Urban Indicators-Comparison

30th September, 2022

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Overview

For city level data, the standard area of reference is the urban agglomeration. When data for the Urban Agglomeration is not available, data for the Metropolitan Area might be used.

In order to make data collection more effective, urban indicators have been grouped into two clusters:

Cluster A: indicators to be obtained from Census, Demographic and Health Surveys, Multiple Indicators Cluster Surveys and national households surveys;

Cluster B: indicators to be obtained from other sources.

It is expected that data collection and analysis be a collaborative effort between National Statistics Offices, Ministries responsible for urban issues, City and Metropolitan authorities and the Research community. Some results can be completed solely by reference to secondary materials. Others will require consultation with small group of experts. Also, it is vital to get knowledgeable experts to interpret the data and provide their most informed judgment on the values of the indicators.

Goals

We have to collect the data and analyze it, and fill the data by reference for the urban Agglomeration :

1. Bangalore (Darpan)
2. San Francisco (Dharmin)
3. Singapore (Vaibhav)

Others will require consultation with small group of experts. Also, it is vital to get knowledgeable experts to interpret the data and provide their most informed judgment on the values of the indicators.
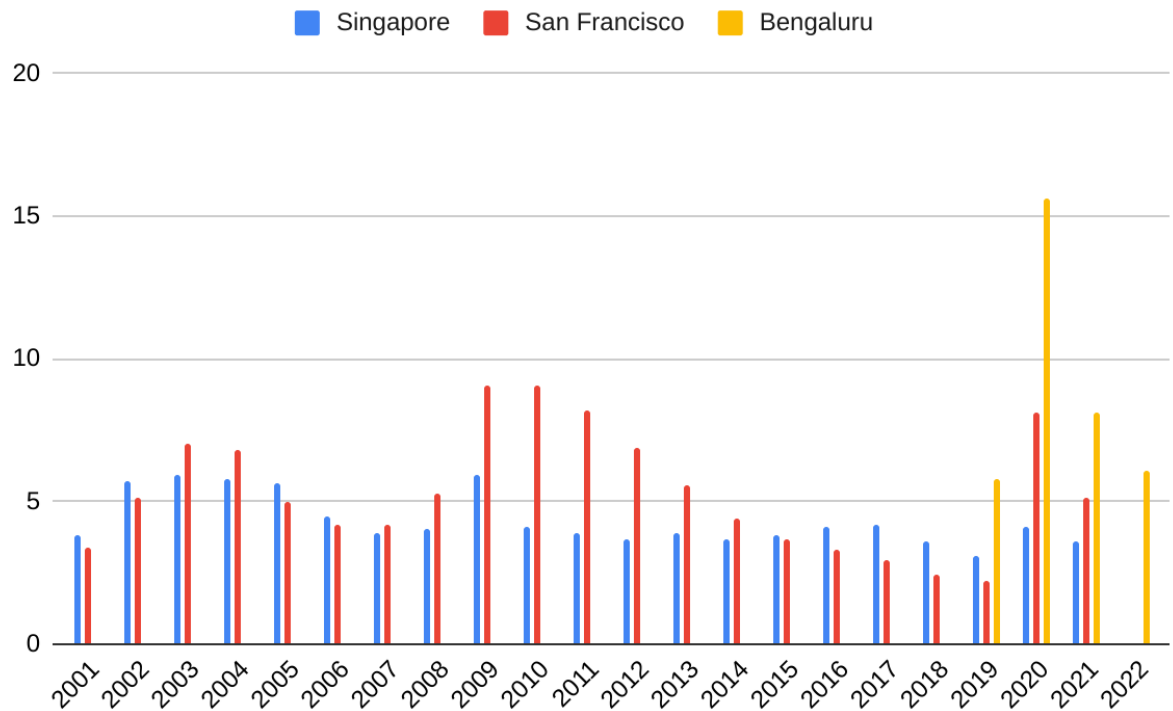
Urban Indicators

Urban indicators are regularly collected in a sample of cities worldwide in order to report on progress in the twenty key areas of the Habitat Agenda at the city level. Data collection is conducted through local and national urban observatories as well as through selected regional institutions.

● Economic Indicators :

1. **Unemployment rate :** average proportion of unemployed (men and women) during the year, as a fraction of the (formal) workforce.

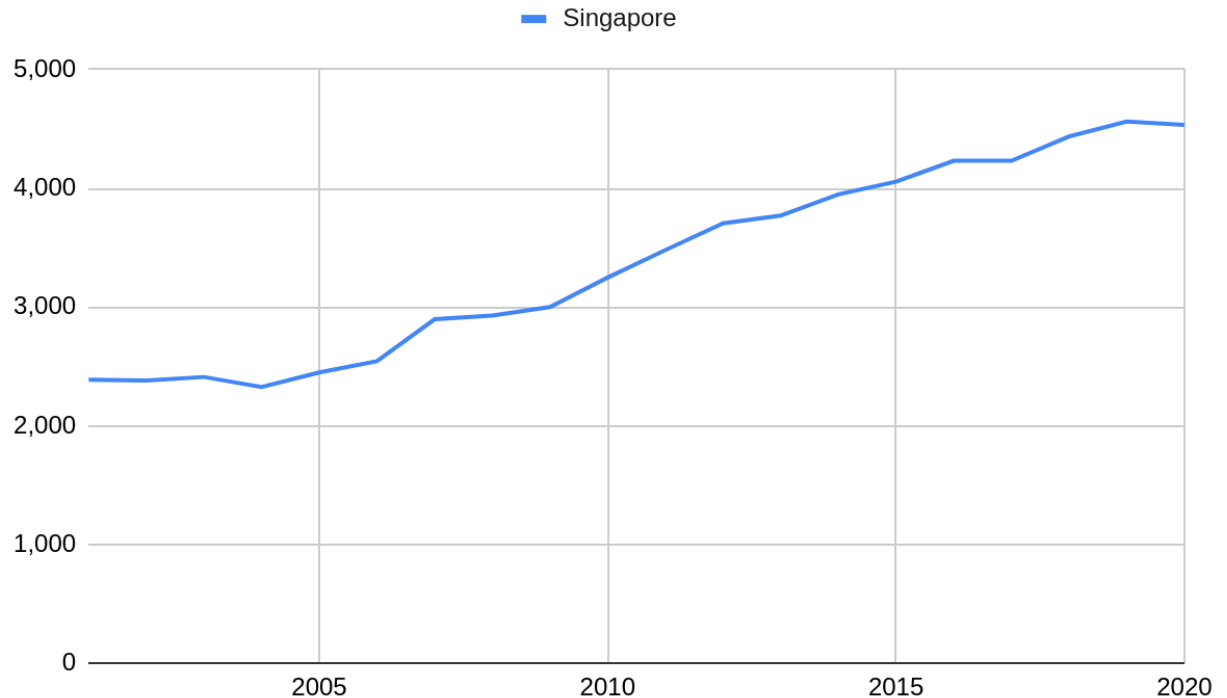Range :: San Francisco(3.35-8.083-5.1), Singapore(3.8-5.9--3.6) , Bangalore(5.8-15.6-8.15)

Comparison :: By the year 2020, the unemployment rate for Bangalore spiked the most to 15.6 , followed by San Francisco as 8.083 and lastly Singapore with 4.1, while the data observed over the past 2 decades for Singapore were alike, whereas in San Francisco there were spikes twice (once in 2009 and the other in 2020) and a spike in 2020 for Bangalore also.

2. **Job-Growth :** Jobs growth refers to the net increase in the number of nonfarm payrolls during the previous month. This number is widely followed because employment is crucial for economic performance.

Range : San Francisco(586000-719000){num of jobs}, Bangalore(17.6%)

3. **Wage (Avg.) :** Average wage is the mean salary of a group of workers. This measure is often monitored and used by government or other organizations as a benchmark for the wage level of individual workers in an industry, area or country. Singapore is seen to have

an increase in the the figure, with the exception of the year 2003-2004 where there appears to have a slight dip.
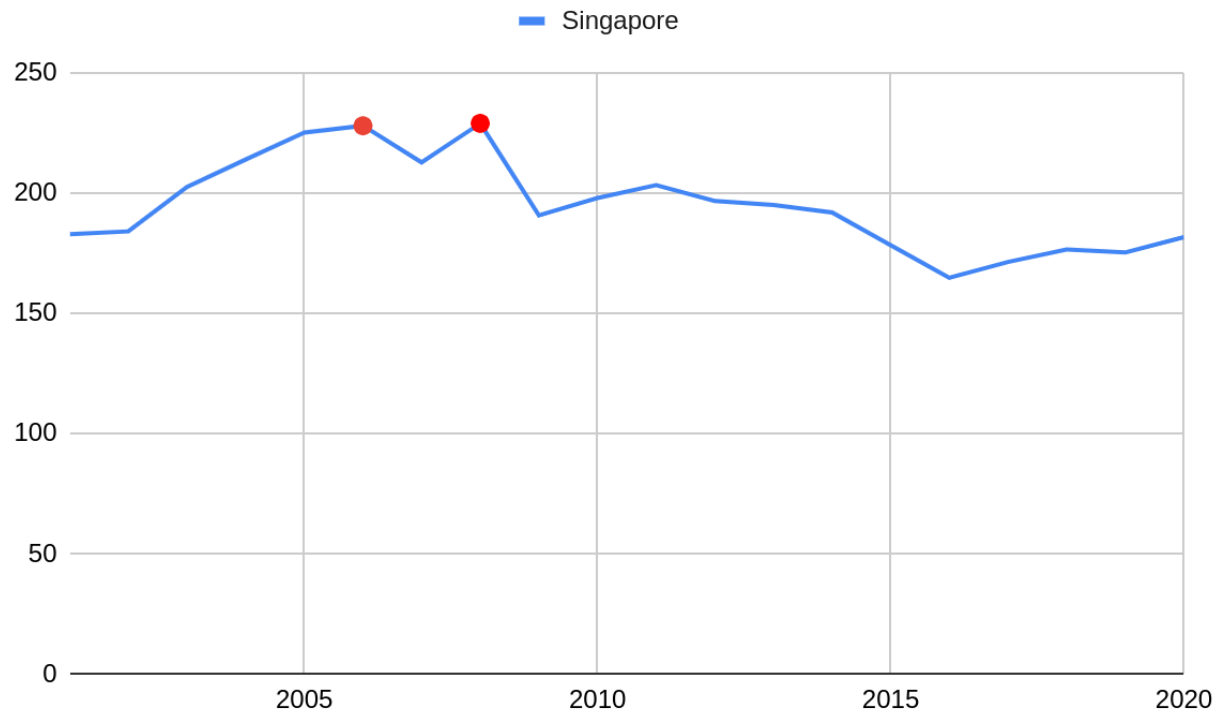

Range : Singapore(2387-4534), Bangalore(426.35)

4. **Start up activity:** Start-up activities are the events and behaviors of individuals who are engaged in the process of starting a new venture [Carter, Gartner, Shaver, 2004; Gartner, Carter, Reynolds, 2004; Reynolds, Miller, 1992;Edelman et al., 2016] and constitute the "micro-foundations of entrepreneurial action .

Range : Bangalore(34% leasing share)

5. **Workers productivity:** Employee productivity can be defined as the amount of work (or output) produced by an employee in a specific period of time. As a manager, you have the power and responsibility to help your teammates do their best work. Three ways to measure employee productivity include: Measuring goals. Measuring quality of work.

Range : Bangalore($3.5 billion loss)

6. **Exports:** refers to a product or service produced in one country but sold to a buyer abroad. Exports are one of the oldest forms of economic transfer and occur on a large scale between nations. No general trend can be seen with respect to the figures for Singapore although we can see two peaks in the years 2006 and 2008 indicative of strong economic growth
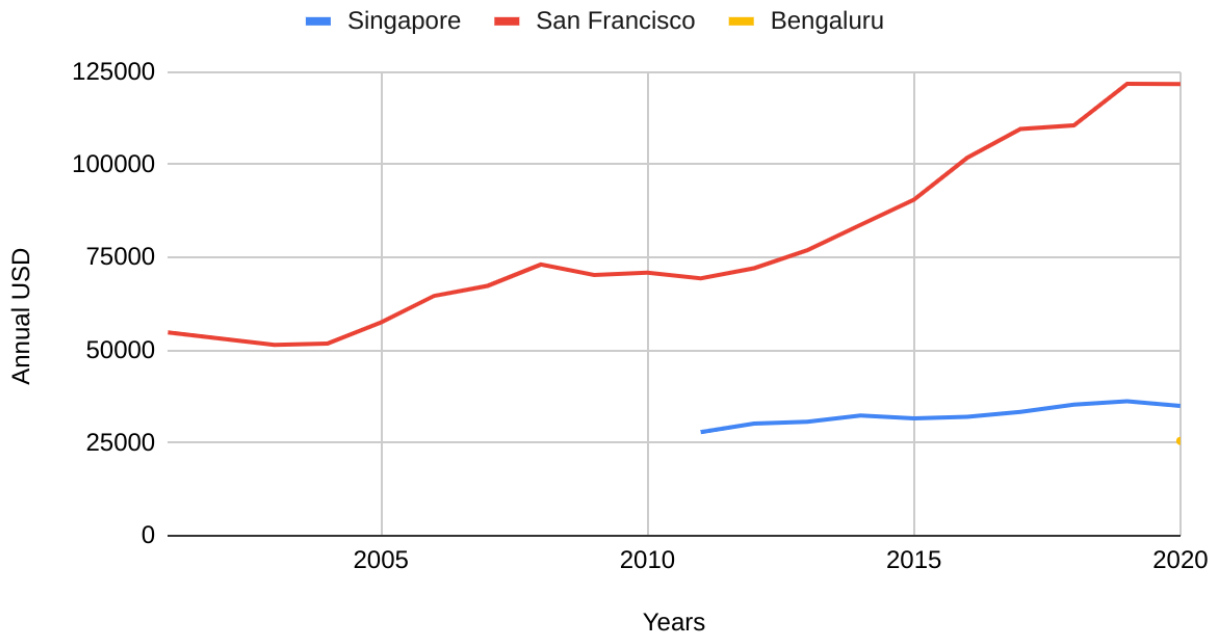
Range : Bangalore(38% of India's)

7. **Median household income :** The median income is the income amount that divides a population into two equal groups, half having an income above that amount, and half having an income below that amount.

Range : San Francisco(51402-121722), Singapore(27919-34987), Bangalore(25541)

Median Household Income

Comparison :: By the year 2022, the Median household income for San Francisco was the most to with as high as 121722 USD per annum , followed by Singapore and lastly Bangalore with 25541, while the data observed over the past 2 decades for Singapore and bangalore were gradually increasing, whereas in San Francisco there was a noteworthy increase to nearly double the income as compared to yr 2001.
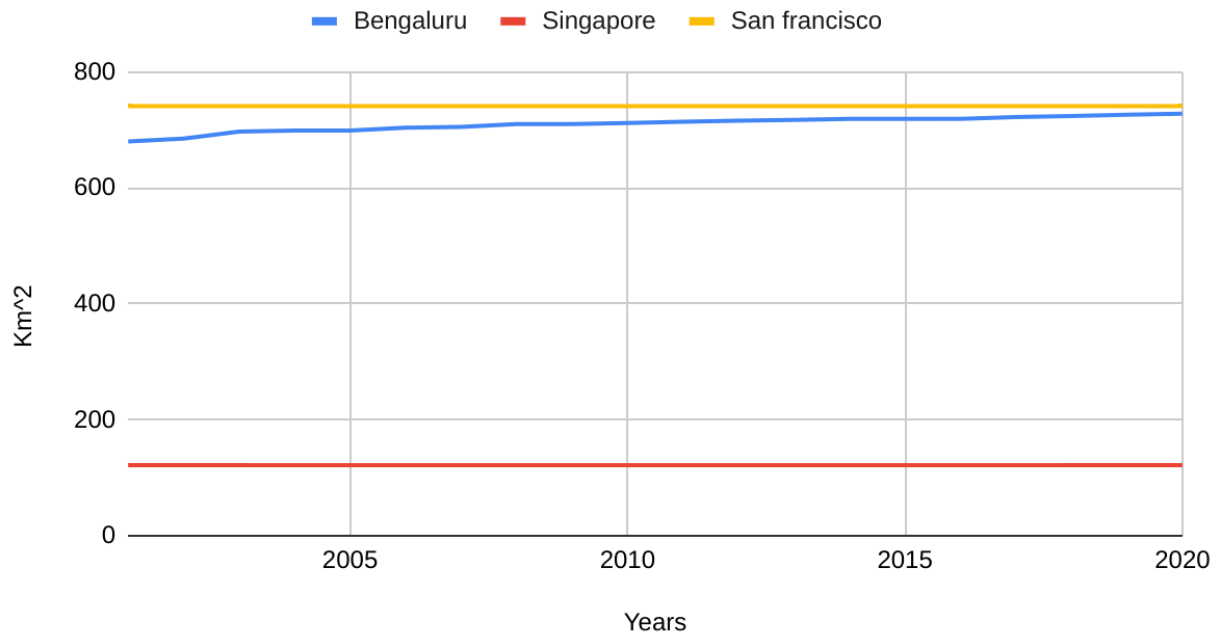
8. **Upward mobility rate:** Upward mobility measures the frequency a person changes their socioeconomic status.

   Range : Bangalore(63%)

9. **Total land area :** Land area is the area in square kilometers of the land-based portions of standard geographic areas.

   Range : Bangalore(741 km²), Singapore(680–728.6 km²), San Francisco(121.62 km²)

Total Land Area

Bengaluru — **Singapore** — **San francisco**

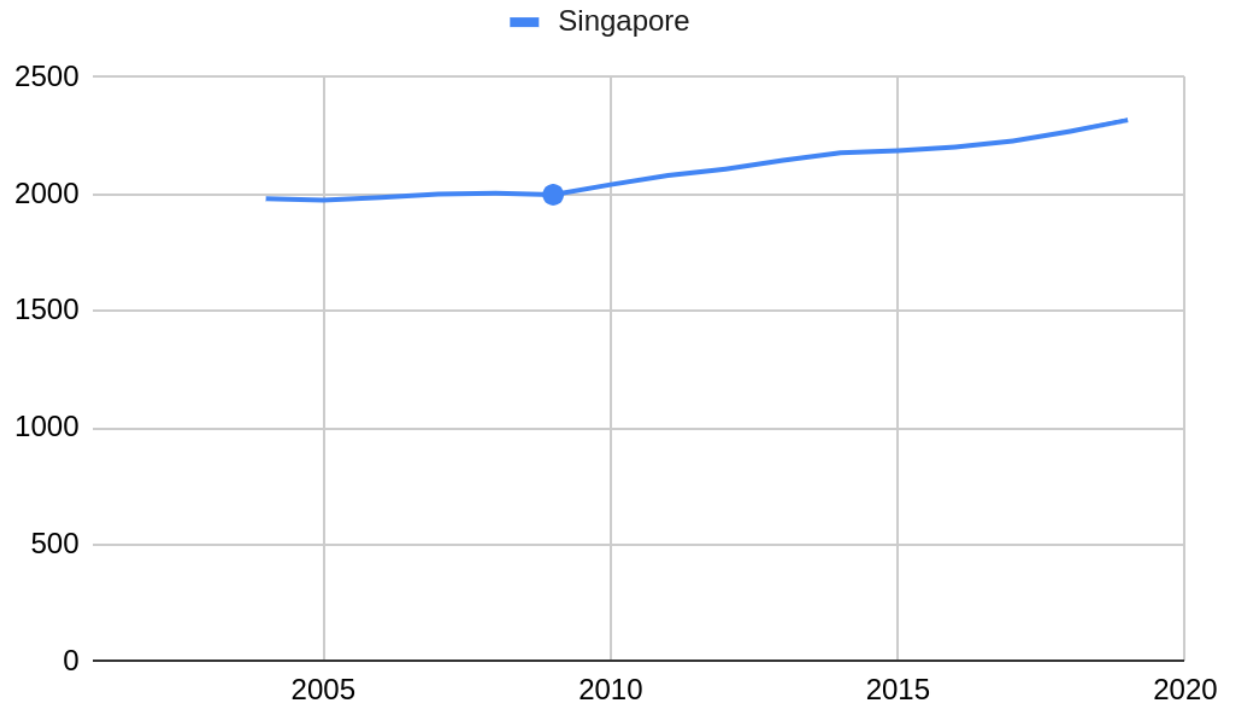(Y-axis: Km^2, values 0, 200, 400, 600, 800; X-axis: Years 2005, 2010, 2015, 2020)

Comparison :: By the year 2020, the Total Land area for San Francisco was the highest , followed by Bangalore and lastly Singapore, while the data observed over the past 2 decades for San Francisco and Bangalore were constant, whereas in Singapore there was a gradual increase.

10. **Urbanization :** Urbanization refers to the concentration of human populations into discrete areas. This concentration leads to the transformation of land for residential, commercial, industrial and transportation purposes.

Range : Bangalore(6-2.8%)

11. **Access to bank accounts (no. / 1000 adults)** : The indicator being self explanatory. For Singapore we can see fluctuating values till the year 2009 from then on there is a general upwards trend.
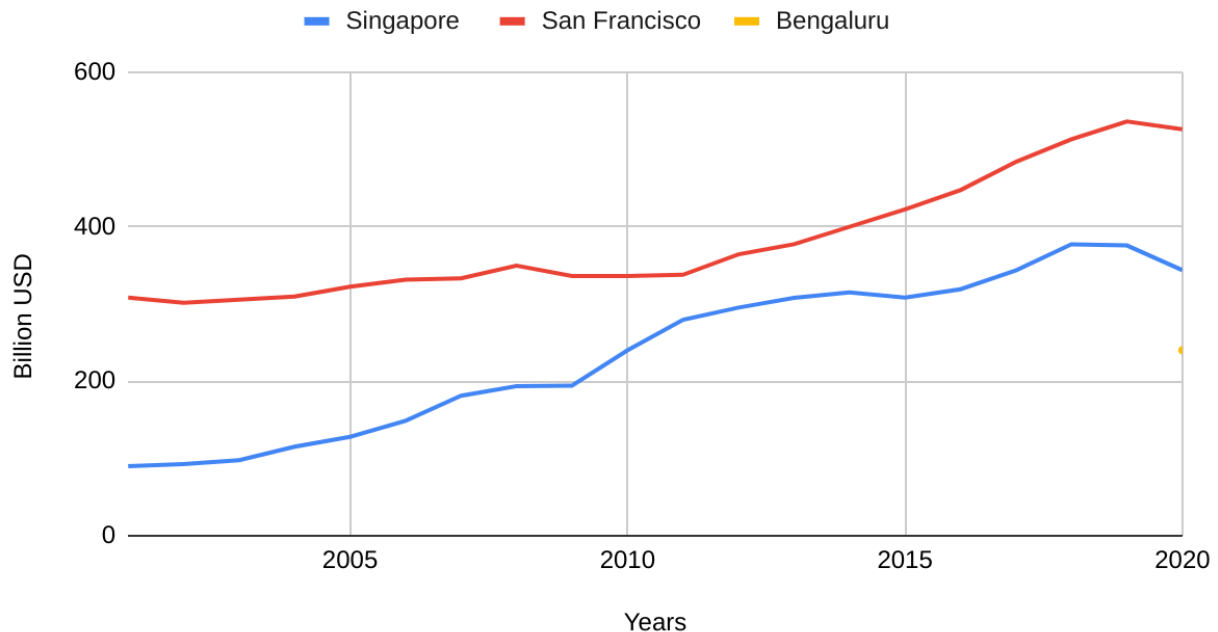
Range : Singapore(1980-2316)

12. **GDP :** GDP stands for "Gross Domestic Product" and represents the total monetary value of all final goods and services produced (and sold on the market) within a country during a period of time (typically 1 year).

Range : San Francisco(308.08-525.83 Billion USD), Singapore(89.79-343,5) , Bangalore(240)
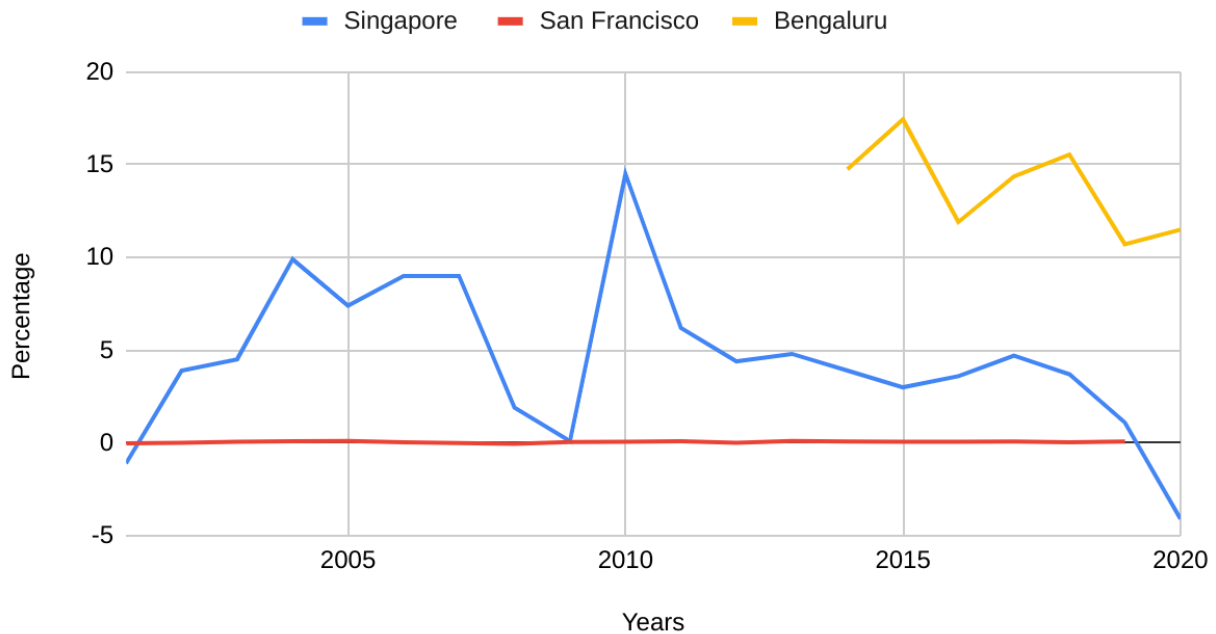
GDP

Comparison :: By the year 2020, the GDP for San Francisco was the highest with 525.83 billion USD, followed by Singapore and lastly Bangalore, while the data observed over the past 2 decades for Singapore and San Francisco have nearly doubled and tripled, with Singapore making a remarkable increase from 89.79 to 343.5 billion USD.

13. **Growth rate in GDP** : The annual average rate of change of the gross domestic product (GDP) at market prices based on constant local currency, for a given national economy, during a specified period of time.

Range : San Francisco(-0.02-0.1-{-0.048}-{0.081}), Singapore(-1.1-{14.5}-{-4.1}), Bangalore(14.75-11.5)
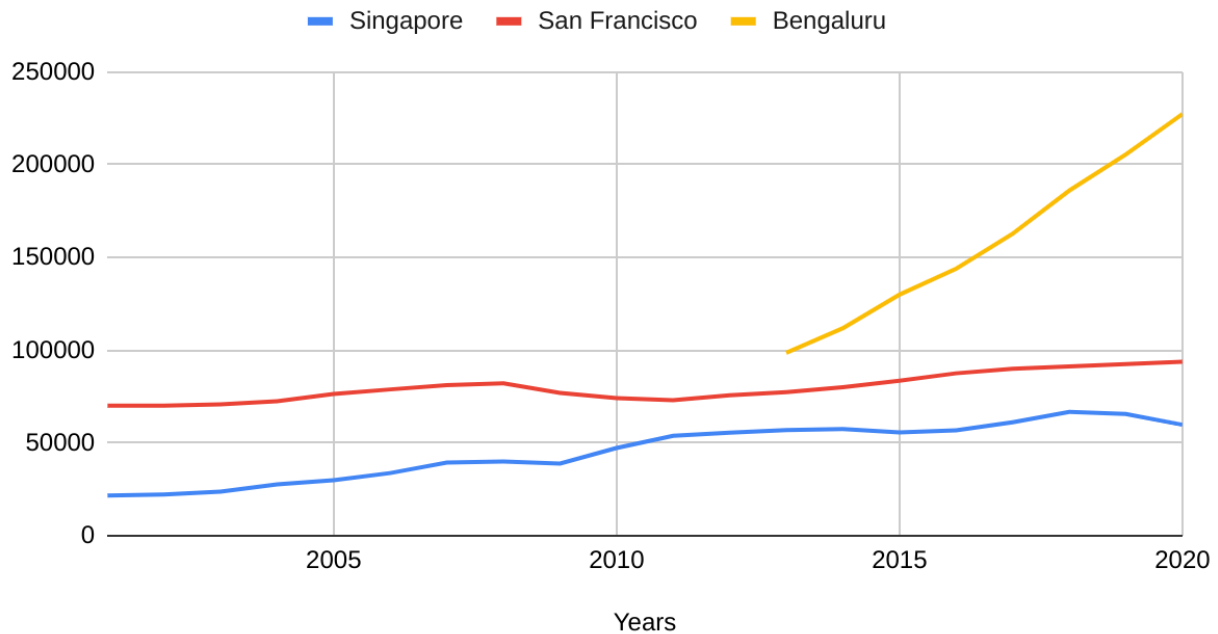
Growth Rate in GDP

Comparison :: By the year 2020, the growth rate in GDP for Bangalore is the highest while for Singapore it decreased to -4.1 and that of San Francisco is also a small value, while the data observed over the past 2 decades for Singapore had downward spikes twice, once in 2008 and 2020 and upward spike in 2010 , while in San Francisco it fluctuated and in Bangalore it is growing.

14. **GDP per capita :** shows a country's GDP divided by its total population.

Range : San Francisco(70141 - 93697), Singapore(22160-59798)USD, Bangalore(98,568-249,947)
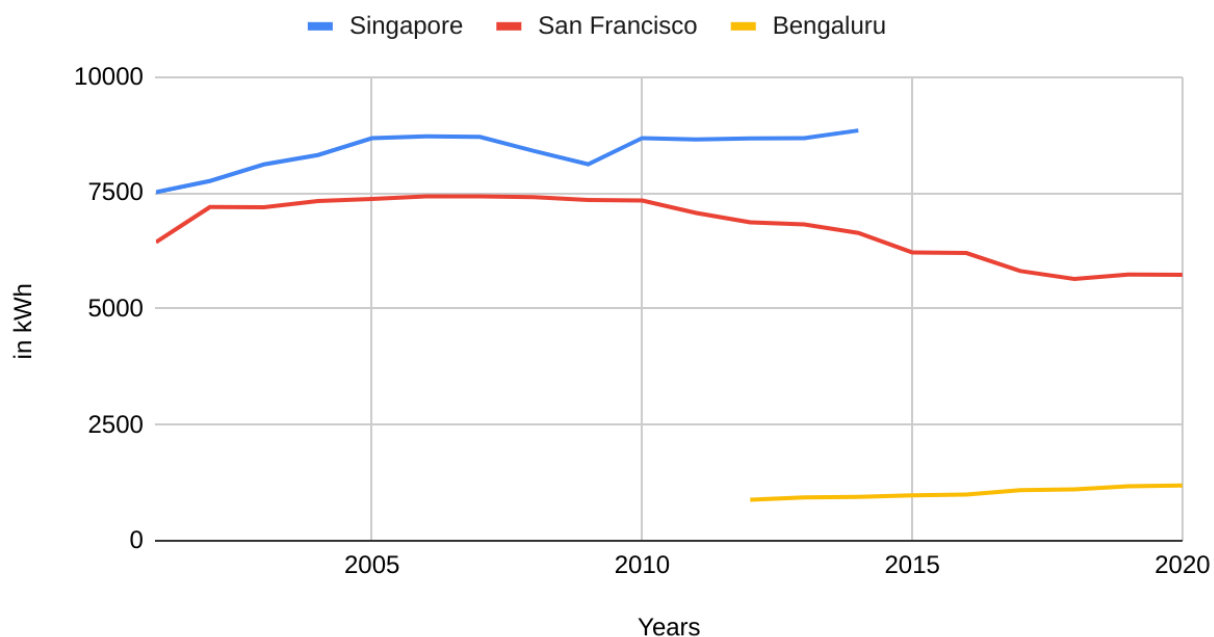
GDP per capita

Comparison :: By the year 2020, the GDP per capita for Bangalore is the highest followed by San Francisco and lastly Singapore, while the data observed over the past 2 decades for Singapore has increased 3x , for San Francisco by 20k and for Bangalore by 2.5x.

15. **Energy consumption per capita :** when the total energy consumption is divided by the total population.

Range : San Francisco(1345.607597 - 1563.597203), Bangalore(883-1190.7 kwh), Singapore(7756 - 8845 kWh)
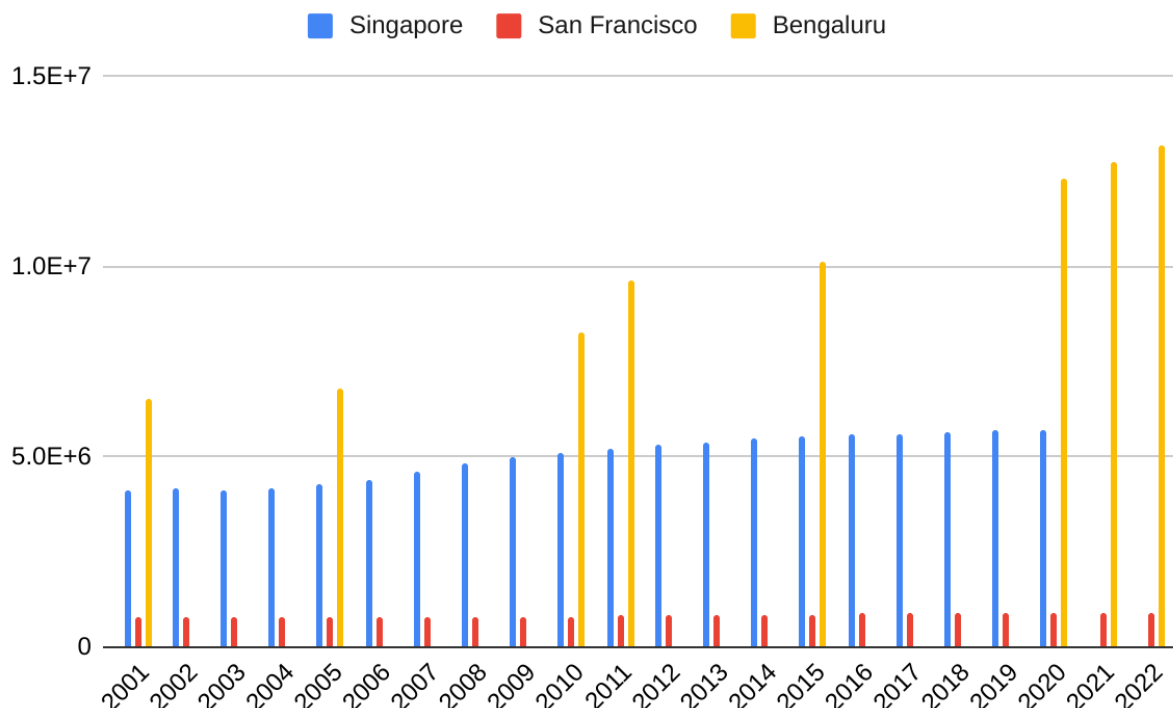
Energy Consumption per Capita

Comparison :: By the year 2014, the Energy consumption per capita for Singapore is the highest followed by San Francisco and lastly Bangalore , while the data observed over the past 2 decades for Singapore has increased by 1 kWh per capita , for San Francisco it decreased and for Bangalore It increased slowly.

● Population Indicators :

1. **Total Population :** The population figure, or total population or simply population, of a given area is the total number of people in that area at a given time.

   Range : San Francisco(7.81-8.76), Singapore(41.75950-56.85807), Bangalore(65.37-131.93 Lakhs)

Comparison :: By the year 2022, the Total population of Bangalore is the most of 131.93 lc , followed by Singapore as 56.85 lc and lastly San Francisco with only 8.76 lc , while the data observed over the past 2 decades for Singapore and San Francisco was slowly increasing, whereas in Bangalore there was noteworthy increase of population from 65.37 lc to 131.93 which was nearly doubled. And the population of San Francisco was a small number compared to other cities.

2. **Actual Population :** Refers to all persons who, on the census date, were in the reference territory, whether they resided in the same municipality in which they were counted (present residents) or were passing through (transient).

   Range : San Francisco(7.76733-8.73965), Bangalore(65.37124-96.21551)

3. **Male :** count of the population that is male.

   Range : Bangalore(34.26599-50.22661)

4. **Female :** percentage of the population that is female.
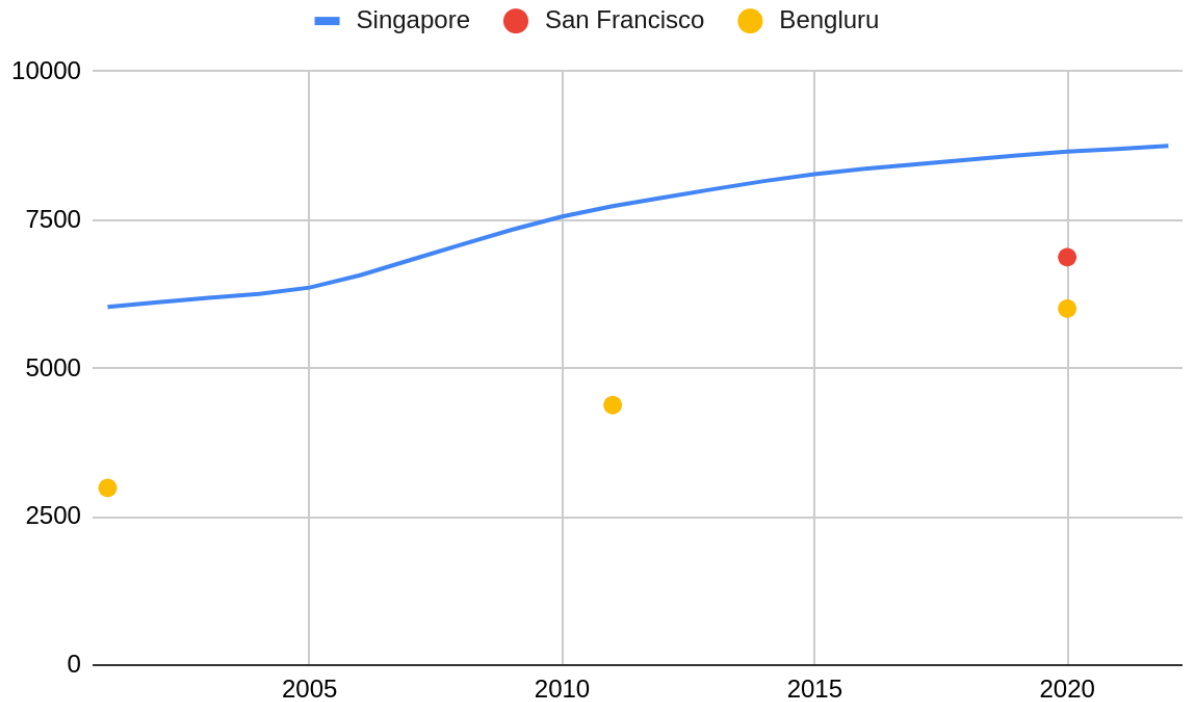
   Range : Bangalore(3,110,525-4,598,890)

5. **Population density :** is a measurement of population per unit land area.

   Range : San Francisco(6873), Singapore(6034-8749), Bangalore(6007)
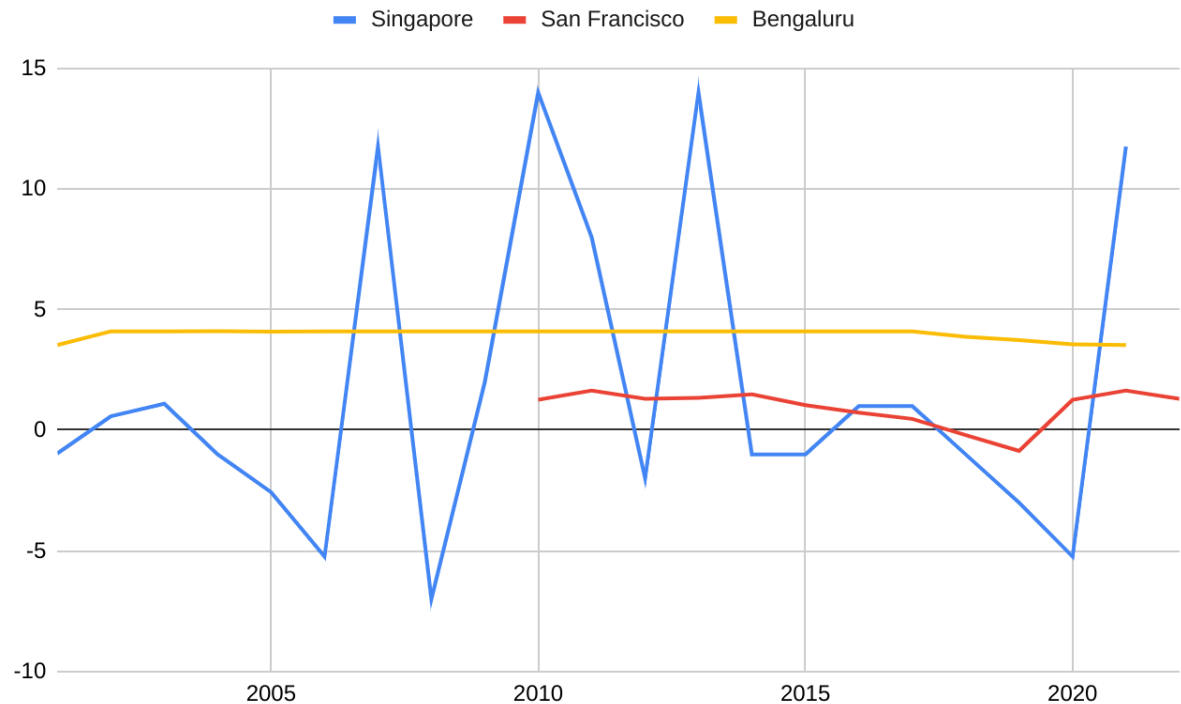
   Comparison :: By the year 2020, the Population density of Singapore is the most with as high as 8653 , followed by Bangalore as San Francisco and lastly Bangalore , while the data

observed over the past 2 decades for Singapore has increased from 6034-8749. The most increase in the figures can be seen for that of Bengaluru.

6. **Population Growth :** Population growth is the increase in the number of people in a population or dispersed group.

Range : San Francisco(1.26-{-0.86}), Singapore({-0.96}-11.76–5.24-11.76), Bangalore(3.53-4.1)
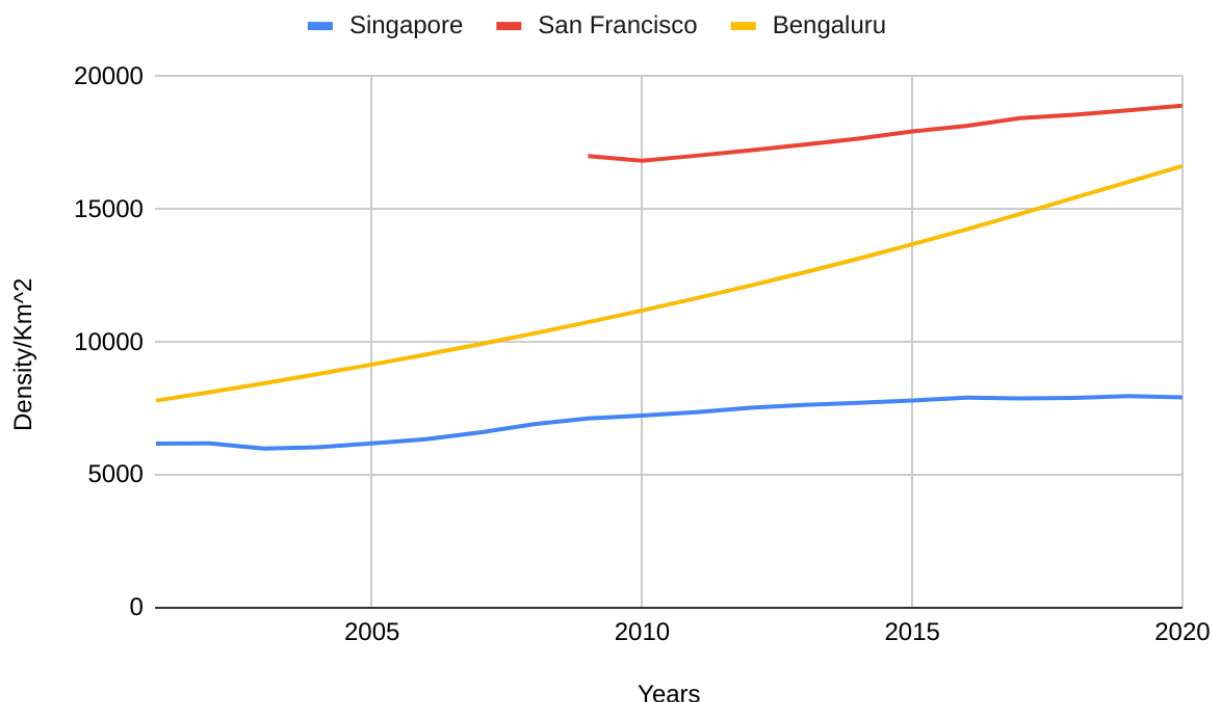
Comparison :: By the year 2021, the Population growth of Singapore is the most with as high as 11.76 , followed by Bangalore as 3.53 and lastly San Francisco with only 1.64 , while the data observed over the past 2 decades for San Francisco were fluctuating slowly, whereas in Bangalore it was decreasing gradually. Whereas in Singapore we observe a decline in population growth to as low as -5.24 and then spiking to 11.76 .

7. **Area Sq. Km :**

   Range : San Francisco(121.72), Singapore(728.6), Bangalore(741) sq.km.

8. **Density/km2 :**

   Range : San Francisco(17009-18907), Singapore (6176-7919), Bangalore(7798-16635 Density/km2)

Comparison :: By the year 2020, the Density/km^2 of San Francisco is the most with , followed by Bangalore and lastly Singapore , while the data observed over the past 2 decades for Singapore and San francisco was increasing gradually, whereas in Bangalore it was increased more than twice the value .

9. **Sex Ratio (Per 1000) :** ratio of females to males in a population

Range : Bangalore(908-916)

10. **Child Sex Ratio (0-6 Age) :** the number of females per thousand males in the age group 0–6 years in a human population.

Range :Bangalore(943-944)

11. **Average Literacy:** The percentage of population aged 15 years and over who can both read and write with understanding a short simple statement on his/her everyday life.

Range : San Francisco(85.7-88.5), Singapore(53070-40154){Enrollment in high school }, Bangalore(82.96-87.67)

12. **Male Literacy :** % of males ages 15 and above

Range : Bangalore(87.92-91.01)

13. **Female Literacy:**

Range : Bangalore(77.48-84.01)

14. **Total Child Population (0-6 Age) :** Total population of persons under age 18

    Range : Bangalore(772,540-1,052,837)

15. **Male Population (0-6 Age):**

    Range : Bangalore(397,648-541,656)

16. **Female Population (0-6 Age):**

    Range : Bangalore(374,892-511,181)

17. **Literates:** having the skills to be able to read, write and speak to understand and create meaning.

    Range : Singapore(92.5-97.5), Bangalore(4,782,565-7,512,276)

18. **Male Literates:**

    Range : Bangalore(2,663,055-4,078,041)

19. **Female Literates:**

    Range : Bangalore(2,119,510-3,434,235)

20. **Child Proportion (0-6 Age):** the number of females per thousand males in the age group 0–6 years in a human population.

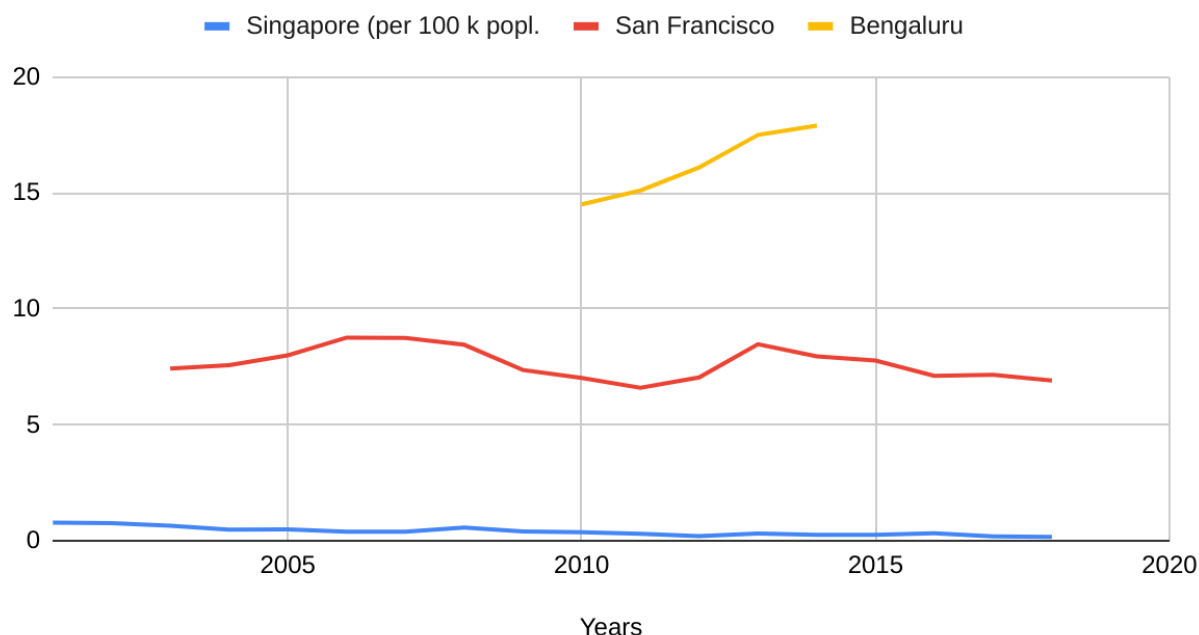   Range : Bangalore(11.82%-10.94%)

21. **Boys Proportion (0-6 Age)**

    Range : Bangalore(11.60%-10.78%)

- ## Public service indicator :
1. **Crime rates :** The crime rate is the ratio between the number of felonies and misdemeanors recorded by the police and gendarmerie and the population in question. per 100k population

    Range : San Francisco(7.42-6.91), Singapore(0.76-0.16), Bangalore(14.5-17.9)

Crime Rate

Comparison :: By the year 2014, the Crime rates of Bangalore is the most with as high as 17.9 , followed by San Francisco as 7.59 and lastly Singapore with only 0.25 , while the data observed over the past 2 decades for Singapore and San Francisco were fluctuating slowly, whereas in Bangalore it was increasing. And the Crime rates of Singapore was a small number compared to other cities.

2. **School quality** : based on the learning it facilitates independent of factors beyond the school's control.

   Range : Bangalore(87.67)

3. **Road quality:** the comparison between current status of roads in terms of road capacity, traffic volume, geometric design, etc. and standard of roads prescribed for well-functioning of roads.the average speed on Congestion Management Program Roads for AM peak hours

   Range : San Francisco(19.3-15.9), Bangalore(40 pot-holes in 500m)
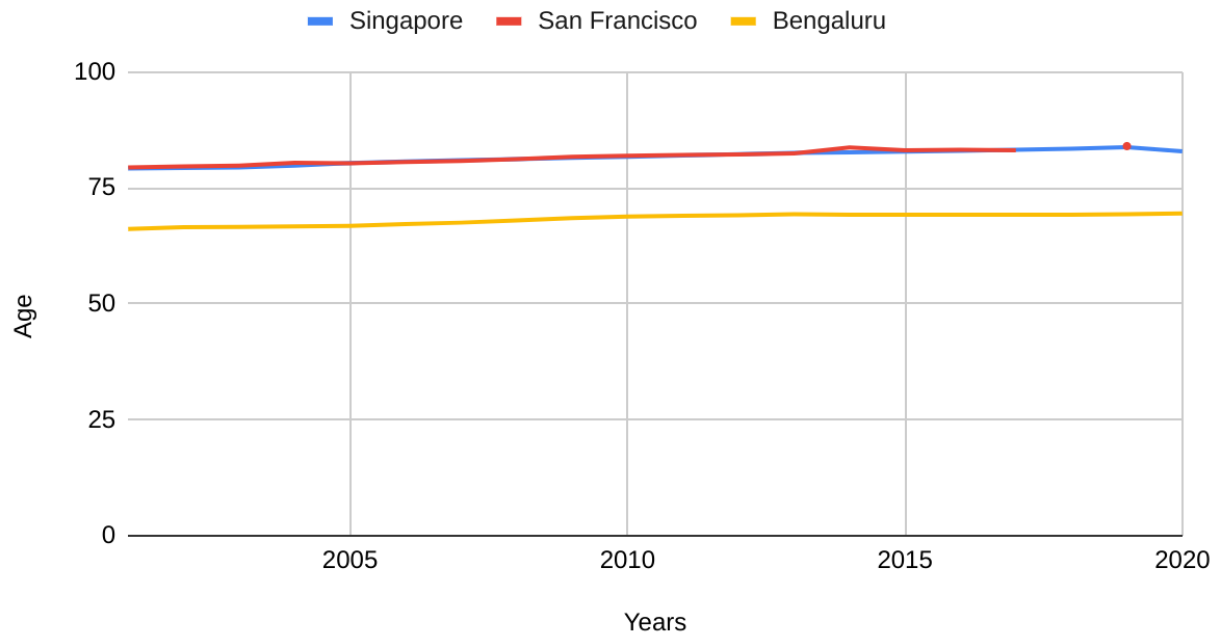
4. **Population % (< 20yrs old):**

   Range : Bangalore(132.7 million)

5. **Life expectancy :** the average period that a person may expect to live.

   Range : San Francisco(78.1-83), Singapore(79.19-84.13), Bangalore(66.1-69.5)
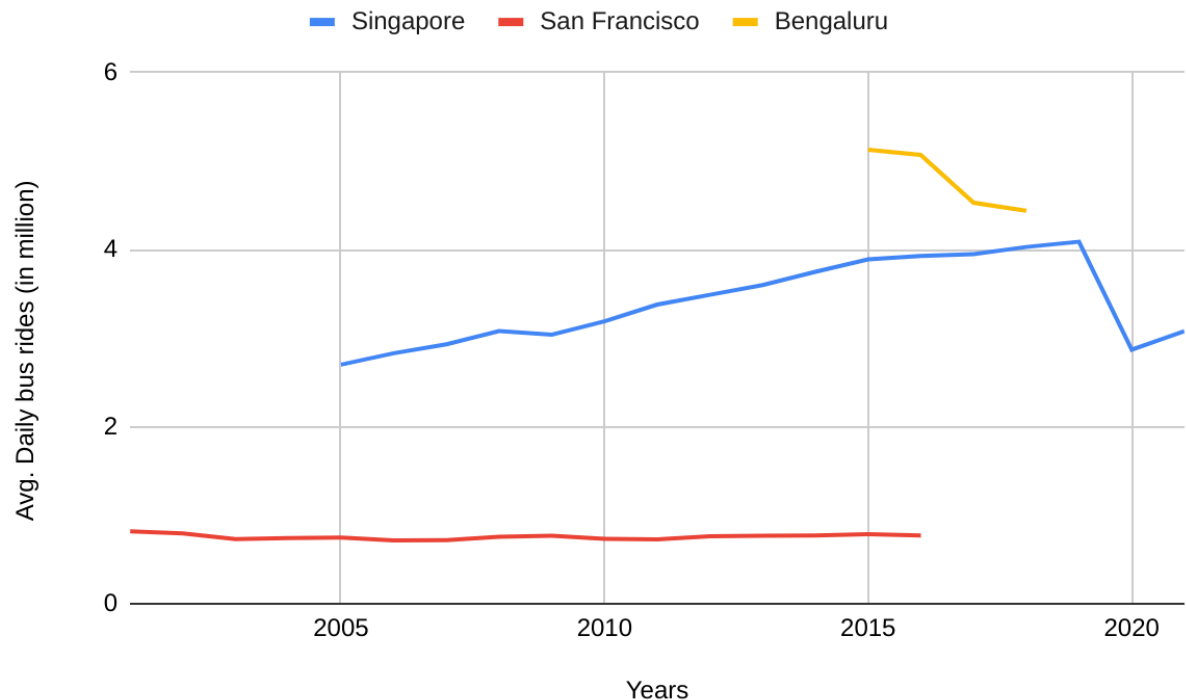
Life Expectancy at Birth

■ Singapore   ■ San Francisco   ■ Bengaluru

Comparison :: By the year 2019, the Life Expectancy of San Francisco and Singapore are close as 84 and 83.76 , while Bangalore with 69.3 , while the data observed over the past 2 decades for each city increased gradually

6. **Transportation :**

Range : San Francisco(0.819-0.772 million), Singapore(2.7-3.08 mil){average daily rides on public transport bus}, Bangalore(5.13-4.44)

Comparison :: By the year 2016, the Transportation of Bangalore is the most with as high as 5.07 million avg daily bus ride , followed by Singapore and lastly San Francisco with only 1.64 , while the data observed over the past 2 decades for San Francisco and Singapore first increased then decreased, whereas in Bangalore it was decreasing by nearly half a million.

7. **Rail network system length :** The track length of a rail network is the combined length of all tracks in the network.

   Range : Bangalore(148.17 kilometers)

8. **car ownership (1000/inhabitants):** the state of owning it.

   Range : San Francisco(938-994), Singapore(127-151), Bangalore(17.6)

9. **Daily water consumption(liter/capital):** The amount of water that is taken (or withdrawn) from the source is called the water intake, and the amount that is returned is called the water discharge. The difference between the water intake and the water discharge is the amount consumed.
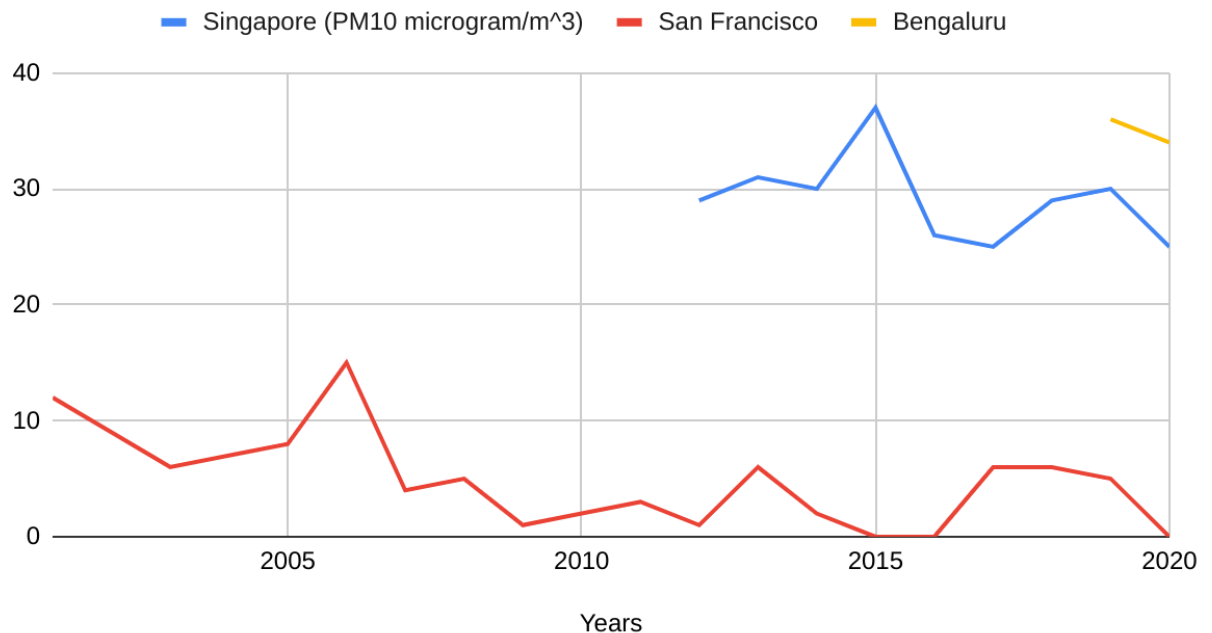
   Range : Bangalore(1618)

● Quality of life indicators :

1. **Air quality :** the degree to which the air in a particular place is pollution-free.PM10 in microgram/ cubic meter

   Range : San Francisco(12-0), Singapore(1-25), Bangalore(36-34)

Air Quality (PM10)

Comparison :: By the year 2020, the Air quality of Bangalore is the most with as high as 34 (PM10 microgram/m^3) , followed by Singapore as 25 and lastly San Francisco nearly 0, while the data observed over the past 2 decades for Singapore was fluctuating slowly, whereas in Bangalore it was increasing. But over the 2 decades San Francisco brought down Air quality from 12 to nearly 0 - PM10 microgram/m^3 .

2. **Pollution level:** Pollutant levels reflect toxin sources in regional as well as local environments and are frequently high in estuaries and adjacent waters.

   Range : San Francisco(25-1),Bangalore(Unhealthy For Sensitive Groups)

3. **Health care:** a way of measuring specified health characteristics in a given population.

   Range : Singapore(**7.54%-{-1.31%}**)

4. **Amenities:** means urban facilities such as parks, playgrounds, green spaces, parking facilities, public wi-fi facilities, public bus transport, bus shelters, taxi and rickshaw stands, libraries, affordable hospitals, cultural centres, recreation centres, stadium, sports complex and any other urban facility that the State Government may, on the recommendation of the Authority, specify to be an urban amenity, but does not include infrastructure development work.

5. **Number of hospitals :** a measure of the resources available for delivering services to inpatients in hospitals in terms of number of beds that are maintained, staffed and immediately available for use.

   Range : Singapore(19) , Bangalore(267)

- Energy mix :
1. **Coal :**

   Range : Bangalore(195,810 MW)

2. **Gas :**

   Range : Bangalore(24,937 MW)

3. **Oil :**

   Range : Bangalore(638 MW)

4. **Others** :

   Range : Bangalore(80,633 MW)

- Energy use per sector :
1. **Transport**
2. **Housing :**

   Range : **Singapore(2.24%-{1.07%})**

3. **Manufacturing**
4. **Energy**

Milestones

I. Bangalore

   x Darpan.xlsx

II. San Francisco

   x Dharmin_2.xlsx

III. Singapore

   x Vaibhav (singapore).xlsx

FINAL COMPARISON OF DATA :

🏠 comparision

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