

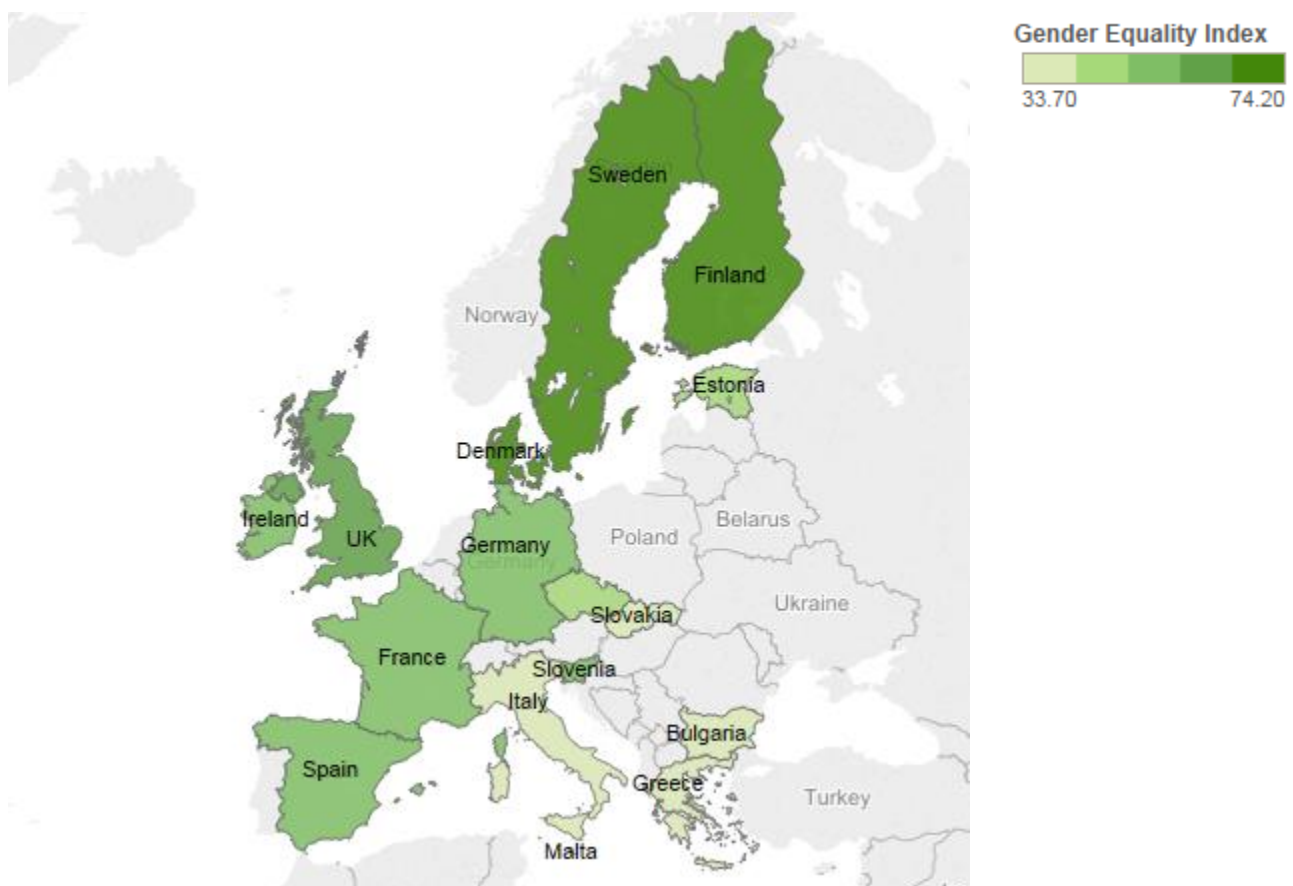
# Exploratory Data Analysis

## Domain:

I wanted to study the variation of Gender Equality Index in various East-European countries and the employment rates of women in these countries. Thus I extracted the dataset containing various indicators with respect to each country such as employment rate, Gender Equality Index, Health, Economic Situation etc.

Question 1. What is the Gender Equality Index for the different countries in East Europe?

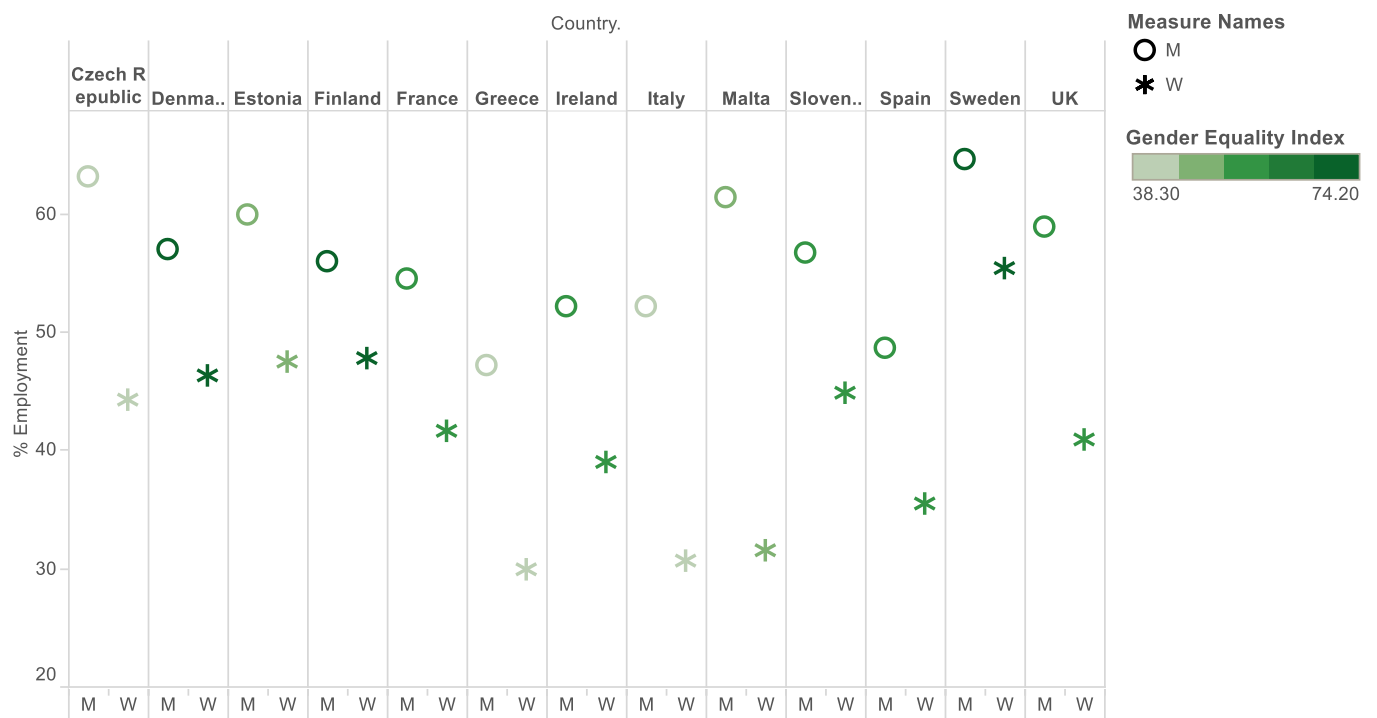
To answer this question I created a visualization containing the countries on a map, with the color of the countries varying with the Gender Equality Index. The darker the color of a country, higher is the Gender Equality Index. This gives a rough idea about the inequality based on gender in various countries.



Question 2. What is the relationship between the Gender Equality Index and the employment rates of men and women?

In this visualization the circle represents Men and star represents Women and the Gender Equality Index is represented by color. The inference is that darker the color of the country (Higher Gender Equality Index) the closer are the values for Men and Women's Employment rates.

Comparison between % Employment of Men and Women

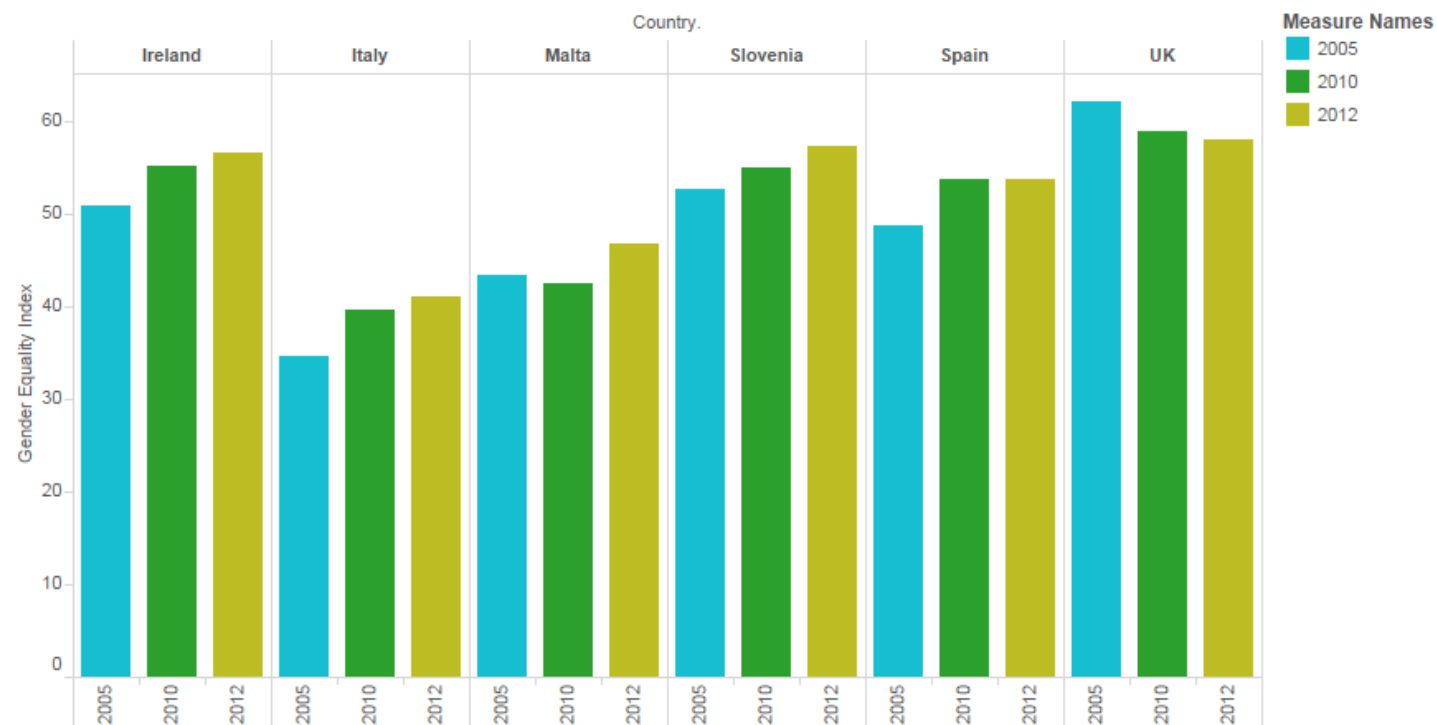


Color shows Gender Equality Index. The darker the color, higher is the Gender Equality Index. Shape shows details about M and W.

Question 3. How has the Gender Equality Index varied over years? Has the inequality reduced with time?

The visualization shows a steady rise in the Gender Equality Index amongst most of the countries but one, that is UK. The Gender Equality Index has dropped consistently in this case over the span of 7 years.

The variation in the value of Gender Equality Index over years in different countries

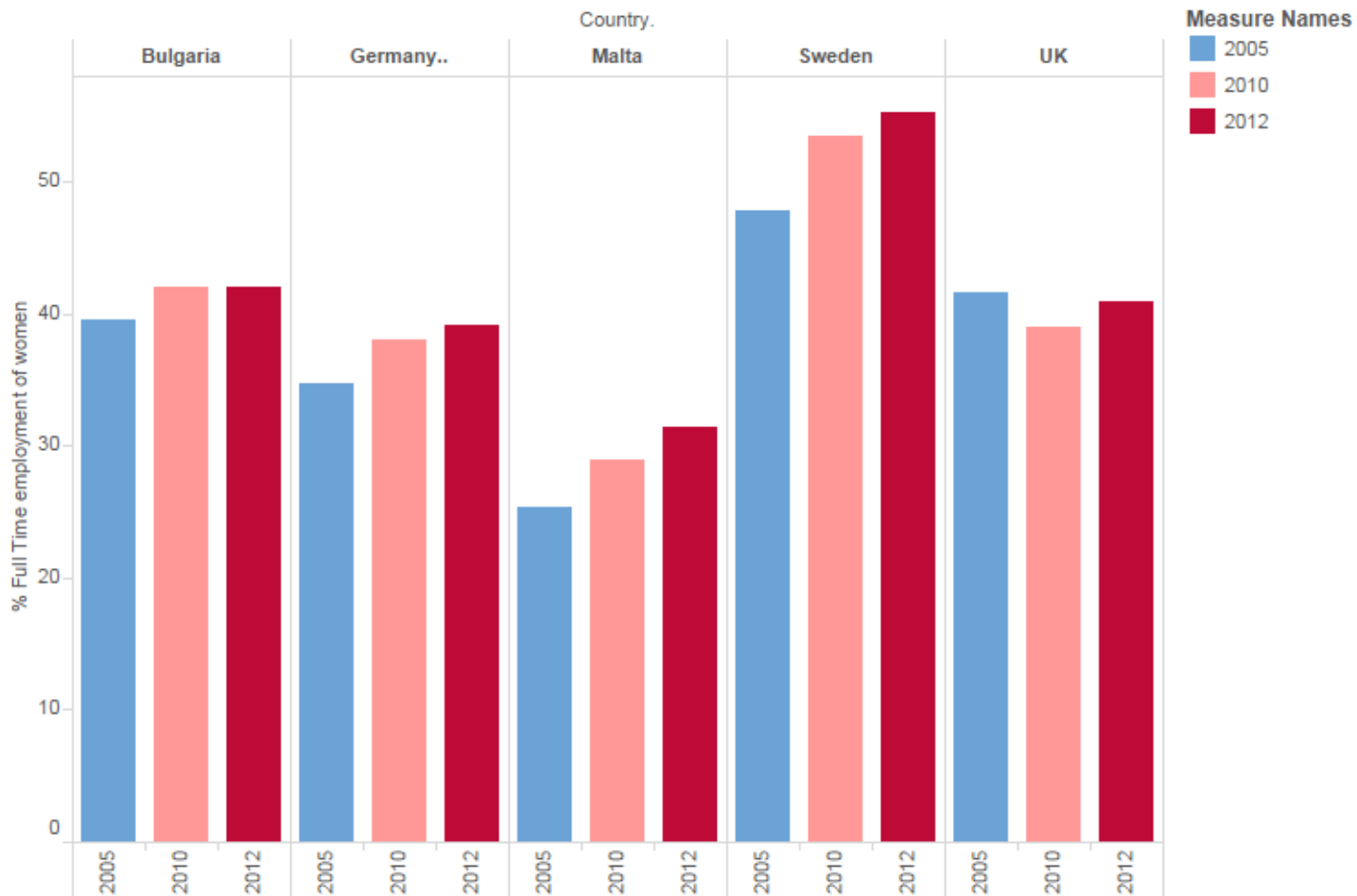


The value of Gender Equality Index has increased in almost all countries except UK.

Question 4. How have the employment rates of women varied over years? Does this show the same trend as the Gender Equality Index?

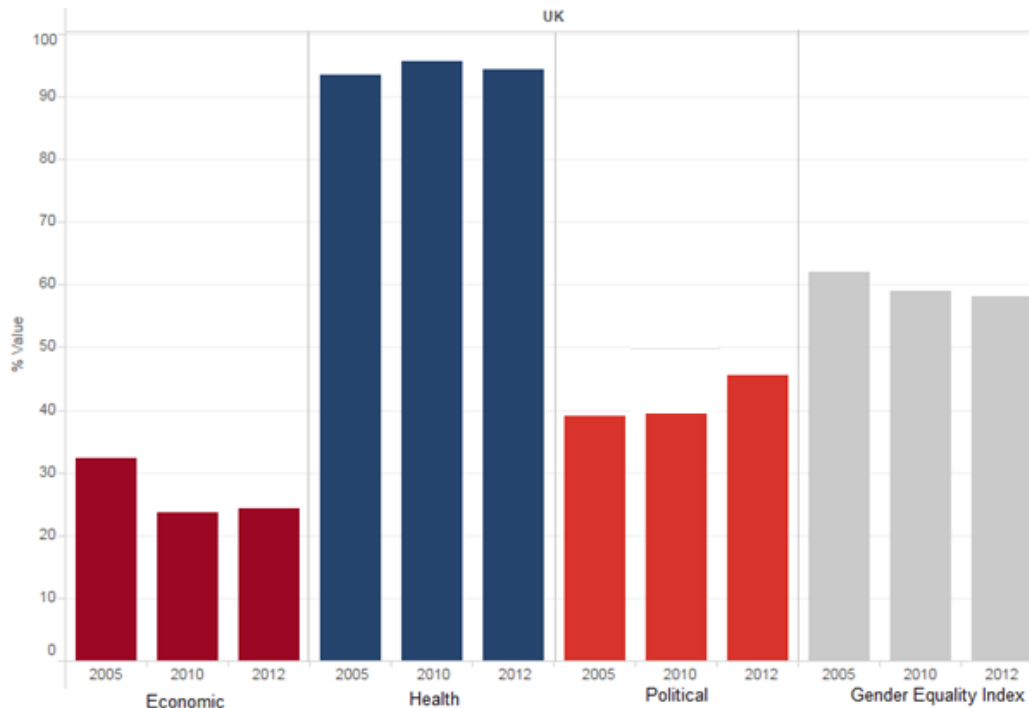
In consistency with the previous visualization, there is a steady rise in the employment rates of women in most of the countries except UK, where it dropped from 2005-2010 and then there is a slight increase.

% of Full time employment of women over the years in different countries



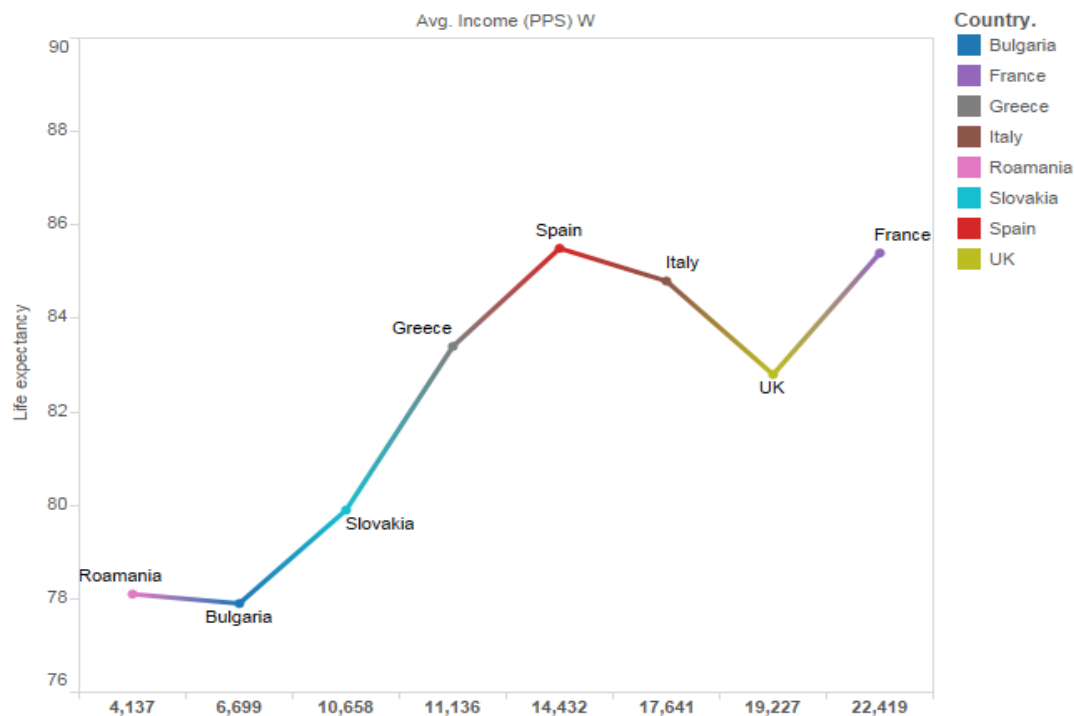
Question 5. Is it just the Gender Equality Index in UK that is falling or are there other factors involved too?

This visualization shows that it's not just the Gender Equality Index and Women employment rates that are falling, the Economic, Political and Health standards show no significant growth as well.



Even the life expectancy of UK is lesser than what it should be for the year 2009 based on the average income. (Inferring that there is a rise in the life expectancy with the increase in average income of countries)

#### Life expectancy vs average incomes of countries

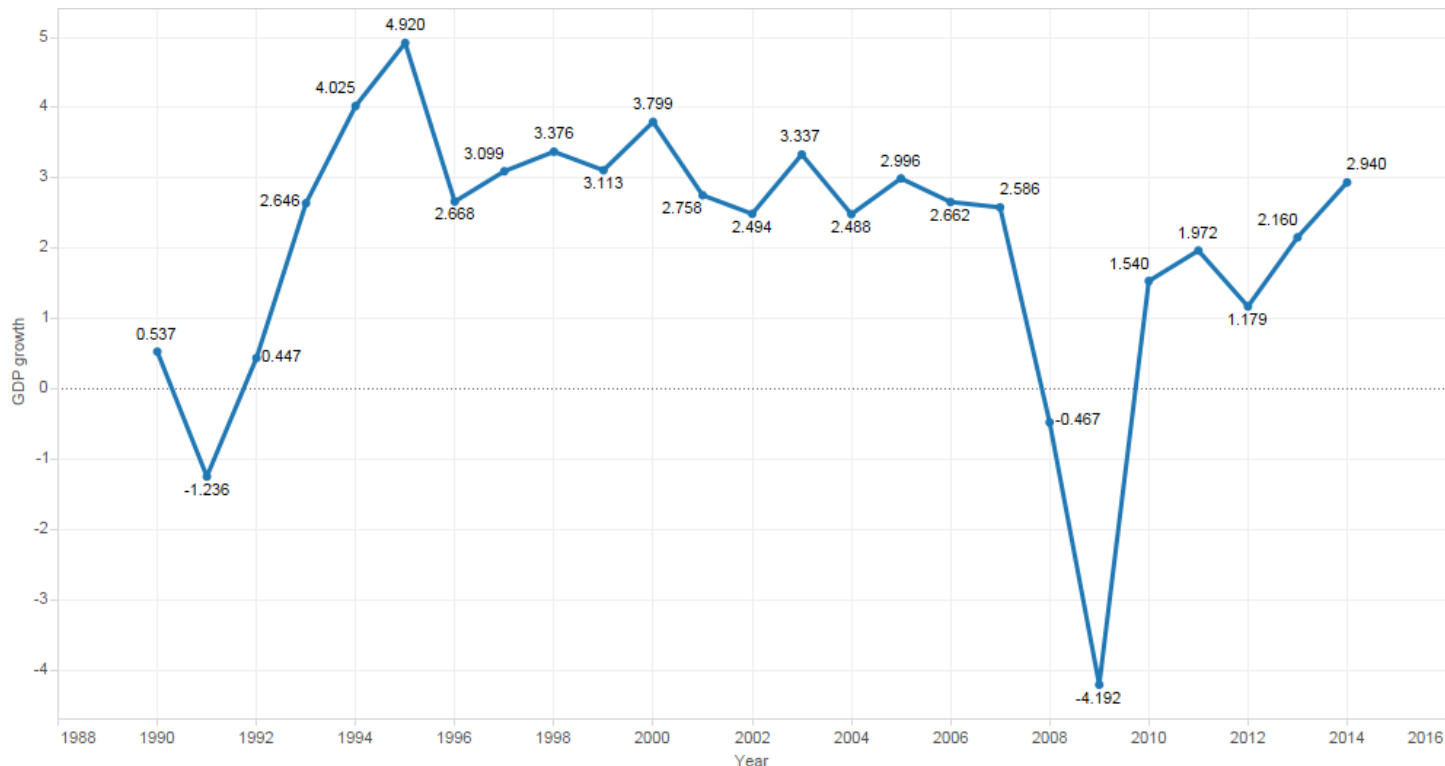


## Domain Change:

Why is the Gender Equality Index and women employment in UK decreasing?

Question 6. What can be the reason behind this sudden drop in growth rates in UK?

To understand this, I pulled the data for the GDP growth rate in UK, to see if there is a trend. On plotting the values, I saw a sharp dip in the GDP growth rate in UK economy. This points to the major economic depression that UK was going through between 2005 and 2010, which explains all the drops in the rates of various factors.



Question 7. How many households lost their jobs as a result of this depression? And where did the depression hit the hardest in UK?

The visualization shows the % of households who lost their jobs as a result of the economic depression in UK. As shown in the visualization, Wales was hit the hardest and maximum household lost their jobs as a result of the depression whereas England suffered comparatively less.



This explains the sudden drop in the economic situation of UK, including Women employment rates. As seen in the visualization below, the dip in the employment rates was for a span of few years, post which the employment rates for women have increased rapidly and will soon be at par with the male employment rate.

Employment rates in UK over time

