Exploring Weather Trends

Step 1: Find my city if in the list of cities and countries from the `city_list` table by SQL query.

```
>>>SELECT *

>>>FROM city_list

>>> WHERE city IN ('Dublin') AND country IN ('Ireland')
```

Get one result from query

Step 2: Extracting data from the `city_data` table and `global_data` table by SQL query, get a table include 3 columns (year, city avg_temp, golab_tem)

```
>>>SELECT c.year, c.avg_temp AS city_dublin_temp, g.avg_temp AS golab_temp

>>>FROM city_data AS c

>>>JOIN global_data AS g

>>>ON c.year=g.year

>>>WHERE c.city='Dublin'
```

Download CSV, and open it with Excel.

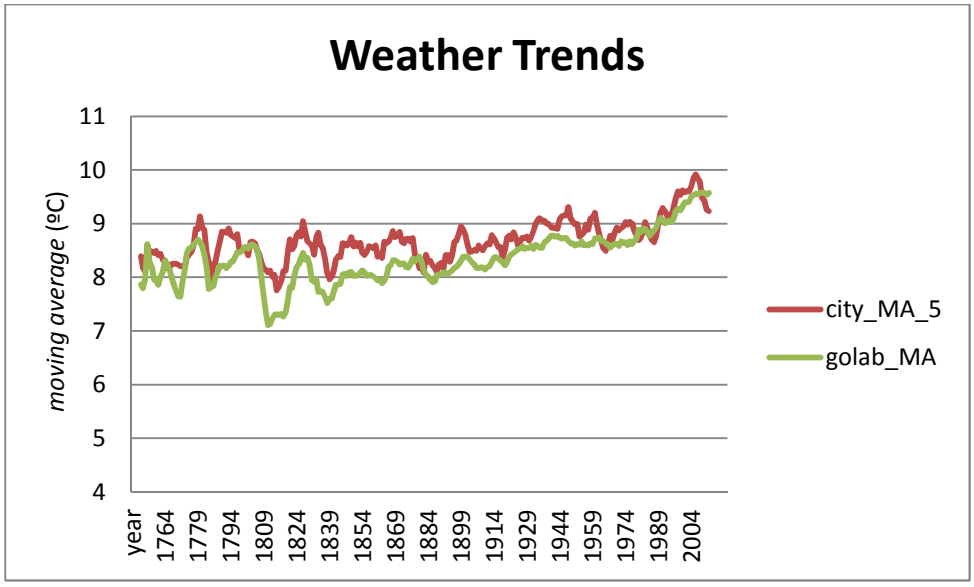
Step 3: My key considerations when deciding how to visualize the trends is don't let the each year fluctuations take away the main attention on the trend in long term. So I choose 5-year moving averages to observe the trends.

Using Excel to calculate 5year-Moving Averages. Using AVERAGE() function to get the average temperature for 5 years:

5 year_Moving Average=AVERAGE(B2:B6)

And continue use this method to deal all data of city_temp and global_temp column data.

Then draw the line chart to show the weather trends:



Step 4: Observations

1. In the most years before 1780, my city weather on average was very close to the global average.

2. In the most years after 1780 , my city weather was a little bit hotter on average compared to the global average.

3. My city weather overall trend looks like getting hotter in the last few hundred years. As well as the global.

4. Both my city and global weather trends to be getting warmer more sharply after 1970.