have led to Egypt's experiencing one of the most serious energy crises for decades. Power blackouts have created widespread frustration for both citizens and investors. Electricity demand has sometimes reached a record daily high of 20 % more than the power stations can provide, caused because of the decline in natural gas production: since 2010, Egypt has become a net importer of natural gas and now imports at least 20 % of the natural gas it uses to produce electricity.

Despite encouraging results about the future of gas and oil discoveries, Egypt will still need to import additional petroleum to meet increasing energy demand, as well as relying on renewable energy sources. If Egypt wishes to maintain high economic growth, it must promote a strict energy-efficiency and renewable-energy policy to solve the problem of energy shortages in 2030; a clear decision to promote renewable energy in the electricity sector could ease the pressure on fuel-fired plants.

The future of Egypt's energy will be to complement natural gas as much as possible with solar cells and wind farm energy. The government

has received bids from local and international private companies to implement 20 solar energy projects at a total cost of US\$30 billion, which will add 20 000 MW to the electricity grid in just two years. Many solar power plants will operate on solar cells in the Kom Ombo region, in the province of Aswan, and in Hurghada city, which are expected to be established by 2017, in addition to the thermal stations set up by the Ministry of Electricity, such as the Kuraymat solar–thermal power plant, and another power plant to be established in Aswan. Studies have predicted significant success for these projects, especially because Egypt is located in the “sun belt” zone, which offers more opportunities for expansion in solar energy. Expanding and developing the Zafrana (Suez Gulf) wind farm will also increase the proportion of renewable energy to more than 25 % of the total electricity generated in Egypt; 12 % will come from wind farms.

As a result, by 2030, Egypt’s electricity production will be more than adequate for its population, creating opportunities to export electricity from renewable energy to the Arab Mediterranean region and southern Europe.

Clinging to Hope for a Better Future

Egyptian geographer Mustafa Amer, addressing the International Geographical Union Congress in Cairo in 1925, noted that Egypt was facing a population problem (the population then was <15 million)—a view shared by many other Egyptian demographers who studied population growth in Egypt through the 20th century to the present, when the population has reached 85 million. This raises the question of whether Egypt’s large population is a blessing or a curse. From my perspective, the large and well-educated population is a grace from God which gives Egypt great value in the Arab and African world. Remittances from the large Egyptian labour force working abroad are a main source of foreign currency; developing the socio-economic characteristics of Egyptian workers by improving their education, increasing the availability of skilled labour and local talent through continuing modern education and vocational training based on local and international market needs, offering more jobs for young graduates, and improving quality of life for Egyptians by raising their income and reducing income inequality will promote Egypt’s ability to achieve modern development and take its place among modern developed countries.

By 2030 Egypt will reap the fruits of its mega-projects, which will be completed by 2020, such as the Suez Canal Corridor Development project (started in 2014), which will play a significant role in developing

and boosting the Egyptian economy by creating new industrial and logistics centre with about 1 million new jobs. At the same time, the establishment of the Egyptian Development Corridor project will help to create an inhabited basin parallel to the Nile valley in the western desert, adding new agricultural land, new industries, and large new residential centres and creating hundreds of thousands of new jobs for Egyptian labour. These projects will expand Egypt's populated areas and redistribute the population, lowering population concentration on the limited arable area around the Nile valley.

In addition, Egyptians will revive local values of generosity, hospitality, and tolerance and will empower women socially, politically, and economically, thus building a strong civil and democratic state capable of protecting its national interests, fundamentally based on the values of justice, equality, and liberty and promoting civil society to raise awareness of citizens' rights and responsibilities. Simplifying government procedures, following international standards and liberalizing trade, adopting government decentralization practices by empowering governorates, and applying fair tax, administrative, and financial systems will attract investment. Egypt has the potential to emulate Japan and China by leveraging the human potential of its people, though their countries lack rich natural resources. By 2030 the Egyptian people, who created one of the most ancient civilizations in human history, will be able to restore their pioneering role once their government has fulfilled its promises by dismantling corruption and providing support to disadvantaged sectors of society. Egypt has the capabilities to stand on the road of greatness and prosperity. When these big dreams come true in the 2030s and 2040s, Egypt will be able to stride toward progress, and its renaissance will become a miracle, not a myth.