

Is there a population growth problem in Iraq?

By Dr. Zeki Fattah

This paper aims to show that Iraq's high population growth is posing a serious problem for its economic development. Its high population growth is driven by a high fertility rate caused by a number of unfavorable socioeconomic conditions that need to be addressed urgently. The population growth is not uniform across the country, and steps should be taken to reinforce the trend where it is low, and to lower it where it is high. Finally, Iraq must urgently apply policies and build apparatus to deal with its high fertility rate and curb its runaway population growth.

"Population growth refers to the increase in the number of inhabitants of a given place. Regional and national trends in population are vital to policymakers when preparing for the various development effect of anticipated population change. Awareness of different size of different age group within the population is particularly critical to policymaking". ⁽¹⁾

A brief world view of population increases

The world population increased at 1.8 percent per year between 1955 and 1975, peaking to 2.1 percent between 1965 and 1970. The growth rate declined to 1.2 percent between 2010 and 2015 and is projected to decline further in the course of the 21st century. In absolute numbers, however, the world population has increased at about 139 million and 135 million annually between 1980 and 2011.

⁽²⁾ The fall was attributed mainly to the declining population growth rate in the most populated countries, namely, China, India, Brazil, Indonesia, and Mexico,

IEN Policy Papers

which together made up 70 per cent of world population in 1990s. In the Middle East and North African countries, despite a significant increase in the size of the population, the annual rate of population growth has slowed, from 2.82 per cent during 1970-2000, to 2.28 percent during 2000-2015. This rate, however, is still higher than the global average of 1.7 and 1.43 percent for developing countries respectively in the two periods mentioned.⁽³⁾

The major driving force behind the population growth has been fertility rate and a declining mortality rate. In this paper we investigate, first, the relationship between fertility rates, mortality rates and population growth rates, and, second, the relationship between the latter and economic development. But, before delving into the multiple relationships that exist between these variables, a brief historical perspective of these relationships is in order.

Historically, in the 18th and 19th century, the sustained economic growth of Western Europe and North America (for which data were available in those two centuries) was accompanied by a steady increase in the population, and significantly, the population growth took place without lowering per capita income.⁽⁴⁾ Population growth had a positive effect on the economy at that time because the growing population made a net contribution to economic growth. It stimulated the demand thus reducing risk to investments. It led to improvements to the labor force and pressure to improve technology and innovation, particularly in agriculture. Societies realized economies of scale in production and markets.⁽⁵⁾

While population growth was conducive to economic growth in Europe in the 18th and 19th century, the same, however, does not apply to present day Europe or to developing countries. In developing countries (*defined by per capita income*) in Asia, Latin American and Africa population growth has proved to be inversely related to their economic prospects.⁽⁵⁾ There are four main reasons for this negative relationship: first, after world war II, mortality rates declined dramatically, and population growth accelerated in developing countries at a

IEN Policy Papers

much higher rate than that recorded historically for developed countries. Second, the situation in the present developing countries is different from that in Europe. Governments now are more responsive to societies' need for education, health and raising standard of living. Third, today's developing countries must achieve growth in the face of competition for their products and services from advanced countries. Finally, and most importantly, population in developing countries is growing twice as fast as in Europe in the 18th and 19th century (at least 2 and 3 per cent compared to 1 percent) with as much as half of the population being young and non-productive. The present pattern of growth is less favorable to production and acts as an impediment to development by lowering per capita consumption and increasing social overheads in the society.⁽⁶⁾

How has the world view of the effect of population growth on economic development evolved through time?

Early in the 18th century population growth was viewed as a hindrance to economic growth. This view known, as Malthusian theory, it predicted that an expanding world population would have dire consequences for food, metal, and mineral supplies, causing famine and resource shortages. However, developments in the early twentieth century contradicted this view. The period 1960-1995, saw, globally, both food and mineral prices fall markedly and an increase in food production per person. This was achieved by technological progress, improved infrastructure, and innovation.

But it wasn't too long before reversals set in. The price of metal and minerals climbed in the late 1990s. During that time a land-mark study significantly established that the net positive effect of population size was closely dependent on family size and its relation to educational attainment and health (both of which demand great resources).⁽⁷⁾ Equally importantly, many studies further established that the most important determinant of family size is fertility (birth

IEN Policy Papers

per woman). More on this later, but first how did the relationship between population growth and economic development manifest itself?

The broad conclusions of the majority of studies on the subject can be summarized as follows: under conditions existing in most developing countries today, rapid population growth slows, 'sometimes drastically', the absorption of the bulk of the population into modern capital-intensive sectors of the economy. At the same time, and contrary to some views, the stimulus for innovation or investment calls only for modest rates of population growth.⁽⁸⁾ Moreover, rapid population growth imposes extra costs on the investment needed to maintain capital per head and adds to the required capital per worker in the economy. It, therefore, lowers labor productivity, and wages; and leads, further, to an over extension of infrastructure and raises the rate of capital depreciation. In other words, 'the country's social infrastructure is not neutral with respect to the population size'. 'Doubling population size in a generation, and city size in a decade keeps a country's political and administrative apparatus perpetually off-balance'.⁽⁹⁾ In addition, rapid population growth diverts investment funds to training and equipping an expanding labor force. It, therefore, imposes new organizational demands on a society. Finally, environmental protection, and the prevention of ecological degradation becomes more difficult and even beyond reach under rapid population growth.⁽¹⁰⁾

To sum up, rapid population growth imposes a whole variety of burdens on the economy and society and impedes socioeconomic development. So, what options are there for a society to alter demographic trends?

Family size is, as mentioned earlier, singled out as the most important factor behind population growth. The most important determinants of family size are fertility and mortality rates. The mortality rate has been steadily declining globally. This global decline can be explained by improved economic conditions, better hygiene and sanitation, the application of new medical knowledge and an expansion of public health worldwide.⁽¹¹⁾

IEN Policy Papers

The factors behind the declining fertility rate, however, are more complex. But there is consensus in the literature that there are certain factors that lower fertility. They include family income, universal education, age at marriage, the infant mortality rate, knowledge of modern contraception, availability of family planning service, women's' labor participation, food availability and a positive socioeconomic environment reducing family size

At a more detailed level, the traditional explanation of reduced fertility proposed by demographers is that, with some lag, reduced fertility follows reduced mortality (this is defined as “demographic transition”.⁽¹²⁾ Cross national studies, however, show that some indicators of advanced development are consistently correlated with a low rate of fertility. This includes high rates of literacy, high per capita consumption of energy, high rates of urbanization, low rates of infant mortality, and high per capita income. Some studies have also established that fertility and mortality rates “are part of a holistic development process”.⁽¹³⁾

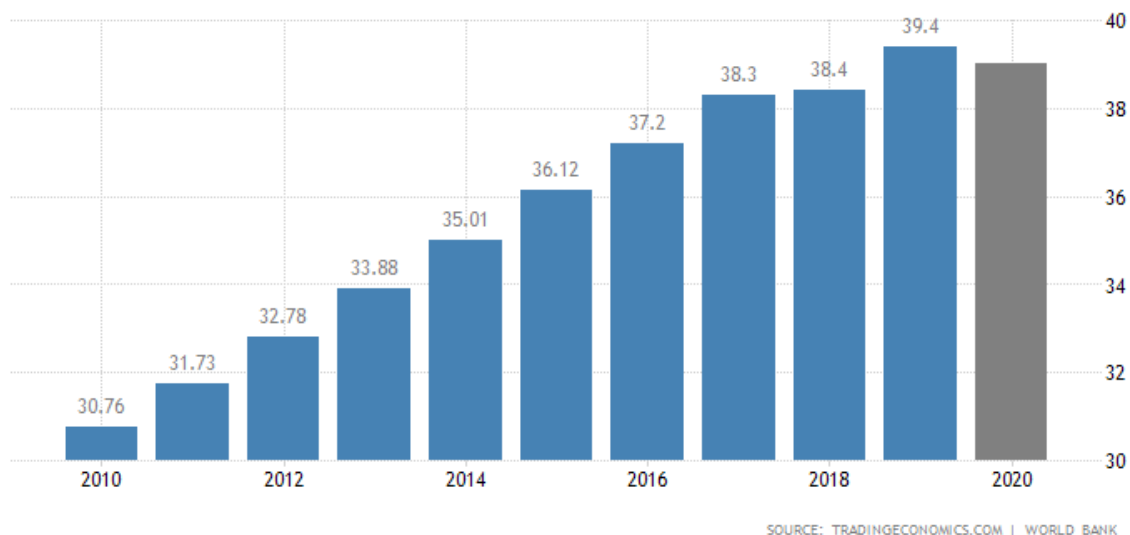
Using 1962 as a base-line for measurement, a ‘development index’- comprising several indicators, showed that countries above a certain level with respect to the ‘development index’ experienced a rapid fertility decline - about 5 percent since 1962. The socioeconomic indicators that correspond to the floor of the ‘development index’ above which countries experienced marked fertility decline include: a literacy level of 78 per cent; a primary school enrollment ratio of 65 per cent; labor force in non-agriculture activities of 62 per cent; an urbanization rate of 40 per cent; and a secondary school enrollment of 22 per cent.⁽¹⁴⁾ . In addition, there is now ample evidence worldwide to show that family planning and women's' education are the most effective means for reducing family size.⁽¹⁵⁾

Turning to Iraq, how has its population growth and fertility performed in the last two decades? We shall review Iraq's case by comparison with other developing countries in the region and the world.

IEN Policy Papers

Iraq's population, as Figure 1 shows, increased by about 10 million between 2010 and 2019, reaching 39.4 million in 2019, from 30 million in 2010. It is expected to exceed 40 million by the end of 2020; an annual increase of one million*.

Figure 1 Population 1960-2019 Data | 2020 Forecast |



Source: World Bank, Trading Economics. Iraq Population - values, historical data and charts - was last updated on March of 2020.

<https://tradingeconomics.com/iraq/population>

At the same time unemployment increased from 8 per cent in 2012 to 13.02 per cent in 2017 (Table 1). The poverty level remained around 20 percent, rising to 37 percent in the middle and southern part of the country in 2019.

IEN Policy Papers

Table 1: Unemployment rate in Iraq, by sex and age (2012-2017)

			(%)									
	2012			2014			2016			2017		
BOTH SEX	FEMALE	MALE	BOTH SEX	FEMALE	MALE	BOTH SEX	FEMALE	MALE	BOTH SEX	FEMALE	MALE	
7.92	12.26	7.17	10.59	21.92	8.44	10.82	22.22	8.49	13.02	30.96	10.26	

Source, Iraq, National Development Strategy, 2005-2007, Ministry of Planning and Development Cooperation, annex XI, page 53.

High reproduction rate is the most salient feature of the Iraqi demographic picture. This is the root of its accelerating population growth and significantly youthful age skew. While most of the developing world has undergone demographic transition from high fertility and high mortality to low fertility and low mortality, in Iraq mortality declined from 6.0 in 2007 to 4.0 per 100,000 in 2019. Life expectancy (for both sexes) increased from 60.4 year in 1980, to 69.7 year in 2015 (due mainly to improved public health and child survival rate). But, contrary to other developing countries, Iraq has not experienced a corresponding decline in fertility. Its fertility rate in 2017 was estimated at 4.3 CPW (child per woman), as a result, Iraq's population growth at 3.6 per cent during 2010-2019, is among the highest in the Middle East and developing countries.⁽¹⁶⁾ In the Middle East and North African countries, despite the significant increase in the population size, the annual rate of population growth has slowed down, falling from 2.82 per cent during 1970-2000 to 2.28 per cent in 2000-2015, and this rate is still higher than the global average, 1.7 per cent, and 1.23 per cent respectively in the two periods mentioned, and significantly higher than 1.43 percent reported for developing countries in at the late years of the period mentioned.⁽¹⁷⁾

IEN Policy Papers

With respect to fertility, most countries in the Middle East and North Africa have undergone marked demographic change, from societies with high fertility and mortality rates, to reduced fertility and mortality rates. Except for Algeria, Egypt, Sudan, Somalia and Iraq where mortality rates declined whilst fertility remained high.⁽¹⁸⁾

The United Nations Report (2018) shows that in Iraq CPW (child per woman) was 7 in 1970, 6.4 in 1980, and 4.3 in 2017. Thus, since 1980, while fertility rate steadily declined in most Middle Eastern Countries and North Africa, it did so comparatively slowly in Somalia, Algeria and Iraq. In Iraq the fertility rate remained above 4 CPW since 2008 compared to 2.1 CPW and 3.5 CPW for the remainder of the countries in the region during the same year. (According to UNFPA, the global average fertility was 2.5 in 2017, and it was 1.6, 2.0, and 2.9 respectively in Iran, Turkey, and Syria in the same year.⁽¹⁹⁾

In addition to fertility, population growth in Iraq, in line with other countries in the region, was also attributed to the decline in mortality. The average age in the country (life expectancy at birth for male and female, in years) has increased from 47.9 (1960) to 57.9 (1970) to 60.4 (1980) to 69.7 (2015) It is projected to reach 70.5, in 2020.⁽²⁰⁾

Several factors contributed to the decline in mortality rate and increase in average age. People in the country are now living longer especially women- with many living beyond 80. The other factors include declining child mortality rates over the last four decades, attributed to: income growth, public spending on basic health services, immunization, better hygiene and sanitation, greater awareness, expanding infrastructure, urbanization and better nutrition. However, the spread of some infectious diseases such as malaria and tuberculosis still need to be reduced at overall country level.⁽²¹⁾

The combination of a falling death rates and a high and stable birth rate not only produced a rapid population growth in Iraq, but had another significant consequence: it skewed the age composition toward youth. In 1970, the share of

IEN Policy Papers

population aged (0-14) in the total population amounted to 44.6 per cent, putting it in a group with Algeria, Egypt, Jordan Morocco, and Saudi Arabia. In 2015, however, this ratio in Iraq remained at 40.7 percent, higher than in Egypt (33.1 percent), Jordan (36.0 percent), Morocco (27.7 percent), and Saudi (26.0 percent). The skew in the age structure increased further; in 2018, more than 86 per cent of Iraq's population was in the age group 0-24, a ratio which was higher even than Yemen at 62 per cent.⁽²²⁾ The youthful population puts serious burdens on economic development. It impedes the growth of per capita income, because labor force participation, productivity, and savings, are low in this group relative to their consumption and investment requirements.

What is the cause of high fertility in Iraq?

The high fertility rate in Iraq is the result of a combination of factors. Principal among them are the five indicators mentioned under the 'development index' referred to earlier, plus a host of other factors including: low family income, gender inequality, and sociocultural factors that reinforce a preference for large families. Iraq's performance measured against all these socioeconomic indicators is poor compared to other countries in the region (see recent publications by the Ministry of Planning - below).

There may also be other plausible explanations for large families, especially, in the southern part of the country. The rural south, which is mainly farmland, resembles other very poor countries, and the description in Meier and Rauch, mirrors its position. Market activity in this part of the country is limited, and financial institutions linked to market operations are poor. The scope for saving for old age is narrow. Thus, children are viewed as the current generation's main source insurance for old age

At the same time, high fertility, large families, rapidly declining infant mortality, and rising population density, reduce the size of farm lands allocated to offspring.

IEN Policy Papers

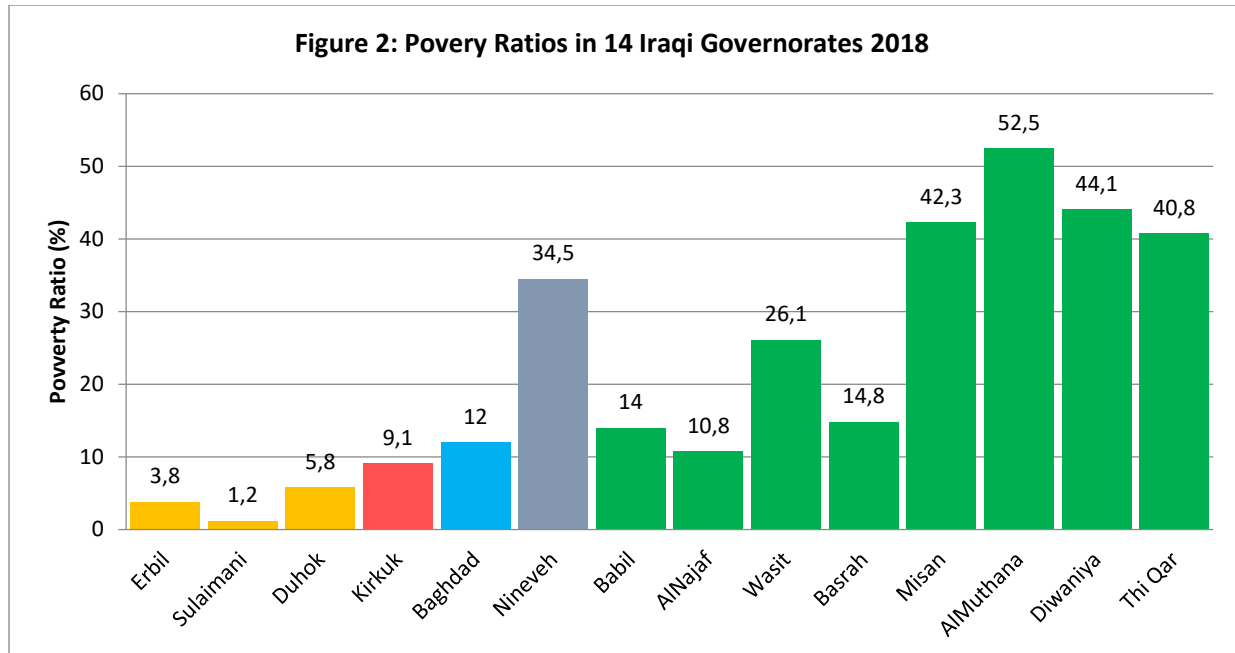
Also, the south, apart from government investment projects, has attracted little foreign investment compared to the Kurdistan Region, for example. All these factors resulted in an increasing migration to the capital and the overcrowded towns of the south. It is, however, possible to reverse the trend and reduce fertility rate by promoting economic and social development.⁽²³⁾ But how lower population and fertility growth rates were achieved in the Kurdistan Region?

Comparative analysis of population growth in the Iraqi regions

For one-year (2017) UNFPA reports fertility rate for Iraq and Kurdistan Region separately.⁽²⁴⁾ According to UNFPA data the total fertility rate for the Region is 3.0 per woman against 4.3 per woman for Iraq. (The data also show that fertility rate in the Region differed appreciably according to the level of female education). At the same time, as shown earlier, there is enough evidence to suggest that the socioeconomic environment that leads to large family size is usually characterized by poverty, high unemployment, illiteracy, low school enrollment, and high youth shares in total population.

Figure 2 below shows the rates recorded for these variables in 2017 for most of Iraq's 14 Iraqi Governorate*.⁽²⁵⁾ Data show a wide difference in the ratio of poverty between the Kurdistan Region and the rest of the country, especially, the southern part. The highest ratio in Kurdistan Region is 5.8 percent in Duhok, the highest ratio in the south is 52.5 percent in Al Muthana, the lowest is 10.8 in Al Najaf, compared to 1.2 in Suleimani in Kurdistan Region.

IEN Policy Papers



*Data for three governorates that were controlled by Deash during 2014-2017, were not reported, including: *Salahaldin, Diyala and Al Anbar-the Middle Governorate*.

Source, Walid Khadori, <https://aawsat.com/node/2159946>, Tuesday 3rd March 2020.

In 2019, according to the Ministry of planning, poverty ratios, on average, reached 41.2 percent in the area previously controlled by ISIS (*Salahadin, Diyala, and Al Anbar*), 30.0 percent in southern Governorates, and 23.0 per cent in the middle Governorates, compared to 12.5 in Kurdistan Region.

Other indicators tell the same story. For example, 48 percent of the Iraqi population are below 18-years of age. 23 percent of them are classified as poor. In the south the ratio of 'poor' rises to 50 percent, in the Kurdistan Region only 5 percent of the children are 'poor'. In addition, according to the Ministry of Planning, in 2019, the rate of participation of those aged 15-24 declined

IEN Policy Papers

markedly. The unemployment rate reached 11 percent for the whole of Iraq, for the Kurdistan Region it was 2 percent. * (Slight differences noted in the figures from the one reported above is due to different source of reporting.)

Now, one can see that not only the socioeconomic environment in the middle and southern parts of the country is conducive to larger families and high population growth; it is, also, in these regions that the bulk of high fertility and high population growth has actually taken place.

How did the disparity in the population growth rate come about?

Iraq's development performance generally, and that of the middle and southern parts of the country in particular, has been dismal by every standard, even in comparison with neighboring countries (Jordan, Saudi Arabia, and Gulf countries).

Iraq's unsatisfactory economic performance was highlighted earlier, but its unbecoming performance has been so pervasive it included all sustainable development indicators. For example, (using Ministry of Planning data before ISIS in 2014) it had high death rate for every 100.000 children; a high death rate for 0 to 5-years for every 100.000; high illiteracy rate for females and males age 15 , low return on educational investment; fewer kilometers of roads built; high rates of unemployment among male and female graduates; a backward banking system; a wide disparity between urban and rural areas; and a high percentage of people living below poverty line. This under achievement wasn't for lack of funds; the country exports, on average, 5 million barrels of oil a day. This bleak performance was surely behind the widespread revolt that swept through Baghdad and the southern Governorates in 2019-2020, paralyzing the government for months.

In contrast, during the same period (2004-2019) the Kurdistan Region reported impressive development, indicated by the low level of poverty, low rates of unemployment, and a high rate of school attendance. This was achieved by

IEN Policy Papers

concentration on building housing units, hospitals, schools, and roads - attracting foreign direct investment - expanding commodity, and amenity sectors. All this contributed to improving the socioeconomic indicators of the Region. Such favorable economic conditions help the middle class to flourish and the middle-income earners to expand. Fertility and population growth under such conditions usually slow down. ⁽²⁶⁾

How to remedy this unfavorable development trend in the country?

To reinforce its development, Iraq must turn the existing gap in the development performance of the different parts of the country to its advantage. This can be done by observing two important principles:

First, by maintaining and supporting the low population growth trend achieved in the Kurdistan Region.

Second, by putting in place development policies to reduce the high population growth in the middle and the southern part of the country.

To explain this. It is a fact that growing regions need more investment funds to maintain and increase their high growth performance. The Central Government should consider this in its annual budget allocation. For example, a tested method is to base its budget allocation on a fixed ratio at a base year, instead of basing it on a moving ratio (as it is done currently). The ratio should be calculated based on the up-to-date population census. The shares should be fixed, and regions encouraged to improve their respective development performance. To continue using a moving ratio in budget allocations rewards under-achievers at the expense of achievers; This does not help economic development in the country.

IEN Policy Papers

Summary - Conclusion - Suggestions for action

1. The inefficient management of Iraq's economy created poverty, unemployment, and low school attendance, among other underdevelopment traits that led to increased family size and high population growth. This is continuously eating away at what little economic progress the country is making.
2. There is a wide disparity in the socioeconomic performance of different parts of the country. The low population growth achieved in the Kurdistan Region shouldn't be undermined; it should be supported by a higher share in the federal budget. This will improve prospects for the overall development of the country.

The following six suggestions are policy recommendations designed to break the vicious circle of high population growth-low development- even higher population growth in which Iraq currently finds itself:

1. Carry out the long overdue population census, enshrined in Iraq's constitution, which will help to calculate the budget allocation on a nationally acceptable basis and avoid unnecessary problems.
2. Set up institutions, develop individual capabilities, and formulate socioeconomic policies focusing on population and development issues. These should cover: poverty, inequality, limited female access to education, unemployment, labor force participation, size of family, poor health facilities, malnutrition, income and income distribution, land ownership, and banking facilities.
3. Engage the country's education institutions in studying, analyzing, and disseminating international publications on population and development; to up-date policy makers' knowledge of new developments in the field.
4. Investigate the best and most acceptable methods of birth control for those who are in favor.

IEN Policy Papers

5. Study, disseminate and benefit from the experience of neighboring countries and other developing countries in issues relating to population and development.
6. Actively engage the country in activities related to population and development based on models suggested by the United Nations and United Nations Economic and Social Commission in the region.
(For further information on these suggestions see UN-DESA, Annual population Report, UNESCWA, Population and Development Reports.

(*) *Dr. Zeki Fattah is consultant/advisor in economic development in the Middle Eastern countries. He directed the Economic Development Program in the United Nations Commission (ESCWA), the Program for Economic Analysis, the program for Globalization, and the Program for Sectoral Economics. He headed ESCWA/UNIDO Science and Technology Program for the Middle East. He was Advisor in the Economic Research Forum (ERF) for the Middle East and North African countries (MENA), and lectured in economic development to graduate students at the American University in Beirut (AUB). He has PH. D in economics from the University of Oxford*

Copyright Iraqi Economists Network. 05.05.2021

[Iraqi Economists Network – شبكة الاقتصاديين العراقيين](http://www.iraqieconomists.net)

FOOTNOTES

1- United Nations Economic and Social Commission for West Asia (UNESCWA), 'Population and Development Report, Issue No. 8, 'Prospects of Ageing with dignity in the Arab Region', page 20. E/ESCWA/SDD/2017/3. Beirut (2019). See also:

- Alexander Hamilton, 'Is Demography Destination'? The Economic Implication of Iraq's Demography. Alexander Hamilton, LSE Middle East Centre, Conflict Research Program, paper series|41| November 2020.

- United Nations World Population Prospects, 2019, Highlights, Department of Economic and Social Affairs, Population Division, especially: Key findings from World Population Prospects, 2019, page 1, UN/ESA/SER.A/423, New York (2019).

United Nations World Statistic Pocketbook, 2019 edition, Department of Economic and Social Affairs, Statistics Division, Series V, No.43, New York (2019), Page 134 Iraq.

2 -World Population -see Wikipedia 2019, page 1 (retrieved from en. Wikipedia. org/wiki/world-population. See also:

Geoffrey McNicoll and Moni Nag: 'Population Growth: Current Issues and Strategies', pp.121-135, in Todaro M.P, (edited) 'The Struggle for Economic Development, Reading in Problems and Policies', published by Longman, New York (1983), page 125.,
 Todaro M.P, 'Economic Development in the Third World'(1990), 4th Edition, Ch. 6, 'The population Debate', Ch. 7: 'Economics of population and Development', published by Longman, New York., Wesley.,

E. Wesley F. Peterson, 'The role of population in Economic Growth' October-November (2017), SAGE Open, pp. 6-12., and - World Bank (2017).

- World development indicators. Retrieved from <http://databank.worldbank.org/data/reports.aspx?source=worlddevelopment-indicators> World Economics (2016).

3. McNicoll and Nag in Todaro (1983), and Todaro M.P, (1990) 'Economic Development in the Third World', 4th Edition, Ch. 6, 'The population Debate', Ch. 7: 'Economics of population and Development', pp. 25-27 published by Longman, New York (1990)., and E. Wesley F. Peterson, pp. 6-12 (2017). I bid.

4. Birdsall in Todaro (1983), p. 137., and E. Wesley F. Peterson, pp. 6-12 (2017). I bid.

5. Birdsall in Todaro (1983), P.137., and Wesley F. Peterson (2017), pp. 6-12 (2017). I bid.

6. Birdsall in Todaro (1983), pp.137-38., I bid. and Heady, D. D., & Hodge, A. (2009), 'The effect of population growth on economic growth: A meta-regression analysis of the macroeconomic literature'. Population and Development Review, 35, pp. 221-248.

IEN Policy Papers

7. USA National Research Council of the National Academy of Sciences (1986), as reported in Gerald M. Meier and James E. Rauch, 8th edition, pp.247-259., and Heady, D. D., & Hodge, A., (2009), pp. 221-248. I bid.
8. McNicoll and Nag in Todaro (1983), I bid, pp 124-126., Banerjee, R. (2012), ‘Population growth and endogenous technological change: Australian economic growth in the long run’. Economic Record, 88, pp. 214-228., and Michael Todaro, Economic Development in the Third World (1990), chapters 6 and 7. I bid.
9. McNicoll and Nag in Todaro (1983), Page 126, para 4., Todaro (2009)., E. Wesley F. Peterson, pp. 6-12 (2017)., Heady, D. D., & Hodge, A. (2009), conclusions, page-259. I bid.
10. McNicoll and Nag in Todaro (1983), Page 126, Todaro, (1990), p.19., E. Wesley F. Peterson, pp. 6-12, 2017., Heady, D. D., & Hodge, A. (2009), pp.247-259. Ibid.
11. McNicoll and Nag in Todaro (1983), I bid, page 125., Eva Beaujouan, ‘Latest-Late Fertility Decline and Resurgence of Late Parenthood Across the Low-Fertility Countries’, Population and Development Review, April (2020)., E. Wesley F. Peterson, pp. 6-12, (2017)., and Heady, D. D., & Hodge, A. (2009). Ibid.
12. Birdsall in Todaro (1983), page 144. E. Wesley F. Peterson, pp. 6-12, (2017)., Heady, D. D., & Hodge, A. (2009), pp.247-259. Ibid.
13. Birdsall in Todaro 1983, page 144., E. Wesley F. Peterson, pp. 6-12, (2017)., Heady, D. D., & Hodge, A. (2009), pp.247-259. Ibid.
14. Birdsall in Todaro (1983), pp. 144-148., E. Wesley F. Peterson, pp. 6-12, 2017., and Heady, D. D., & Hodge, A. (2009), pp.247-259. Ibid.
15. Gerald M. Meier and James E. Rauch, 8th edition, I bid, page. 247.
16. See, <https://www.unfpa.org/data/world-population-dashboard>.
17. See Table 2, in the annex, and UNSD, SDG Indicators, Global data base, 2020.
18. UNESCWA 2019, I bid. P.20, and page 116.
19. UNESCWA 2019, Population and Development Report, Issue No.8, Ibid, page.28, and annex IV and V.
20. UNESCWA 2019, I bid, Issue No. 8, Annex VII, I bid, P.122, and PP. 130-131.
21. Iraq, National Development Strategy, 2005-2007, Ministry of Planning and Development Cooperation, annex XI, page 53. And Iraq ‘The National Development Strategy’ March 2017, Ministry of Planning and Development Cooperation.
- *It is worth noting that for lack of data the impact of migration on total population isn't known. However, taking a view expanding over two decades would show that the overall impact has been negligible.*
22. UNESCWA 2019, Issue No. 8, Ibid, Annex VII, pp127-131.
23. Meier and Rauch, I bid, pp258-259.
24. Demographic Survey-Kurdistan Region of Iraq, UNFPA July 2018, pp.27-28.
25. Based on figures provided by Mr. Abdul Zahra Al-Hindawi, the Official spokesperson of the Ministry of Planning and International Cooperation, in 2018.
26. Eva Beaujouan, ‘Latest-Late Fertility Decline and Resurgence of Late Parenthood Across the Low-Fertility Countries’, Population and Development Review, April (2020).