# Exploring the Trend and Influence of the World Population in the 50 Years (1980-2030)

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Abstract: The present research has conceptualized the trend of world population nearly 50 years and the effects from it. The gradual growth of the population is seen hugely and it is predicted that in the future years, it can automatically impact the natural resources and healthcare benefits. It is explained in the research work that Ghana, Korea, Ireland and England have suffered hugely due to the random growth of the population. Constant economic downturn is found all over the world and the healthcare benefits have become missing. This has also been discussed that the unequal educational facilities have been broadened for which employment is also affected. Poverty line is increasing and in the near future, it can impact the economic growth hugely. The research has depended on existing literature for gathering information on world population growth. The medical campaigns can be arranged in the countries for educating the people about the birth control. It is also recommended that family planning is needed for the citizens of the countries. It is also mentioned that the healthcare benefits also need to be developed for the people to control the growth of the population.

**Keywords:** world population, sustainable development goals (SDGs), population growth

#### 1. Introduction

The world population growth has become a significant factor towards specific changes in the world regarding its sustainable development. Starting from the economic changes to the healthcare changing patterns, population growth has kept the major effects. The constant changes are found and the trends in nearly 50 years (1980-2030) have been explored in the research work. The birth and death ratio are indirectly proportional to their count. In the present paper, the problems that have been noted due to the world population have been discussed.

From Table 1, it is clear that the trends of the world population are changing and it makes impacts on every single sphere of life. Presently, the world population is approximately 8 billion and it is predicted that within just a few years, it will reach approximately 9 billion [1]. Random growth affects sustainable development in a huge manner because sustained and rapid growth adds challenges to achieving economic and social development. Lack of opportunity is seen, especially in developing countries due to the random growth of population. The information and services are not accessed by all the people of those countries hugely.

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Year Yearly % Yearly Mellon **Fertility Density Population** (P/Km (July1) Change Change Rate Age 2030 8,548,487,400 0.87% 72,809,988 33 2.62 57 77,927,744 2025 8,184,437,460 0.98% 32 2.54 55 2020 1.05% 81,330.639 2.47 52 7.794,798,739 30.9 2019 7,713,468,100 1.08% 82,377,060 29.8 2.51 52 2018 7.631.091.040 1.10% 83,732115 29.8 2.51 51 2017 7.547,858,925 1.12% 83,836.876 29.8 2.51 51 7,464,022.049 2016 84.224,910 2.51 1.14% 29.8 50 84,394,707 2015 7,379,797.139 1.19% 2.52 50 30 2010 6,956,823.603 82,583,315 2.58 47 1.24% 28 2005 79,662.641 44 6,541,907.027 1.26% 27 2.65 2000 6,143,493.823 135% 79.856.169 26 2.78 41 1995 83,396,384 5.744,212,979 1.52% 25 3.01 39 1990 5,327,231,061 1.81% 91,761,364 ?4 3.44 36 82,583.65 3.59 1985 4.870,921.740 1.79% 23 33

Table 1: World population from 1980 to 2030 [2].

Low-income problems emerged from it and in the upcoming years, it can be highly difficult even for lower-middle-income countries to afford education [3]. From this viewpoint, it is vivid that achieving the "Sustainable Development Goals (SDGs)" of the 2030 Agenda develops the thoughts of education, reproductive health, gender equality and empowering individuals. However, malnutrition and the problems in delivering education have been broadened through population growth as inequality to serve the facilities is found broadly.

75,704,582

1.79%

23

3.86

30

The main aim of the research is to explore the trends in the world population in nearly 50 years. The prime purpose of the study is to define the impacts of the world population on sustainable development throughout the world and focus on maximizing its benefits and reducing its risks.

In the present research work, the problems of the world population have been described along with the constant changes in the numbers. The research is highly important as it defines the economic changes worldwide as a part of the trends of world population growth. The research is also very significant because Government would get a clear idea about the impact of the world's population and what legislation needs to be developed for controlling its negative impact can be focused on. The past, present and future population ratios have been noted from the research, which signifies the random differences in the businesses significantly emphasized.

The economic turmoil is mainly seen due to the changing trends of the world population and people, especially in developing countries. It is found that the healthcare problems as well as issues in sustainable economic development have been broadened through the gradual world population enlargement. Sustainable development is not observed after the huge population growth because the constant changes in the population have made limitations in information access and equality in education, healthcare systems and food.

## 2. Literature Review

1980

4,458,003,514

Millions of people around the world are mainly from low or lower-middle-income backgrounds. The economic, educational, equal opportunity getting and other challenges are broadened through the trends in population growth. This chapter has explained the effects or adverse impacts of the trend through which the present, past and future years have been analyzed as well as predicted properly.

# 2.1. Existing Studies Relating to the Effects of the Trend on the Educational and Economic Development

The problems increase the lack of opportunities in their educational system and from this point of view, economic opportunities are not achieved. It is also true that as women are unable to get the proper education, they fail to decide the number of children they need to have and other effective things. From the notations of scholars, it is clear that as the decisions are not taken properly, the constant problems of well-being are increased and the intergenerational cycles of poverty are enlarged [4]. With accurate economic growth, the trades are promoted and without actual educational development, it is not possible to enhance economic growth in a huge manner. Contrarily, for example, in Ireland, population growth has made numerous problems in equal opportunity growth for students in their education. A gradual economic downturn can also take place in this regard in the upcoming years [5]. As per the above viewpoint, *K* (*Capital*), *L* (*Labour*), *E* (*Energy*), *MS* (*Materials*), *MF* (*Multi-factors*) *P* (*Productivity*) theories can be utilized further for controlling the gradual population growth because certain development needs to be focused depending on the proper resources.

# **2.2.** Existing Studies Relating to the Impacts of the World Population on the Demographic and Healthcare-oriented Things

Demographic changes have started to take place in a huge manner, especially after the pandemic starts. Covid-19 has made severe changes in the demographic set up and the overall world has hugely faced the issues. In the context of Ghana, it is observed that demographic changes have taken place highly due to the pandemic, and the death ratios have been enlarged. Aduhene and Osei-Assibey explained that the pandemic has confirmed the high level of deaths in Ghana like in other countries. As its effects, the continuous population trend is affected and the people's income has deteriorated [6]. Arguing the above comment, Kim and Lee said that population growth is constant in Korea; however, low mortality and low fertility have been broadened hugely [7]. It can also make problems in the healthcare setting and overall demographic changes can take its place in the upcoming years.

# 2.3. Existing Studies Relating to the Factors of the Trend to Impact the Governmentoriented Decisions

The organizational, country-based or other decisions are changed in a huge manner in the country as per the Government decisions and in the future years, it will be changed significantly. It is found from Table 2 that in England, the population growth rate is 0.55%, which is mostly high in other countries [8]. This trend has made the Government take decisions on birth control and the constant promotions in this regard have been broadened for sustainable development. It is also expected that in the upcoming years, Government decisions will be changed in a huge manner as the political, economic and other factors will have different points of view due to the population [7]. It can happen in the upcoming years, and the governments of different countries can take decisions of developing earning options through which monetary problems can be solved in the countries. Practically, the decisions are highly valuable for the countries to focus properly on the trend and make control of high population growth.

Table 2: Population growth in the countries of the UK [8].

	Mid-2018 population (millions)	Mid-2019 pop- ulation (millions)	Population growth (number of people)	Population growth rate (%)
England	56.0	56.3	310.000	.45
Wales	3.1	3.2	14.000	0.45
Scotland	5.4	5.5	25,000	0.46
Northern Ireland	1.8	1.9	12.000	0.64

### 2.4. Summary

The present research work has developed ideas on the ongoing population growth trend, however, the previous articles, which have been used here, are some flaws. Scholars have explained the economic growth-oriented problems due to the trend worldwide; however, the Government-centric decision changes have not been focused on here [4]. On the other hand, scholars defined the upcoming decision changes of the governments for the trend, however, the adverse impacts on educational equality or healthcare problems have not been focused on [8].

From the above discussion, it is clear that the development of the population and the growth constantly have made issues in economic opportunity and educational progression. The healthcare facilities have not been received by people, especially, in developing countries and the gradual upgradation in the demographic section has not been found.

### 3. Global Economic and Demographic Trends after the End of the COVID-19 Period

Recently in 2023, the issue of Global economic development has aroused considerable concern. Over the past three years, the global economy and lives have been greatly affected by COVID-19. The COVID-19 pandemic has affected nearly every aspect of daily life, including work, education, travel, social interactions, and mental health [9]. Now, that period is almost over, and much of society has returned to normal. The major strength of this study was the multi-faceted dissection of the problem, as it allows for a more comprehensive understanding of the issue at hand and can lead to more effective solutions. By looking at a problem from multiple perspectives, considering various factors and stakeholders, this study can provide a more nuanced and comprehensive understanding of a problem and its potential solutions.

Economic growth has the potential to improve individual living standards and quality of life by creating more job opportunities, increasing income, and improving access to goods and services. However, the benefits of economic growth are not always evenly distributed, and economic inequality can arise as a result. According to scholars, globalization, on the other hand, can promote trade, investment, and cross-cultural exchanges, leading to greater efficiency, innovation, and economic growth [10]. The decrease in world population can make the promotion of trade and economic problems can be solved [11]. However, globalization can also have negative consequences, such as the concentration of economic power and wealth in certain regions, cultural homogenization, and environmental degradation. Economic fluctuations such as recessions and inflation can have a devastating impact on individuals and communities, leading to widespread hardship, unemployment, and poverty [12]. In summary, economic growth, globalization, and economic fluctuations can all have both positive and negative impacts on individuals and societies.

It is important to strive for a balanced and sustainable approach to economic development that takes into account the needs of all stakeholders and aims to create a more equitable and prosperous world for all. Scholars commented that over the past 50 years, several countries across different continents have experienced rapid economic growth and have transitioned from developing to developed countries [13]. Some of the countries that have experienced significant economic growth include:

In Africa: Mauritius, Rwanda, and Ghana have made notable strides in economic development and poverty reduction in recent years.

In Asia: Singapore, Korea, China, and Israel have all experienced rapid economic growth in recent decades. Singapore has transformed itself into a global financial center and a hub for innovation and technology [12]. Korea has developed a strong manufacturing base and has become a leader in industries such as electronics and automotive.

In Australia and Oceania: Australia and New Zealand are two developed countries with advanced economies and high living standards [14]. Both countries have strong service sectors, as well as developed industries such as mining, agriculture, and tourism.

In Europe: Ireland is a notable example of a country that has made significant economic progress over the past few decades. Ireland's economy has shifted from a largely agricultural base to a knowledge-based economy, with a strong focus on technology and research. Iceland has also made significant strides in economic development, driven by industries such as tourism, geothermal energy, and fisheries [13]. UK economic development is a complex and multi-faceted way: an ageing population, a shortage of skilled Labour, Labour migration, rising education levels (meaning a greater proportion of the population needs well-paid jobs and Labour market pressures), immigration (putting pressure on public services such as housing, health and education).

In North America: The United States and Canada are two of the wealthiest countries in the world, with strong economies and high living standards. The ways in which demographic changes have a significant impact on economic development in the United States include an ageing population, declining fertility (naturally occurring), an immigrant labour force, and educational skill levels [12].

In South America: Chile, Peru, and Colombia have all made significant strides in economic development in recent years. Chile has a diversified economy with strong mining, forestry, and agricultural sectors, as well as a growing tech industry [15]. Peru has a rich natural resource base and has experienced strong growth in industries such as mining, agriculture, and tourism. Colombia has made significant progress in reducing poverty and improving access to education and healthcare and has a diversified economy with strong sectors such as oil, mining, and agriculture.

Growth in these countries has been driven by several factors: strong economic policies, access to natural resources and favourable demographics, and growth in these countries is more sustainable and inclusive than in other countries [14]. In the case of economic recession and inflation, government intervention and fiscal and monetary policies can help stabilize the economy and mitigate the impact of economic fluctuations on people's lives. As per the notations of scholars, economic progression can be hampered through population growth based on which excessive problems in monetary development can be found [16]. Yet their governments know that ageing populations and falling fertility rates are the biggest problems facing them. There is a link between an ageing population and declining fertility, known as the demographic transition. Their common effects on the economies and lives of countries:

- 1) Increased demand for health care and social services, putting pressure on government budgets.
- 2) Reduce the size of the labour and consumer markets.
- 3) Government policies need to be adjusted and reformed to cope with demographic changes and meet the needs of ageing.

In the past 50 years, the UK has experienced a mixed economic development model and significant structural changes, including the decline of traditional industries such as manufacturing and the rise of the service industry. Economy: Periods of growth and contraction. The general trend is towards growth, but economic growth is uneven. Much of the industry has moved abroad in search of lower labour costs, causing unemployment to rise [17]. More multinational companies are establishing operations in the UK and the UK's increasing integration into the global economy brings benefits and challenges, with increased competition but also new markets and investment opportunities. Eu membership: In this country's background, it is seen that the blockage in trade has increased because the problems in population growth are broadened [15]. The continuous survival of business has not been found because of the changes in the random population as opportunities for all have not been developed.

Ireland has been the country which is the fastest economic development in the world in the past 50 years, from poverty to high development. Ireland has a highly educated workforce and a strong work ethic. With a corporate tax rate of just 12.5%, Ireland has attracted many multinationals, plus its open economy and membership in the European Union have helped it access a large market and benefit from EU funds [18]. The disadvantage, however, is that it is too dependent on foreign investment and vulnerable to changes in the global economy, as well as the long-term effects of a shortage of affordable housing and climate change.

The South Korean government is committed to the development of manufacturing, electronics, semiconductors, shipbuilding and automobile industries to develop export-oriented industrialization, and to drive economic development. South Korea has invested heavily in education and training programs, creating a highly skilled and well-educated workforce [19]. The past Korean War also played a role in the South Korean economy. The war left South Korea in a state of destruction and poverty. The government's response was to industrialize the economy and it was able to build close relations with the United States and other major trading nations. The actual setup for the economy is also not found in the country because of the pandemic and other problems [20]. It has sufficiently made the issues in citizens' survival and the gradual growth in health problems is also found.

The United States is the largest economy in the world and one of the most diverse. It is a leader in technological innovation and has a strong research and development department. Scholars stated that cultural diversity promotes a culture of creativity and entrepreneurship. A large consumer market also drives demand for goods and services [14]. The US is a major player in global trade, so it also has a more flexible workforce. It has one of the highest levels of income inequality in the developed world, with huge disparities between the richest and poorest. The population growth has also made issues in the unequal economic condition for which sustainability problems have been noted [19]. The United States has a high level of the national debt. Compared with other developed countries, the social insurance in the United States is worse, which will result in vulnerable groups being unable to obtain basic needs such as medical care and education. Therefore, the problems in the population growth trend affect it highly and it spends a higher percentage of its GDP on health care than any other developed country, yet many Americans still lack access to quality health care for the population problem. The United States has the best universities and research institutions in the world, though population growth has made problems in admission [15]. The U.S. political system is deeply polarized, which can lead to gridlock and uncertainty in policymaking regarding population growth.

Australia's economic development has long been influenced by these factors: it is rich in natural resources, including coal, gold, natural gas and iron ore development [14]. However, dependence on these resources is also vulnerable to price and demand fluctuations. A well-developed R&D sector contributes to key industries such as healthcare, biotechnology and clean energy. Australia has a

stable political system, an independent judiciary and a well-developed financial system, which provide support for development [14]. But Australia is particularly vulnerable to climate change, with frequent and severe natural disasters that have led to biodiversity loss and require significant investment in mitigation and adaptation.

Ghana is rich in natural resources, including gold, oil and cocoa. These have been the main drivers of the country's economic growth and have attracted significant foreign investment. With a young and growing population, Ghana has the potential to provide a large workforce and consumers, particularly with strengths in the service sector, to drive national development [21]. Ghana has implemented some economic reforms in recent years, such as reducing government intervention in the economy, simplifying regulations and improving the business environment by which population facts can be changed. Agricultural development is also an important part of Ghana's economy and a major source of employment. Investment in infrastructure, including roads, ports and power generation, helps boost national competitiveness. The Ghanaian government has been working hard to increase access to finance for businesses and individuals [22]. However, the country faces the same challenges of high levels of poverty and inequality yet has the potential for further economic growth and development in the future.

The reason for the slow economic development of India, which has the same characteristics of fast population growth, India's infrastructure constraints are the main constraints on the country's economic growth. The lack of infrastructure, including poor roads and ports, makes it difficult for enterprises to be effective operations, and goods are difficult to transport and trade. Corruption has been a major challenge in India, especially in the public sector.

Cumbersome and slow procedures in the government sector make it difficult to attract new investment. The education system has not kept up with the population growth rate, and a large proportion of the population has limited education, which limits the country's ability to produce a skilled workforce [23]. India is also one of the most unequal countries in the world, with a large proportion of the population living in poverty and unable to Participate in the economy as a consumer or worker. A period of political instability and lack of clear policy direction in India has created an uncertain industrial environment. Long-term sustained efforts are required to unleash the full potential of the economy.

In many countries, the cost of raising a child has increased due to factors such as education costs, housing prices and rising medical costs. Therefore, many families may choose to have fewer children or delay having children to improve their financial situation. Economic uncertainty, such as high unemployment or underemployment, can discourage people from having children's development [21]. When people are uncertain about their economic prospects, they may delay starting a family until their economic situation is more stable. There is a lack of policies to support families, such as paid maternity leave, flexible work arrangements and affordable child care. If the population growth is restricted in a proper manner, the healthcare facilities can be improved development [3]. This can make it harder for people to balance work and family responsibilities and may prevent them from having children.

Overall, fertility decline is a complex issue influenced by a wide range of economic, social and cultural factors. However, the high cost of raising children, economic uncertainty, and lack of family-friendly policies are some of the major economic factors contributing to the decline in fertility development [21]. Focusing on the family planning aspect would aid in reducing the rate of population in the world.

#### 4. Suggestions

The first and foremost activity, which can be taken by governments worldwide to control the birth rate and reduce the constant growth of the population, is family planning programs that need to be

developed [24]. It is highly required mainly in developing countries as the people from the country have no such ideas in this regard and the problems in economic prosperity are increasing through it.

After that, the educational opportunity for all has to be developed both for de-veloped and developing countries. It can help countries to secure the future of their citizens and enhance ideas on birth control. Through this recommendation, child mar-riage can be prevented and healthcare security can also be gained by the people.

Apart from this, Government policies have to be maintained strictly in every country for controlling the population properly [2]. If the governments start to main-tain it, the citizens may have the idea of controlling the population and they can clear their ideas regarding giving birth to children.

#### 5. Conclusion

The entire discussion has made it clear that economic progression and educational development have been affected due to the growing trend in population worldwide widely. The pandemic in 2020 has also added problems in it because the job cuts and attritions have been increased for which economic troubles have taken place. On the other hand, demographic changes have been found in this time such as income problems for the people due to the gradual population growth. It is predicted that in the upcoming years, the problems can be broadened because the resources have started to become limited for the present population.

The prime limitation of the research is that it has utilized only secondary sources such as books, journals, articles and others for which the primary data directly from participants have not been collected. However, the research will be helpful for the future because the predictions on the future years' populations have been developed in the present research work that would aid them in satisfactorily carrying forward the topic.

#### **References**

- [1] Rusanova, N.E., Reproductive birth control after the coronavirus pandemic. Population and Economics, 6(4), pp.178-188, (2022).
- [2] Worldometers, Current Population. Available at: https://www.worldometers.info/world-population/, Accessed 23/2/2023, (2022).
- [3] United Nations, Why population growth matters for sustainable development. Available at: https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/undesa\_pd\_2022\_policy\_brief\_population\_growth.pdf Accessed 23/2/2023, (2022).
- [4] Fróna, D., Szenderák, J. and Harangi-Rákos, M., The challenge of feeding the world, Sustainability, 11(20), p.5816, (2019).
- [5] Bilan, Y., Mishchuk, H., Roshchyk, I. and Kmecova, I., n analysis of intellecutal potential and its impact on the social and economic development of European countries, Journal of Competitiveness, 12(1), p.22, (2020).
- [6] Aduhene, D.T. and Osei-Assibey, E., Socio-economic impact of COVID-19 on Ghana's economy: challenges and prospects, International Journal of Social Economics, (2021).
- [7] Kim, H.K. and Lee, S.H., The effects of population aging on South Korea's economy: The National Transfer Accounts approach, The Journal of the Economics of Ageing, 20, p.100340, (2021).
- [8] De Guimarães, J.C.F., Severo, E.A., Júnior, L.A.F., Da Costa, W.P.L.B. and Salmoria, F.T., Governance and quality of life in smart cities: Towards sustainable development goals, Journal of Cleaner Production, 253, p.119926, (2020).
- [9] Karasmanaki, E. and Tsantopoulos, G., Impacts of social distancing during COVID-19 pandemic on the daily life of forestry students, Children and youth services review, 120, p.105781, (2021).
- [10] Ahmad, S., Arshed, N., Salem, S., Khan, Y.A., Hameed, K. and Kam, S., Role of globalization defining the incidence of entrepreneurship, Plos one, 17(3), p.e0265757, (2022).
- [11] Yameogo, C.E.W. and Omojolaibi, J.A., Trade liberalisation, economic growth and poverty level in sub-Saharan Africa (SSA), Economic Research-Ekonomskalstraživanja, 34(1), pp.754-774, (2021).
- [12] Larsen, V.H. and Thorsrud, L.A., The value of news for economic developments. Journal of Econometrics, 210(1), pp.203-218, (2019).

- [13] Saint Akadiri, S., Alola, A.A., Olasehinde-Williams, G. and Etokakpan, M.U., The role of electricity consumption, globalization and economic growth in carbon dioxide emissions and its implications for environmental sustainability targets, Science of The Total Environment, 708, p.134653, (2020).
- [14] O'Sullivan, D., Rahamathulla, M. and Pawar, M., The impact and implications of COVID-19: An Australian perspective, The international journal of community and social development, 2(2), pp.134-151, (2020).
- [15] Rehman, A., Ma, H., Ahmad, M., Irfan, M., Traore, O. and Chandio, A.A., Towards environmental Sustainability: Devolving the influence of carbon dioxide emission to population growth, climate change, Forestry, livestock and crops production in Pakistan, Ecological indicators, 125, p.107460, (2021).
- [16] Abbasi, K.R., Shahbaz, M., Jiao, Z. and Tufail, M., How energy consumption, industrial growth, urbanization, and CO2 emissions affect economic growth in Pakistan? A novel dynamic ARDL simulations approach, Energy, 221, p.119793, (2021).
- [17] Jackson, T., The post-growth challenge: secular stagnation, inequality and the limits to growth, Ecological economics, 156, pp.236-246, (2019).
- [18] Hartley, K., van Santen, R. and Kirchherr, J., Policies for transitioning towards a circular economy: Expectations from the European Union (EU), Resources, Conservation and Recycling, 155, p.104634, (2020).
- [19] Tehreem, H.S., Anser, M.K., Nassani, A.A., Abro, M.M.Q. and Zaman, K., Impact of average temperature, energy demand, sectoral value added, and population growth on water resource quality and mortality rate: it is time to stop waiting around, Environmental Science and Pollution Research, 27, pp.37626-37644, (2020).
- [20] Kim, K.W. and Kim, O.S., Super aging in South Korea unstoppable but mitigatable: a sub-national scale population projection for best policy planning, Spatial demography, 8(2), pp.155-173, (2020).
- [21] Rahman, M.M., Saidi, K. and Mbarek, M.B., Economic growth in South Asia: the role of CO2 emissions, population density and trade openness, Heliyon, 6(5), p.e03903, (2020).
- [22] Frimpong, B.E., Sunindijo, R.Y. and Wang, C., Towards improving performance of the construction industry in Ghana: A SWOT approach, Civil Engineering Dimension, 22(1), pp.37-46, (2020).
- [23] Joe, W., Kumar, A., Rajpal, S., Mishra, U.S. and Subramanian, S.V., Equal risk, unequal burden? Gender differentials in COVID-19 mortality in India, Journal of Global Health Science, 2(1), (2020).
- [24] Asif, M.F. and Pervaiz, Z., Socio-demographic determinants of unmet need for family planning among married women in Pakistan, BMC public health, 19(1), pp.1-8, (2019).