Unemployment by Ethnicity In the UK, Between 2004 and 2022

By Saqib Iqbal
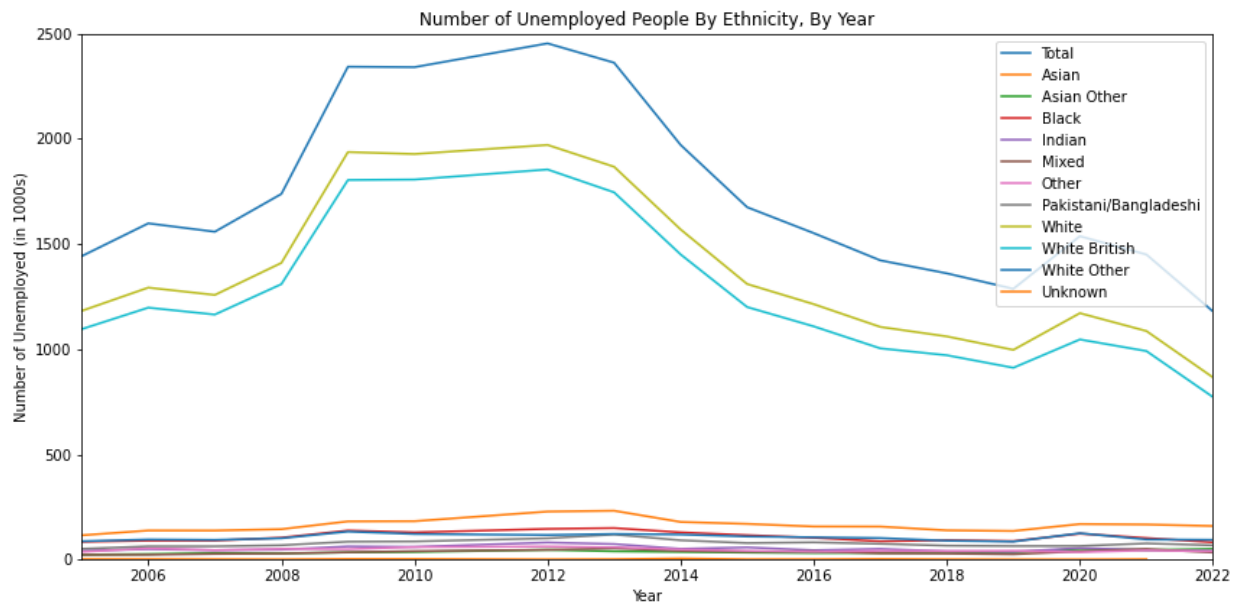
Unemployment - GOV.UK Ethnicity facts and figures (ethnicity-facts-figures.service.gov.uk)

*I rearranged the data in the CSV form so that data for each ethnicity was in a separate column, making it easier for pandas to read it.

*I removed 2011 as data was not collected during this year, I did not personally omit this data.

* Data for "Unknown" in 2022 was withheld as the sample size was too small to be reliable.

1. Line-plot for the number of unemployed people by ethnicity by year.
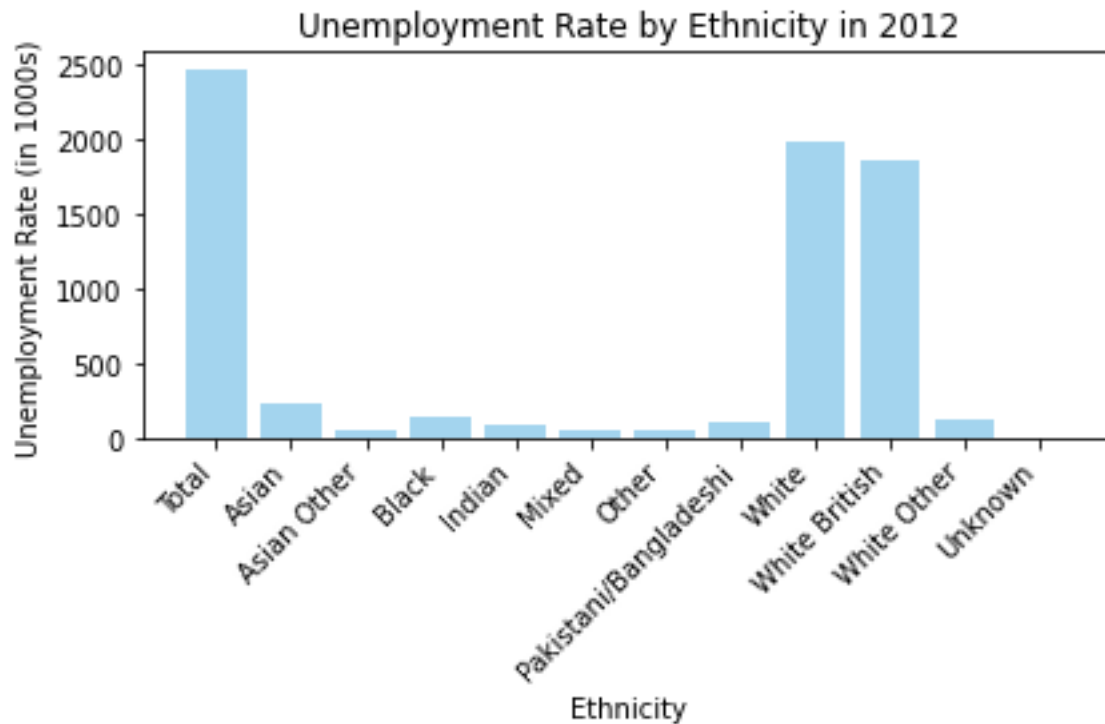

The line graph shows the unemployment rate for ethnicities in the UK from 2004 to 2022. The line-plot suggests a general downward trend in unemployment rates across most ethnicities over this period. However, the rate of decrease of unemployment seems to vary across ethnic groups.

Observations:

- **Total unemployment rate:** The total unemployment rate has decreased from around 2.3 million at its peak in 2012 to around 1.3 million in 2022.
- **White:** The "White" group consistently has one of the highest unemployment rates throughout the period, although it has also decreased significantly over time. It is important to note that this data does not show that the white ethnic group is also the largest in the Uk, therefore may be misleading.

- **2012-2013:** The graph shows a sharp increase in 2012 –2013 across all ethnic groups, this could be due to mass layoffs, however more research would have to be done.

2. **Bar Chart for unemployment by ethnicity in 2012**

Why a bar chart?
My primary goal was to compare the unemployment rates of different ethnicities in 2012, as it was the year with the highest unemployment.

A bar chart excels at displaying this information conveniently. The bars for each ethnicity are positioned side-by-side, which allows for easy visual comparison of their heights.
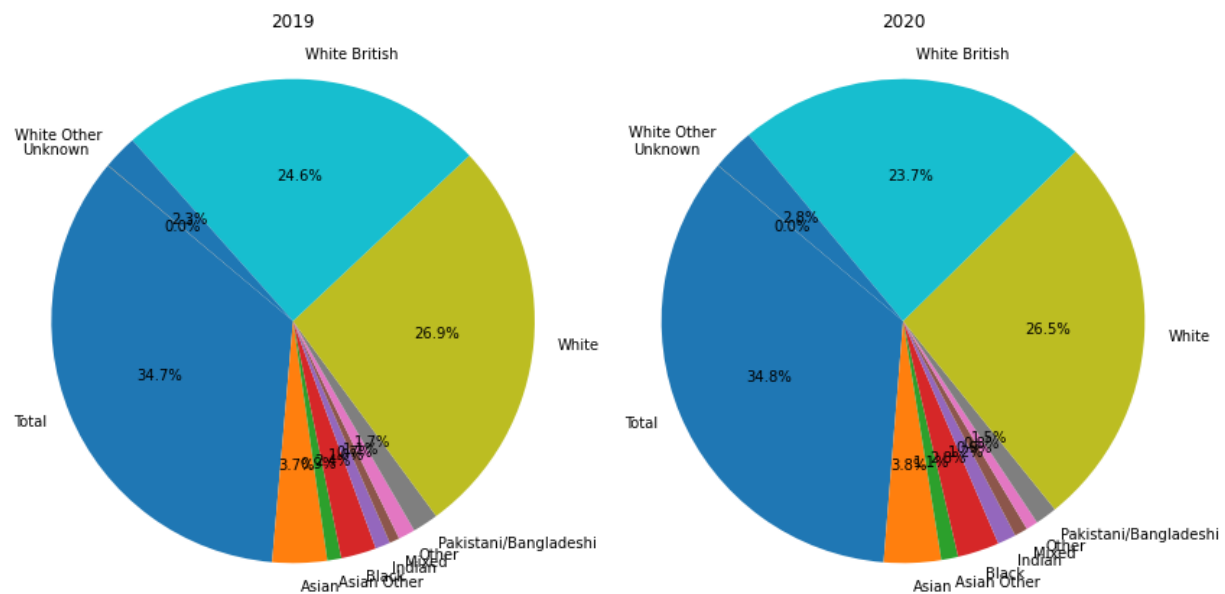
Additionally, Bar charts are easy to interpret, even for people unfamiliar with statistics. The visual representation of bars with clear labels makes it straightforward to understand the relationship between ethnicities and their corresponding unemployment rates.

Observations:
White: Similarly to the line-plot, this shows that the white ethnic group has the highest amounts of unemployment, however this may be because this ethnic group has the highest overall population.
Unknown: From this graph we can see that the ethnic group "unknown" has had the least unemployment.

3. Pie Chart for unemployment by ethnicity between 2020 and 2019

Why did I choose a pie chart?
Although the data was a time series, I was still able to create a pie chart by graphing a single year each time.

The categories used are not ordered or continuous, making them nominal data. Pie charts are well-suited for representing the proportions of categorical data.

Due to the part-to-whole ratio of the pie chart, each slice of the pie chart represents the percentage of unemployed individuals belonging to a specific ethnicity, clearly showing how the different categories contribute to total unemployment.

Observations:
No significant rise: My goal with the pie chart was to see how covid directly affected unemployment, however the graph clearly shows that covid did not have a large impact by ethnicity compared to the previous year – Although unemployment did rise.

Other: Although the ethnic group "other" is not very large, the graph shows that it saw the biggest unemployment increase.