TRACING THE GROWTH OF GLOBAL COMMUNITY ,A POPULATION FORECASTING ANALYSIS

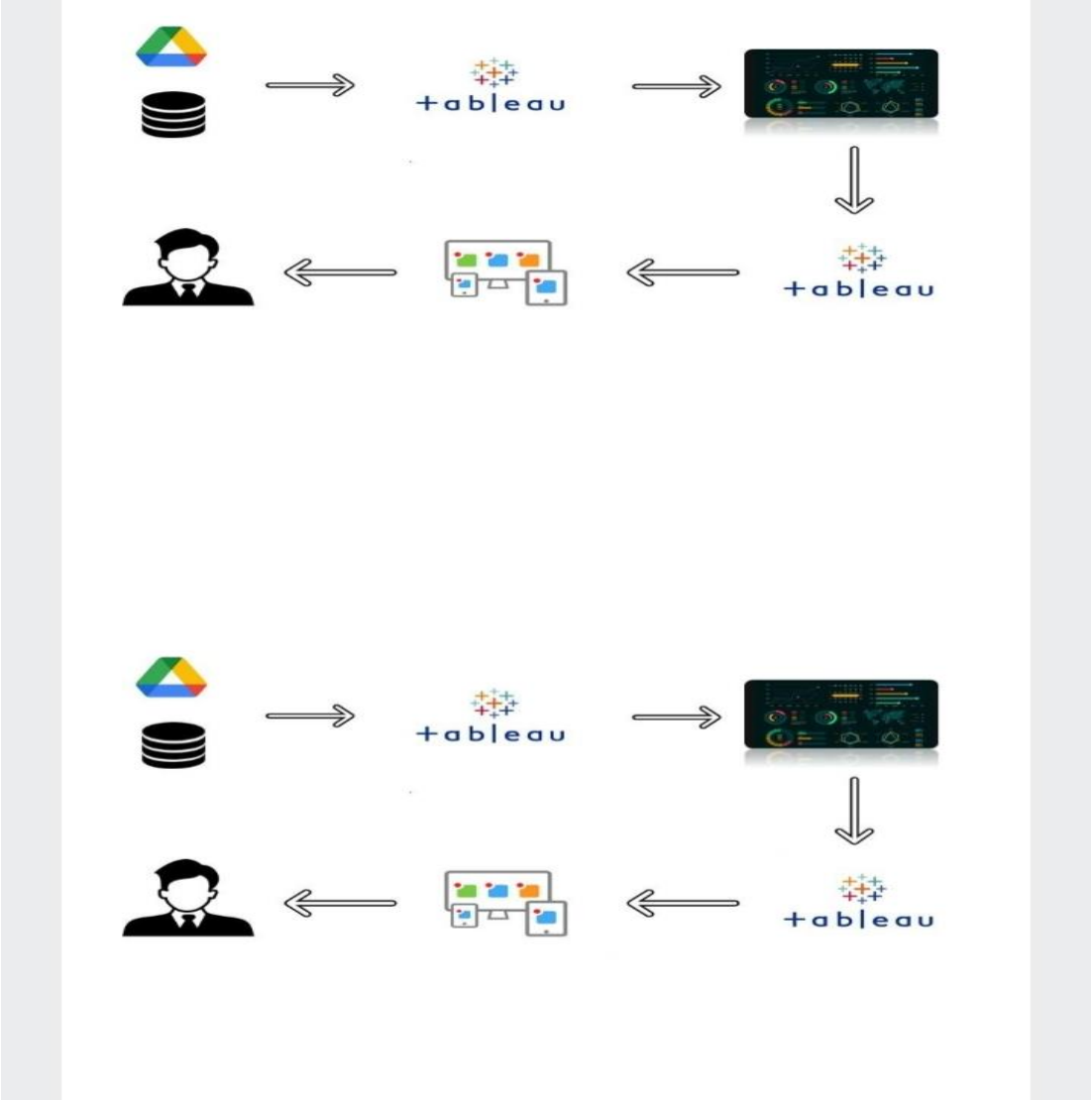
INTRODUCTION

Description about the project:

The world's population is more than three times larger than it was in the mid-twentieth century. The global human population reached 8.0 billion in mid-November 2022 from an estimated 2.5 billion people in 1950, adding 1 billion since 1998.

Purpose:

- The UN projects that the global population will increase from a population of around 8 billion in 2022 to 10.4 billion by the end of the century. By that time, the UN projects, fast global population growth will come to an end.
- Beneath the global level, there are of course big differences between different world regions and countries. While in some regions the world population will likely grow rapidly for the coming decades, other regions will continue to see declinings.



- Global population growth is determined by the number of births and deaths. Improving health is increasing the size of the population as it is decreasing mortality. The countervailing trend is falling fertility rates – the trend of couples having fewer children is what brought rapid population growth to an end in many countries already, and what will bring an end to rapid population growth globally.

- The global population growth rate has already slowed down considerably: it reached its peak at over 2% in the 1960s and has been falling since.
- The UN projections for the global population growth rates, which have been produced since the 1950s, have a good track record in projecting the size of the global population.
- While the UN projections are most widely known, there are other very-carefully-produced projections. The demographers of WC-IIASA model what will happen according to different scenarios and make clear that the population growth rate tomorrow depends on what we do today. Rapid progress in getting children – and especially girls – into schools will result in a much smaller global population.
- The biggest disagreement between different projections is concerning the future of Africa. While the UN projects an almost 3-fold increase of the population of Africa, other researchers find a much smaller increase more likely.

Empathy Map

Tracing the growth of the global community requires an analysis of historical and current population trends through the use of population forecasting models.
Population forecasting is the process of estimating future population size and demographic characteristics by using mathematical models and statistical techniques. It is a vital tool

for policymakers and businesses to understand the growth of the global community and plan for the future.

One critical factor in population forecasting is fertility rates. Fertility rates have been declining worldwide due to various social, economic, and political factors, such as increasing access to contraception, higher education levels among women, and changing cultural values. As a result, many developed countries are facing an aging population, while developing ones face population explosions.

To understand the implications of population growth, policymakers use population forecasting to predict future trends and their possible outcomes. For example, projections on population size and demographics can help governments plan for infrastructure development, healthcare, education, and social services.

Businesses can also use population forecasts to identify new markets, anticipate demographic changes, and adjust their products and services to meet different customer needs.

Design of dashboard

Responsive and Design of Dashboard The responsiveness and design of a dashboard for analyzing population growth in the cities is crucial to ensure that the information is easily

understandable and actionable. Key considerations for designing a responsive and effective dashboard include user-centered design, clear and concise information, interactivity, data-driven approach, accessibility, customization, and security. The goal is to create a dashboard that is user-friendly, interactive, and data-driven, providing actionable insights on the population.

Advantages of population growth

1. **More people leads to greater human capital**. If there are more people, the probability of finding a genius like , Marie Curie, Beethoven increase. These exceptional people can lead to technological and cultural masterpieces which enrich our lives. The past 200 years have shown exponential growth in technical development and innovation. There are many factors behind this, but the world's growing population means we have a bigger pool of human capital and the possibility of these discoveries increase.

2. **Higher economic growth**. Population growth will lead to economic growth with more people able to produce more goods. It will lead to higher tax revenues which can be spent on public goods, such as health care and environmental projects.

- The obvious evaluation is to say, the crucial thing is not GDP, but GDP per capita. If economic growth is at the same rate as population growth, average living standards will not increase. However, it is possible population growth can also improve per capita incomes. As the population increases, the economy can benefit from a bigger talent pool, economies of scale and greater special All this can enable higher per capita income, which we have seen in major developed economies.

3. **Economies of scale**. Farming and industry have been able to benefit from economies of scale, which means as the population grows, food output and manufacturing output have been able to grow even faster than population growth. For

example, at the turn of the nineteenth century, Thomas Malthus predicted population growth would lead to famine as we would be unable to feed the growing population. However, his dire predictions failed to because he failed to understand, that the productivity of land, and capital could all increase more than proportionately. 300 years ago, most of the population worked on the land. Technological innovation and economies of scale, mean productivity of land has vastly increased as farmers make use of me and economies of scale for increased food production.

4. The efficiency of higher population density. In terms of per capita carbon footprint, areas with a high population density are significantly more efficient than rural areas and places with a low population. When people live in densely populated areas, they are more likely to use public transport, live in apartment buildings which are easier to heat. In big cities, transport and the delivery of goods is much more efficient, whereas for low population densities, the average cost and environmental footprint are much higher. Therefore, population growth which leads to growth in city (which is a feature of global growth in past) is not as environmentally damaging as we may think.
In Green Metropolis, by David Owen he argues living in closer proximity in cities is a key aspect of sustainability

- Urban areas account for only 3% of the world's land surface. But, more than 50% of the population. By 2050, the United Nations predict this will rise to 70%. Therefore,

population growth doesn't have to lead to an equivalent fall in natural habitats.

5. The improved demographic structure of society. Many western economies are now experiencing a falling population, with the result that their population demographic is being skewed to old, retired people. This is imposing costs on society as we struggle to pay for health care and pensions. Moderate population growth helps to rebalance the population with a higher share of young, working people.

6. Critical mass. Higher populations can enable a critical mass of people to enable a sider, more vibrant society. With low populations, there is less scope for diversity. But, when the population grows, it can enable the support of a broader cultural range of activities.

Disadvantages of population growth

1. Cost to the environment: Population growth exacerbates many of the existing environmental problems

- Trying to reduce carbon and methane emissions to reduce global warming is relatively more difficult as the population.
- There will be greater threat on natural habitats as a greater population has greater demand for housing and farmland. This will increase pressure to cut down forests to make way for farming and housing.

- Higher population will lead to a greater consumption of non-renewable resources, leading to a faster depletion of natural resources.
- Higher population will lead to greater pollution levels in air, water and land. Higher pollution is associated with a range of health issues, such as cancer and asthma. The pollution also harms animals and plants.
- Soil degradation. To feed a growing planet, we have seen serious degrading of farmland (according to UN estimates) about 12 million hectares of farmland every year. This is due to factors, such as overgrazing, use of chemicals, climate change and use of chemicals.

2. Congestion: Too many people in a small space will lead to various types of congestion. Road congestion is a major problem across the world. One study suggested congestion cost the EU €111bn (1% of GDP) in 2012. population growth, the costs of congestion will only increase leading to time lost, more pollution and lost output.

3. Water shortages: Already up to 40% of the world's population face water scarcity and the risk of drought. According to the UN water shortages could lead to 700 million people at the risk of displacement. A growing population will put pressure on scarce water supplies and this is a factor behind many minor and major conflicts with countries having to find ways around the shortage of water.

4. Generating unsustainable waste: We are currently generating non-biodegradable rubbish that we are struggling to process. It tends to end in landfill, causing methane emissions and other toxic problems.

Future scope:

World population growth – This article is focusing on the history of population growth up to the present. We show how the world population grew over the last several thousand years and we explain what has been driving this change.

Life expectancy – Improving health leads to falling mortality and is therefore the factor that increases the size of the population. Life expectancy, which measures the age of death, has doubled in every region in the world as we show here.

Fertility rates – Rapid population growth has been a temporary phenomenon in many countries. It comes to an end when the average number of births per woman – the fertility rate – declines. In the article we show the data and explain why fertility rates declined.

Age Structure – What is the age profile of populations around the world? How did it change and what will the age structure of populations look like in the future?

Global population growth

IN THIS SECTION

Two centuries of rapid global population growth will come to an end

Two centuries of rapid global population growth will come to an end

One of the big lessons from the demographic history of countries is that periods of rapid population growth are temporary. For many countries, the demographic transition has already ended, and as the global fertility rate has now halved we know that the world as a whole is approaching the end of rapid population growth.

CONCLUSION :

Population projections, like master plans, must be revised quite frequently. It has been suggested in this report that several alternative projections be made on the basis of different sets of assumptions. It has also been recognized that in the last analysis, the planner must use as a working guide that population projection he considers most feasible. In making population projections, the planner need not be so much worried about errors in forecasting the numbers of persons (a five percent under or over-estimation of population should not disrupt a community!) but he should be concerned about an error in the kinds of anticipated persons. For example, in a community of anticipated 100,000 population, 5,000 additional persons could be absorbed; if all 5,000 additional persons were

children of school age, however, the effects on community facilities might be disastrous.

There is no easy method to population forecasting. Some demographers feel that fertility and mortality rates are nearing some sort of stability. Should this actually happen, a series of formulae might be developed by which fertility and mortality might be projected, leaving migration as the field for most intensive scruting. The "stability" does not yet exist. Given though the planner of today must resort to "enlightened guesses", he must be aware of the many complex interacting forces that influence future population numbers, composition and place of residence.