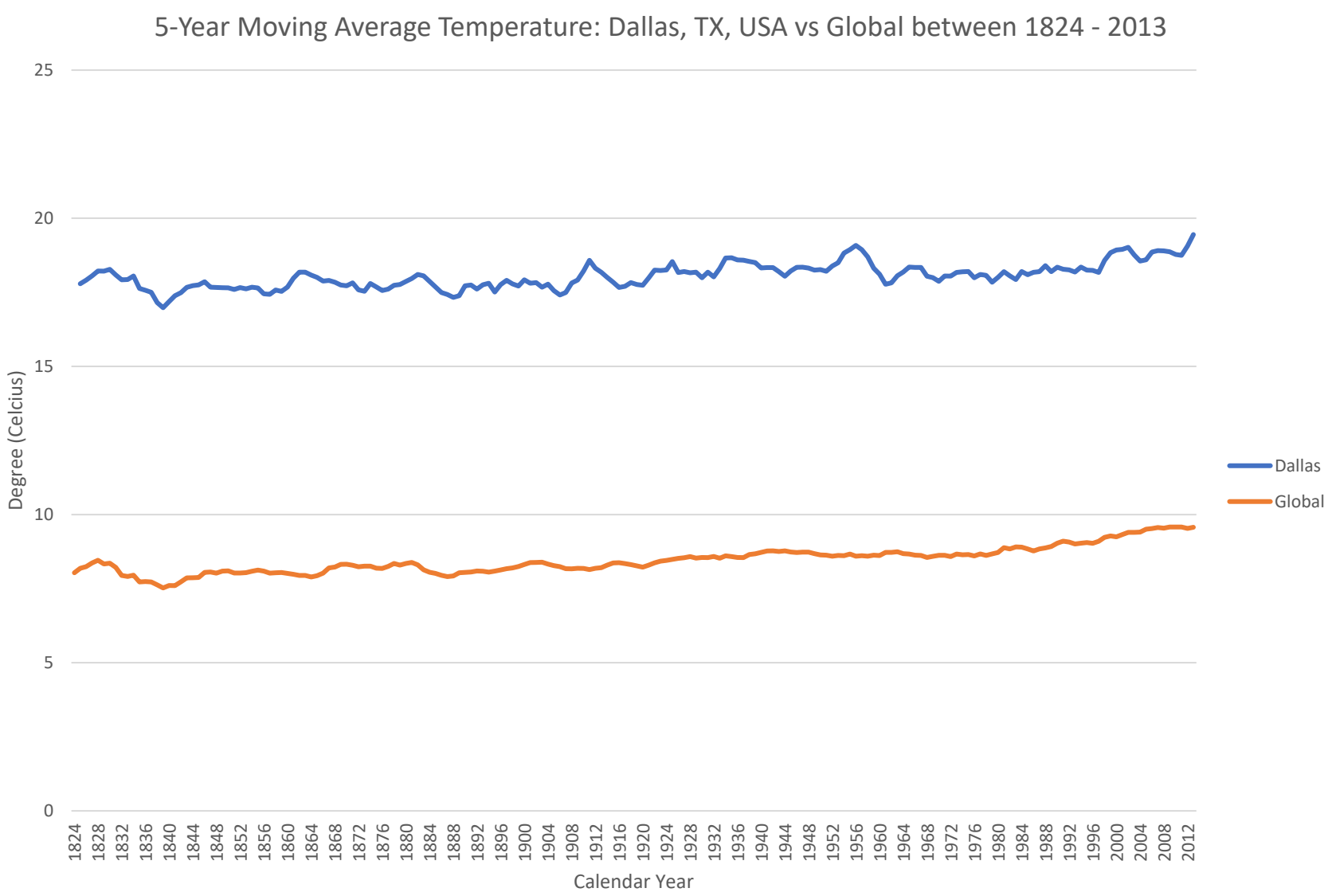

The trend for Dallas is more volatile that the Global data. For example, there are sharper increases and decreases across the time period.

The correlation of coefficient is approximately 0.8, indicating that both trends simultaneously increase in a similar way.

Fitting a regression line to the curve, Dallas, TX experienced an average increase of 0.005 degrees Celsius per year. This is a 0.029% increase relative to the Dallas mean.

Globally, there was an average increase of 0.007 degrees Celsius per year. This is a 0.086% increase relative to the Global mean.

Project outline:

1) Extract .csv files from SQL using the following queries:

*pull city level data for Dallas, TX

```
SELECT city, avg_temp, year
FROM city_data
WHERE city = 'Dallas'
ORDER BY year
```

*data in Dallas, TX ranges from 1820 to 2013, so I pull the corresponding global data

```
SELECT *
FROM global_data
WHERE year BETWEEN '1820' AND '2013'
ORDER BY year
```

Open in Excel and calculate the 5-year moving average with the following code:

```
=AVERAGE(B2:B6)
```

Where ‘B’ corresponds to the column containing temperatures for each respective location (Dallas and Global) and ‘B2:B6’ are the 5 year-temperatures to be averaged.

I copy this code downwards for each respective year-temp row, holding column B constant.

I combine the moving 5-year temperature averages of Texas and Global to display on the same line graph plot in Excel.