FERTILITY & POPULATION:
A TIMELESS MEASURE OF HUMAN CONDITION

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DID YOU KNOW?

On November 15, 2022, the world population reached a milestone– 8 billion!

Definitions

- Fertility is "the ability of an individual or couple to reproduce."

- Fertility Rate is "the average number of children born to women during their reproductive years."

SOURCE: Britannica

Fertility Rate ≠ Birth Rate (Natality)

Definitions

- Mortality is "the frequency of death in a population."

- Suicide Mortality Rate is "Number of suicide deaths in a year, divided by the population and multiplied by 100 000."

SOURCE: WHO

Definitions

- Life Expectancy is "the estimate of the average number of years that a person of a given age can expect to live."

SOURCE: Britannica

- In 1950s, a family had **5** children on average, today a family has less than **3** children on average.

  - Some reasons for the decrease in fertility rates:

    - Women's empowerment, both in education and workplace
    - Lower child mortality
    - Increased cost of raising a child

Fun fact 🤨
The country with the lowest fertility rate in 2022 is South Korea - 0.9

According to the World Economic Forum (WEF), partly due to these reasons, the global fertility rate has decreased dramatically in the last 70 years by around 50%.

QUESTION: If fertility rate is declining, then why is the world population still increasing?

Dataset overview

bigquery-public-data.world_bank_health_population

Dataset overview

The world bank population international dataset provides estimates of country populations since 1950 and projections through 2020.

Specifically, the dataset includes midyear population figures and population_growth_rate. Additionally, time-series data is provided for attributes including fertility rates, life_expectancy, fertility_rate etc.
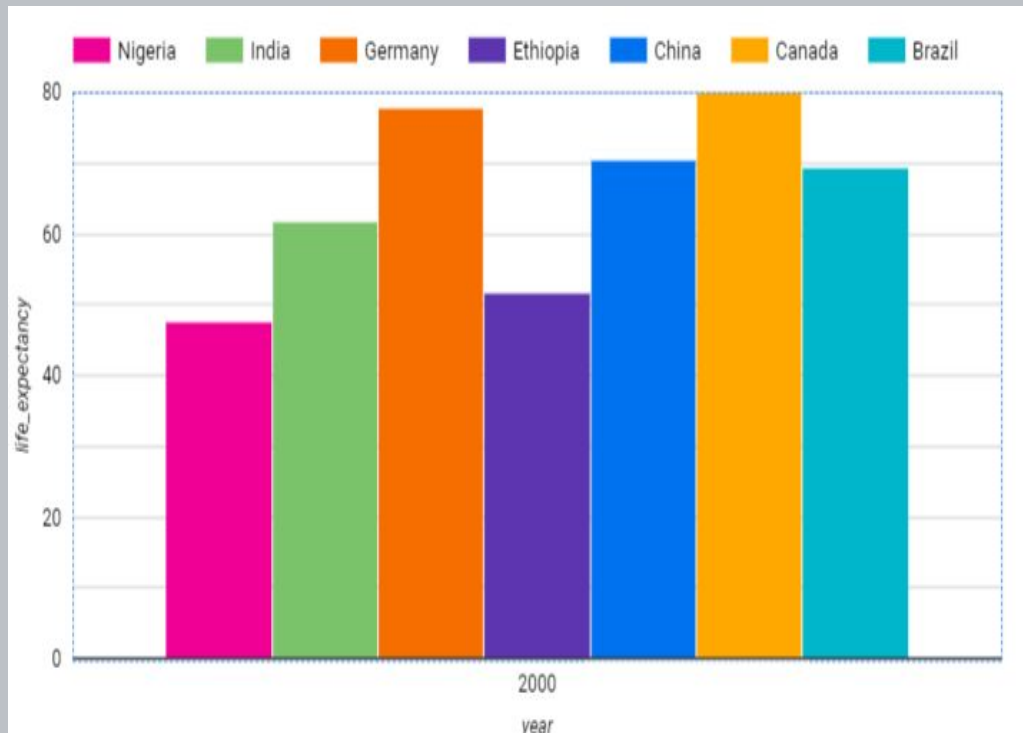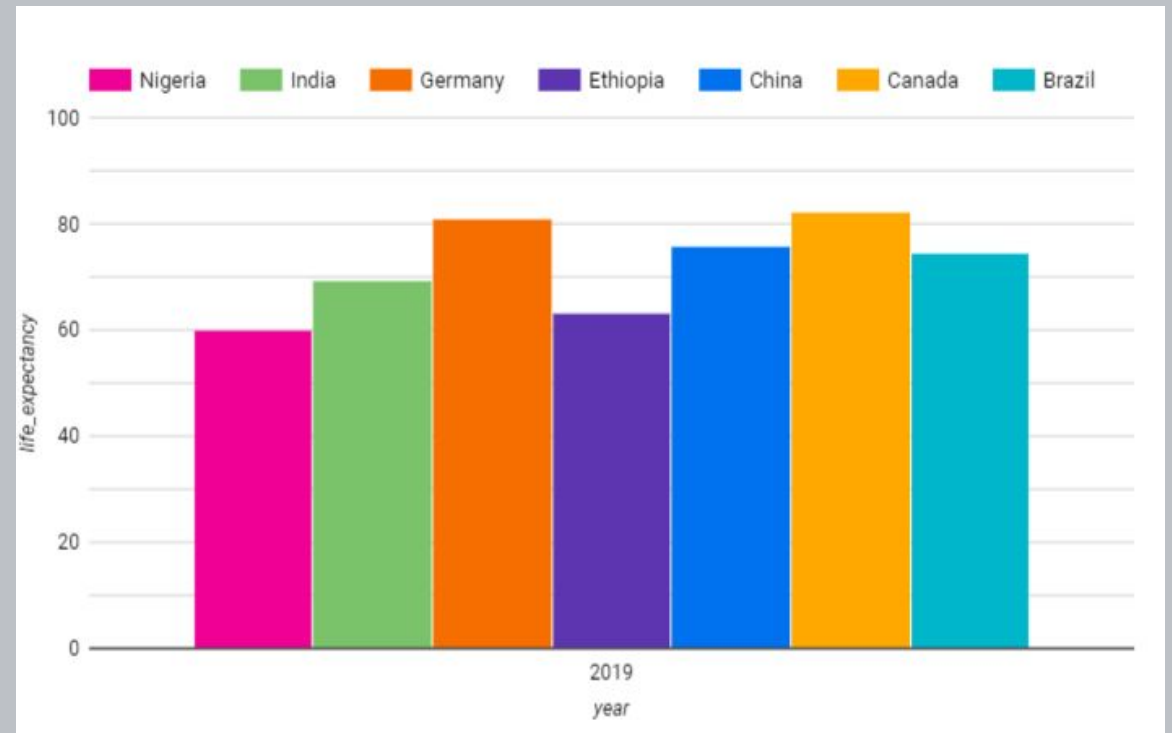
Population growth rate
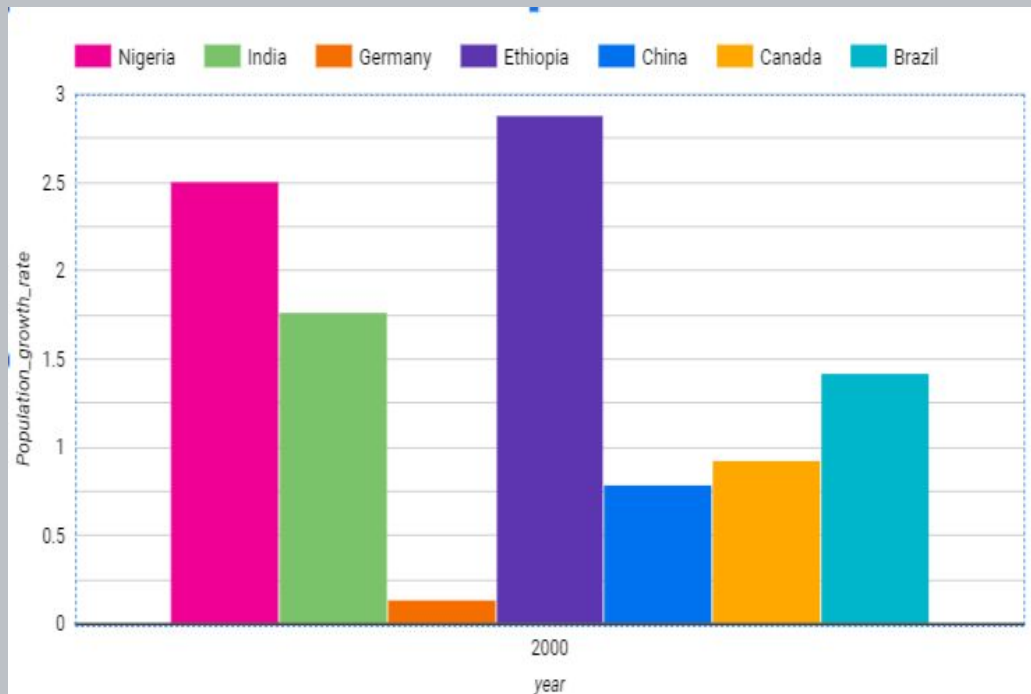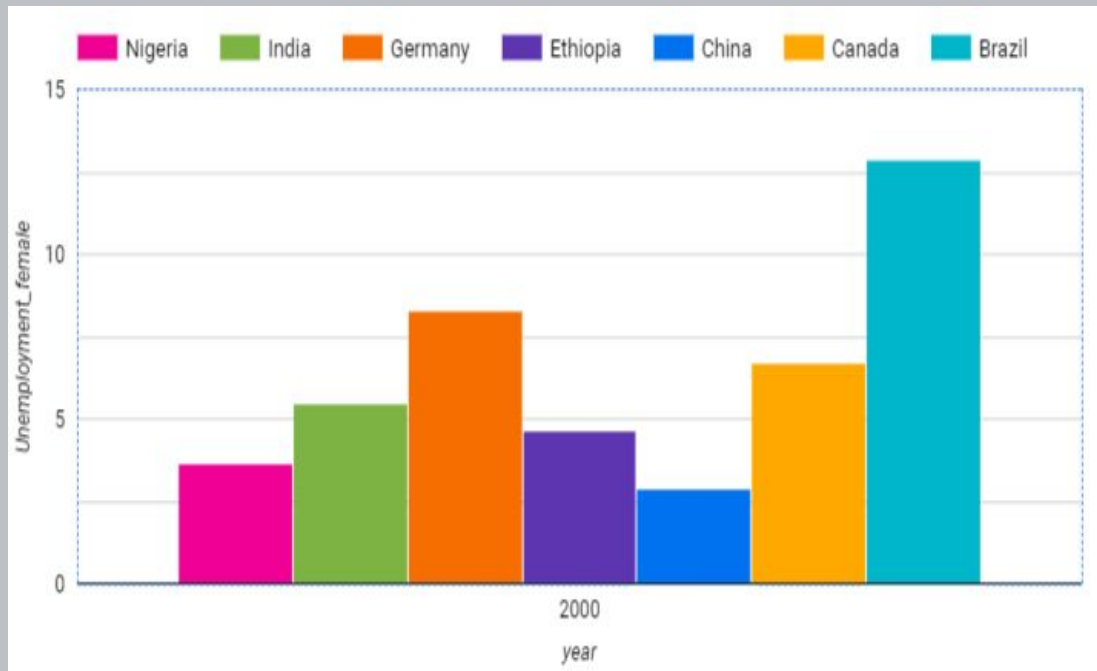

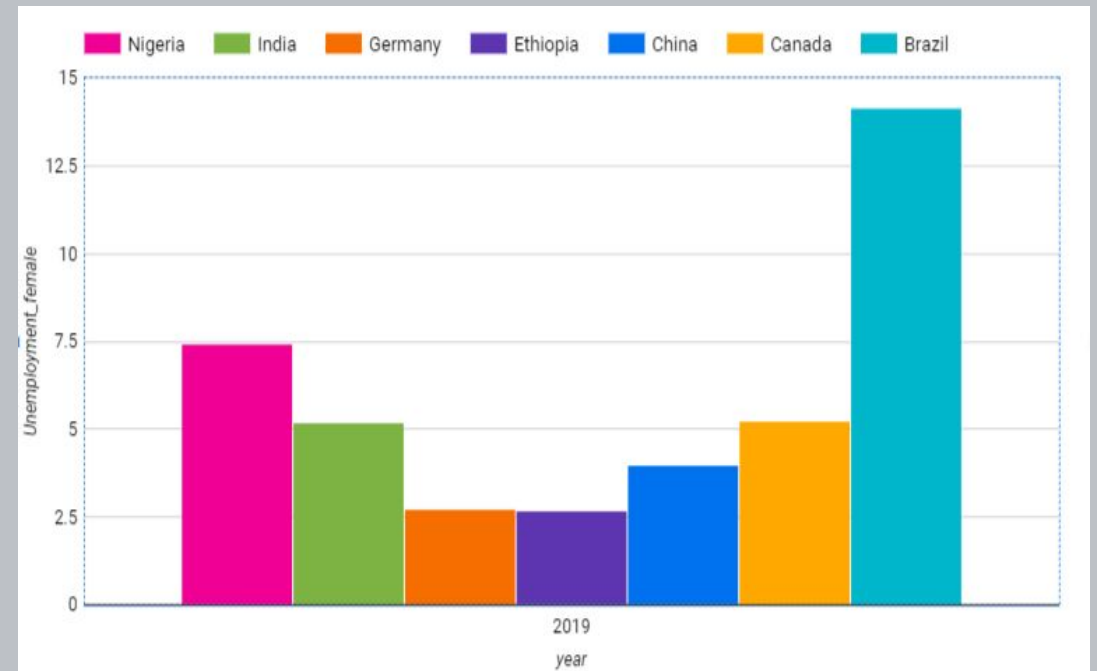2000
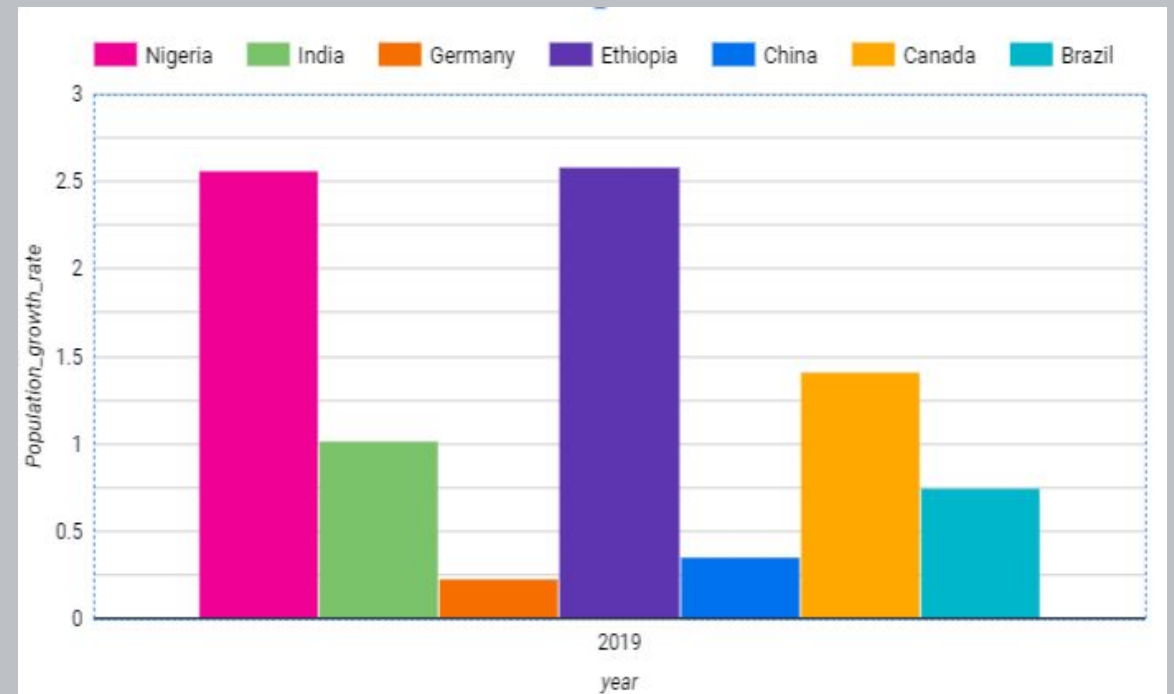
2019

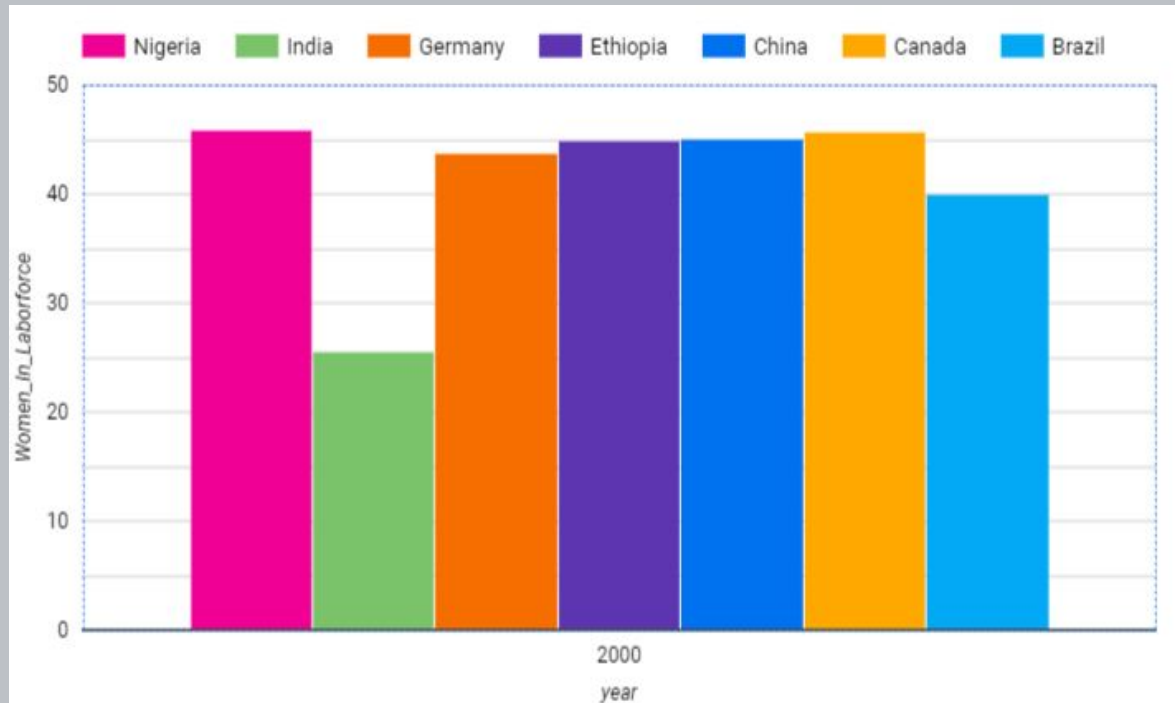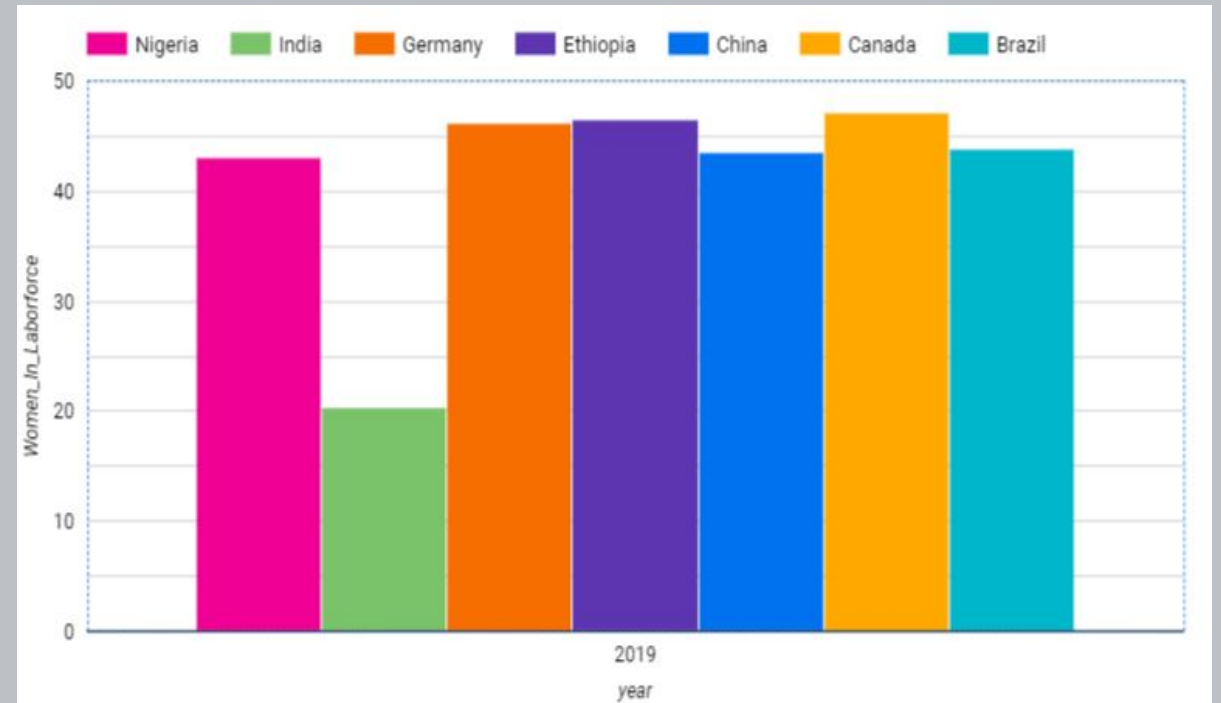# Life expectancy rate

2000

2019

Unemployment female rate

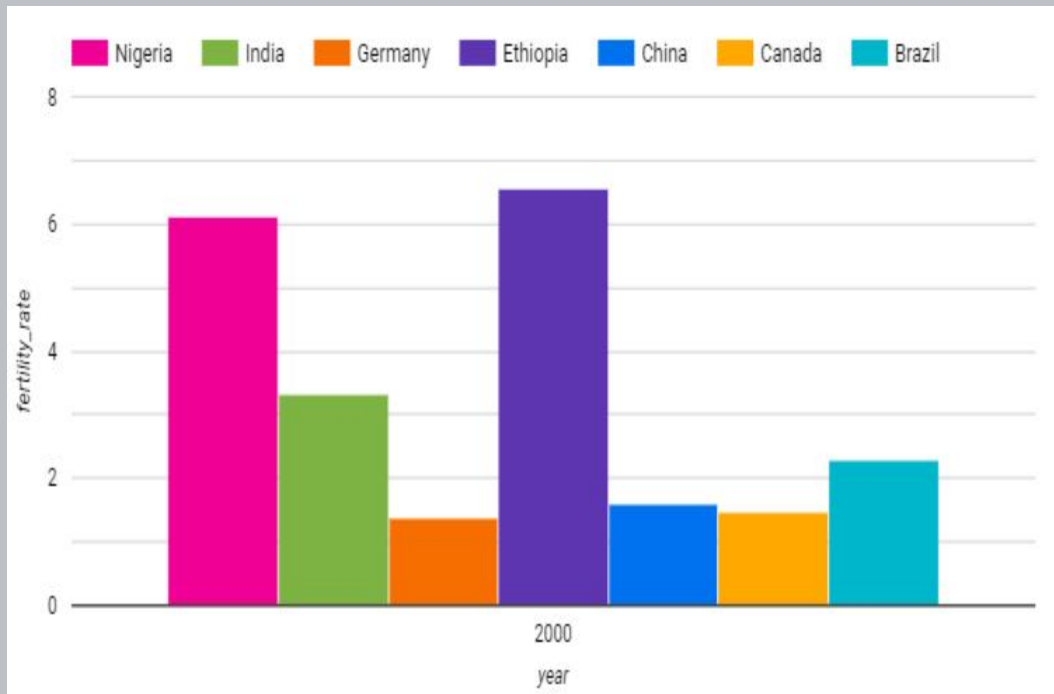
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2019

Women In Labor Force
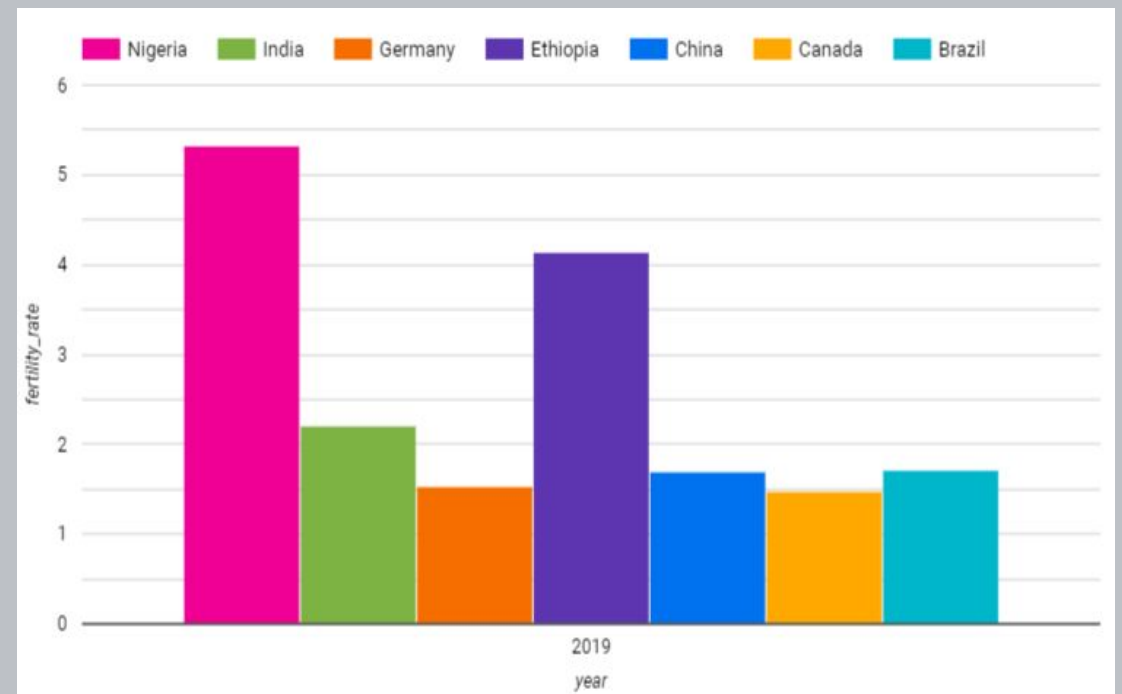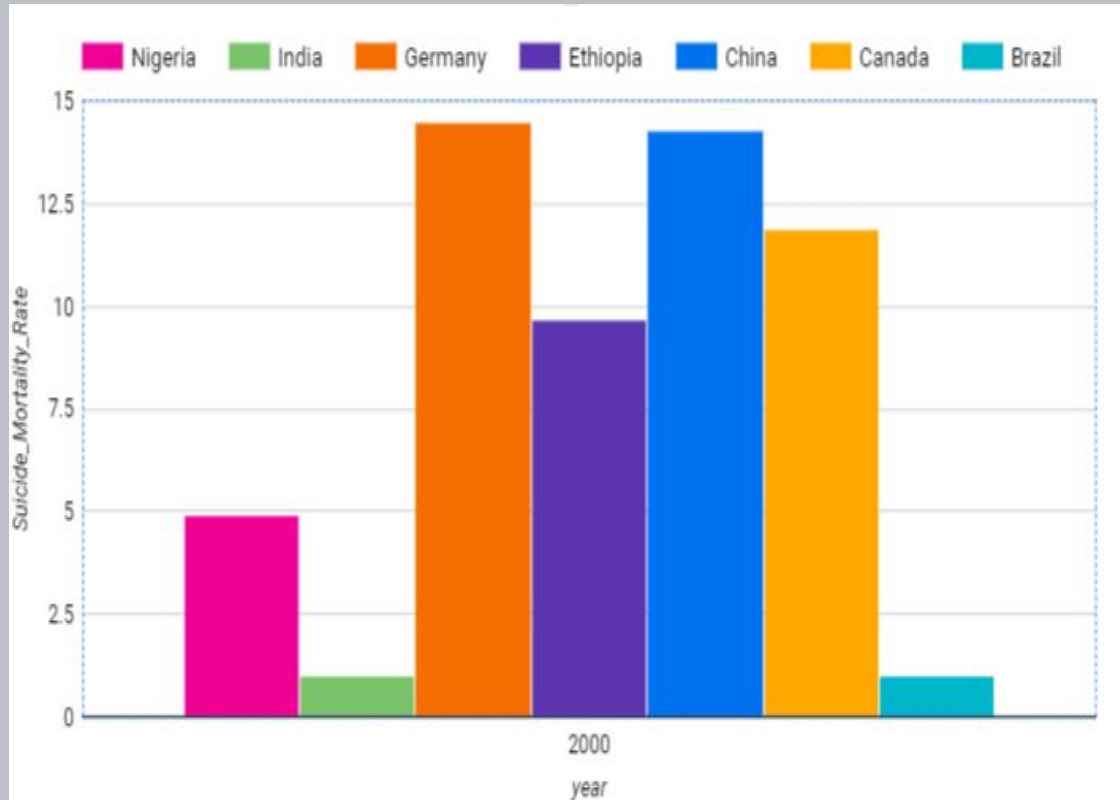

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Fertility rate

2000

2019

Suicide mortality rate

2000
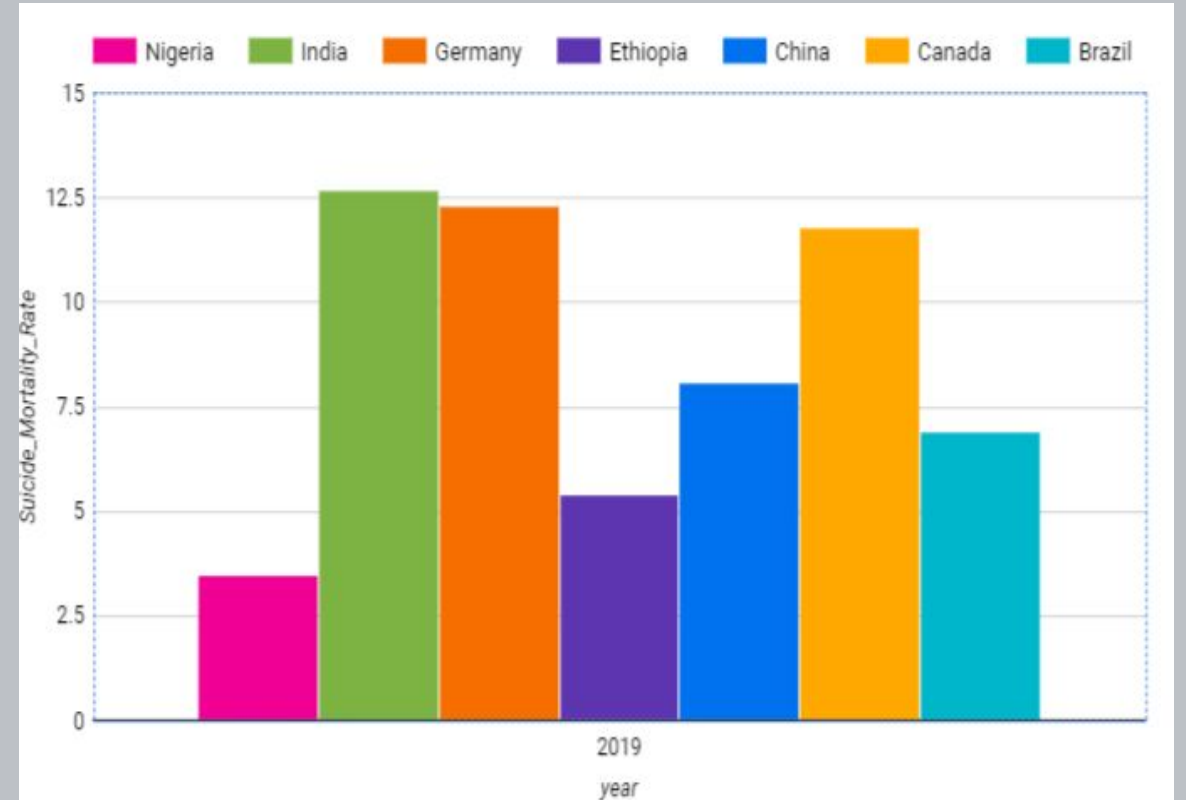
2019

CONCLUSION

The reason for the increase in population despite the decreasing fertility rate is that the average fertility rate is 2.76 (2000-2020) and 3.37 (1950-2020), which are higher than **2.1** — the value over which the population would increase (WEF).

The report finds that by 2050, global fertility is expected to be **2.2 births per woman**, down from 2.5 today. This rate is inching closer to the replacement rate of 2.1—the number of births per woman needed to maintain a population's size (IMF).

CONCLUSION

According to the United Nations, Africa will likely account for "more than half of the world's population growth between 2015 and 2050. Its population is projected to double by 2050, and could double again by 2100".

CONCLUSION

"The biggest things are the modern tools of contraception,"

"If you have those things available then people have more control over being able to space their children."

"To continue improving the human condition, our task now is to help create opportunities in Africa's fastest-growing, poorest countries,"

"This means investing in young people."

References

1.What does the global decline of the fertility rate look like? (n.d.). World Economic Forum. Retrieved December 4, 2022, from https://www.weforum.org/agenda/2022/06/global-decline-of-fertility-rates-visualised/

2. 7 graphics that explain: What is an 'ageing population'? | Aetna International. (n.d.). 7 Graphics That Explain: What Is an 'Ageing Population'? | Aetna International. Retrieved December 4, 2022, from https://www.aetnainternational.com/en/about-us/explore/future-health/ageing-population-graphics.html