How Unemployment in U.S Has Evolved Over Time

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Abstract and Introduction

The U.S. labor market has seen significant fluctuations influenced by global and local events. By analyzing unemployment data from 1976 to 2022, we uncover national trends, state-level disparities, and the broader impacts of economic milestones like recessions and industry booms. We highlight key insights and raise questions about labor resilience and recovery.

Our dataset consists of 11 columns and 29,892 rows of data about States, population, labor force, unemployment rates, year, months, etc.

Historical Events leading to high Unemployment

1980s Recession (1980-1982):
The U.S. faced two back-to-back recessions, with unemployment peaking over 9% in 1982. High inflation, oil price shocks, and restrictive monetary policies contributed to widespread layoffs, especially in manufacturing and industrial sectors.

Early 1990s Recession (1990-1991):
Triggered by restrictive monetary policies, reduced consumer confidence, and banking instability, this recession saw unemployment climb to 7% in mid-1992. Recovery was uneven, with slower job growth in the service and manufacturing sectors.

Dot-Com Bubble Burst (2000-2002):
After the tech bubble burst in 2000, many internet-based companies collapsed. Unemployment rose to 6% by 2003 as the tech industry, once a major job provider, experienced massive layoffs.

2008 Financial Crisis (2008-2010):
The Great Recession caused unemployment to spike at 9% in late 2009, driven by the collapse of financial institutions, the housing market crash, and reduced consumer spending. Recovery was slow but steady over the next decade.

COVID-19 Pandemic (2020):
Unemployment surged in April 2020—the highest since the Great Depression—due to global lockdowns, business closures, and layoffs across industries like hospitality, travel, and retail. Recovery began as restrictions eased.

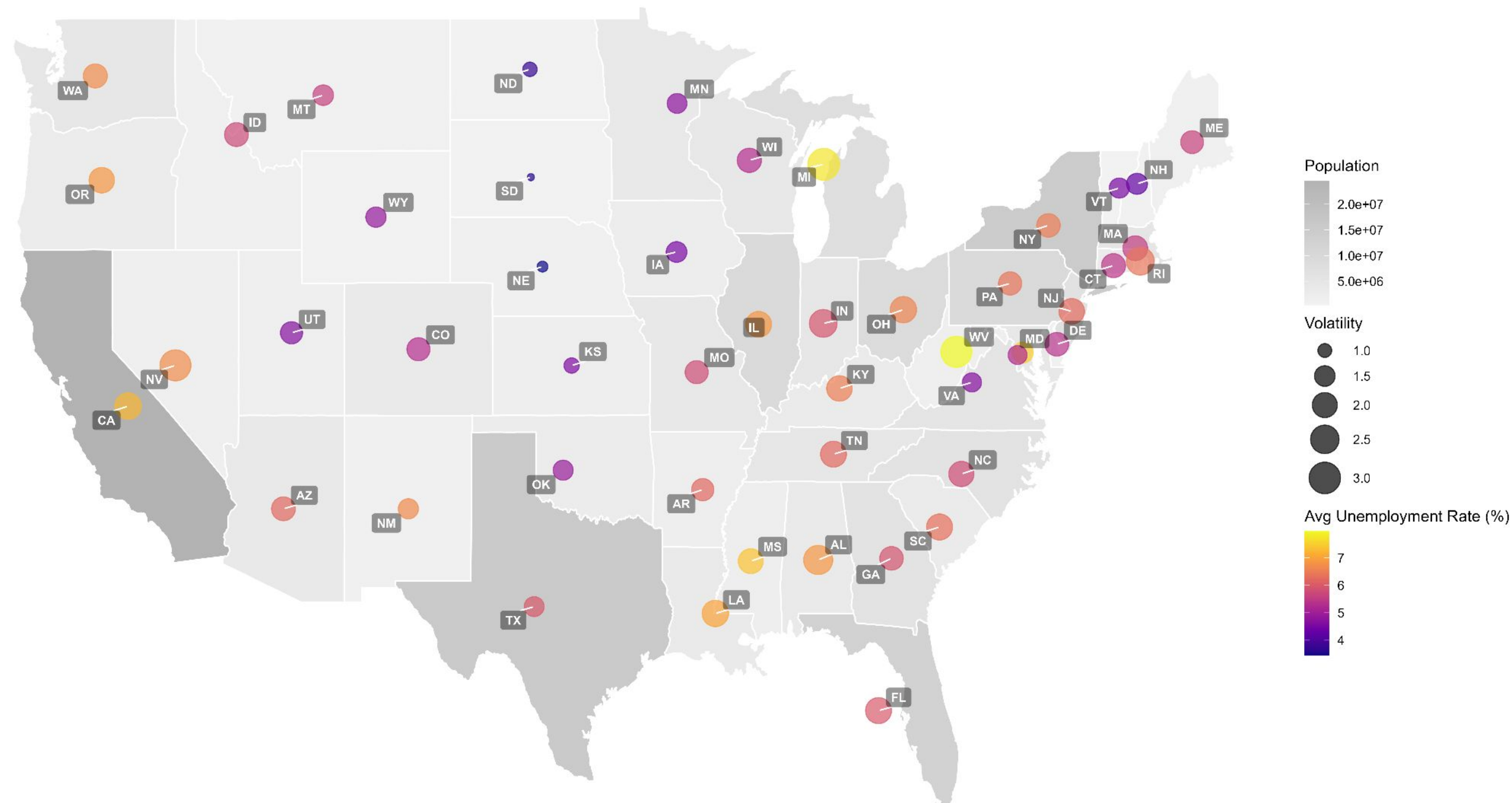## Key Trends for Volatility in Unemployment Rates

Fig 4 -Bubble Plot for Volatility in Unemployment Rates
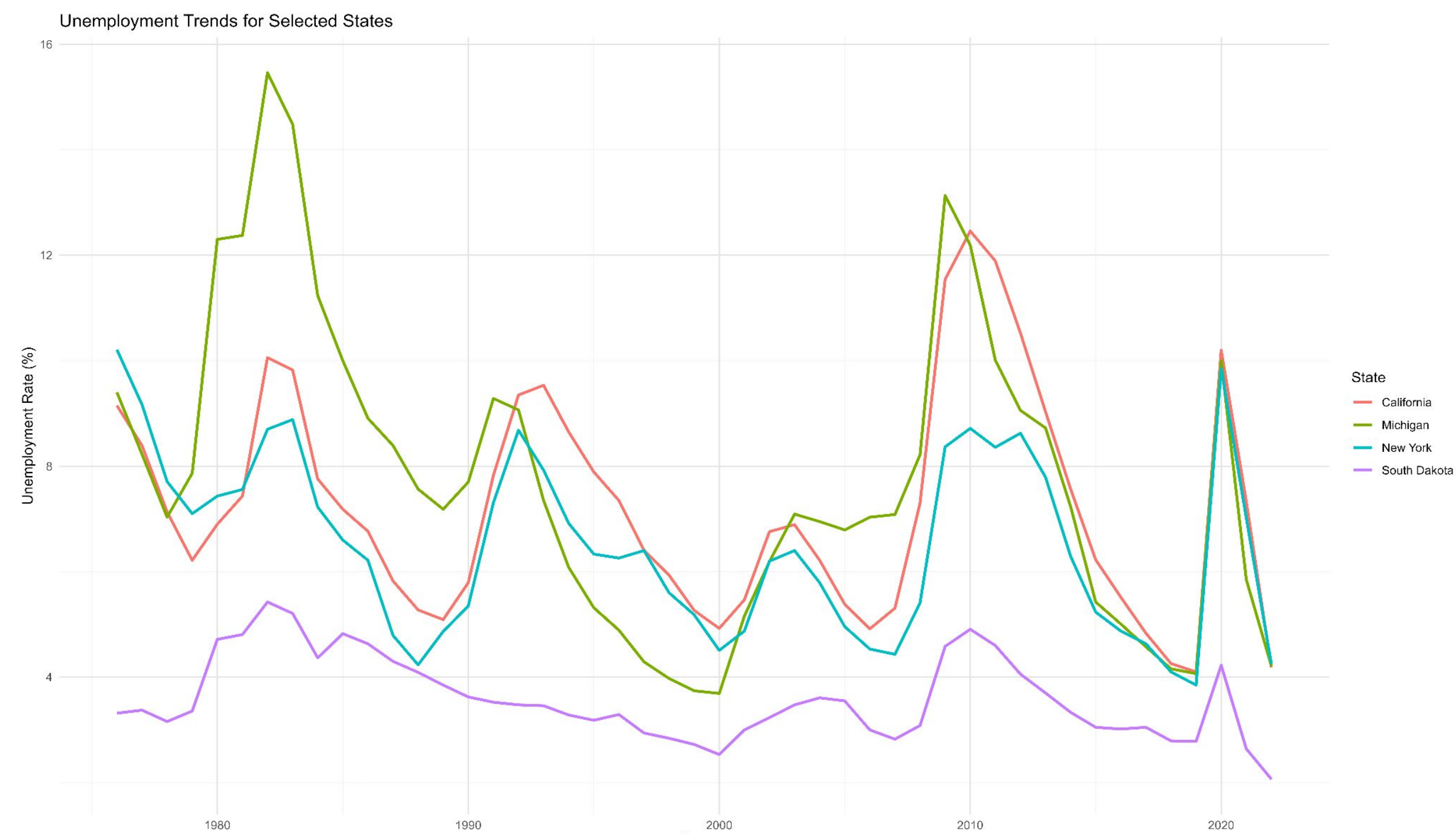

Fig 5 - Unemployment Trends for key states by volatility.

Inferences

Fig 1:
Unemployment rates move in the opposite direction to employment rates. Studying one is effective in understanding the other. We will pick unemployment rates throughout this poster. Simultaneous inferences on employment rates can be made too.

Fig 2:
Unemployment levels recover following economic crises, with recovery times varying significantly across decades.

Fig 3:
States like Michigan and Nevada show higher unemployment due to reliance on volatile industries like manufacturing and tourism, while states like North Dakota and Nebraska maintain lower rates, reflecting economic stability and diversification.

Fig 4:
Volatility reflects dependency on unstable industries; diversified economies show greater stability. The states most resilient to unemployment spikes are South Dakota, Nebraska and North Dakota, while the least resilient ones are Michigan, West Virginia and Nevada.

Fig 5:
Recovery is generally tied to local industry strength and government interventions. The resilience of South Dakota as well as the high sensitivity of Michigan can be observed here.

Fig 6
Regional differences emphasize the importance of economic diversification in reducing unemployment shocks.

How are Employment and Unemployment Rates Related?

This chart shows the consistency in the inverse relationship between employment rates and unemployment rates over the years 1976- 2022 in the U.S. Note that whenever the unemployment rates go up, the employment rates go down, and vice versa. This shows that we can look at any one of them and through this, learn about the other. We'll be using trends in unemployment rates in this poster.
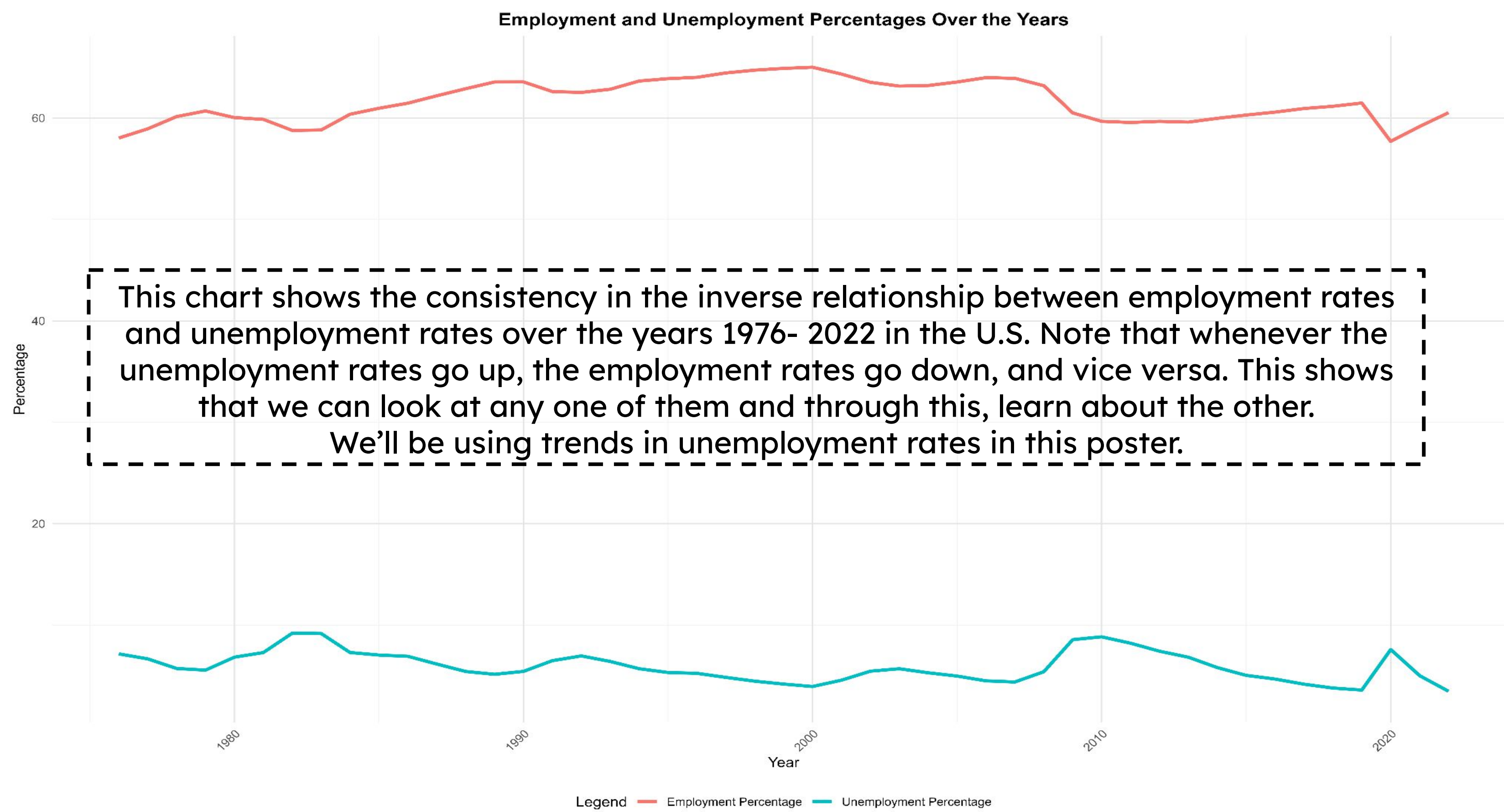
Fig 1 - Average National Employment and Unemployment Rates Over the Years

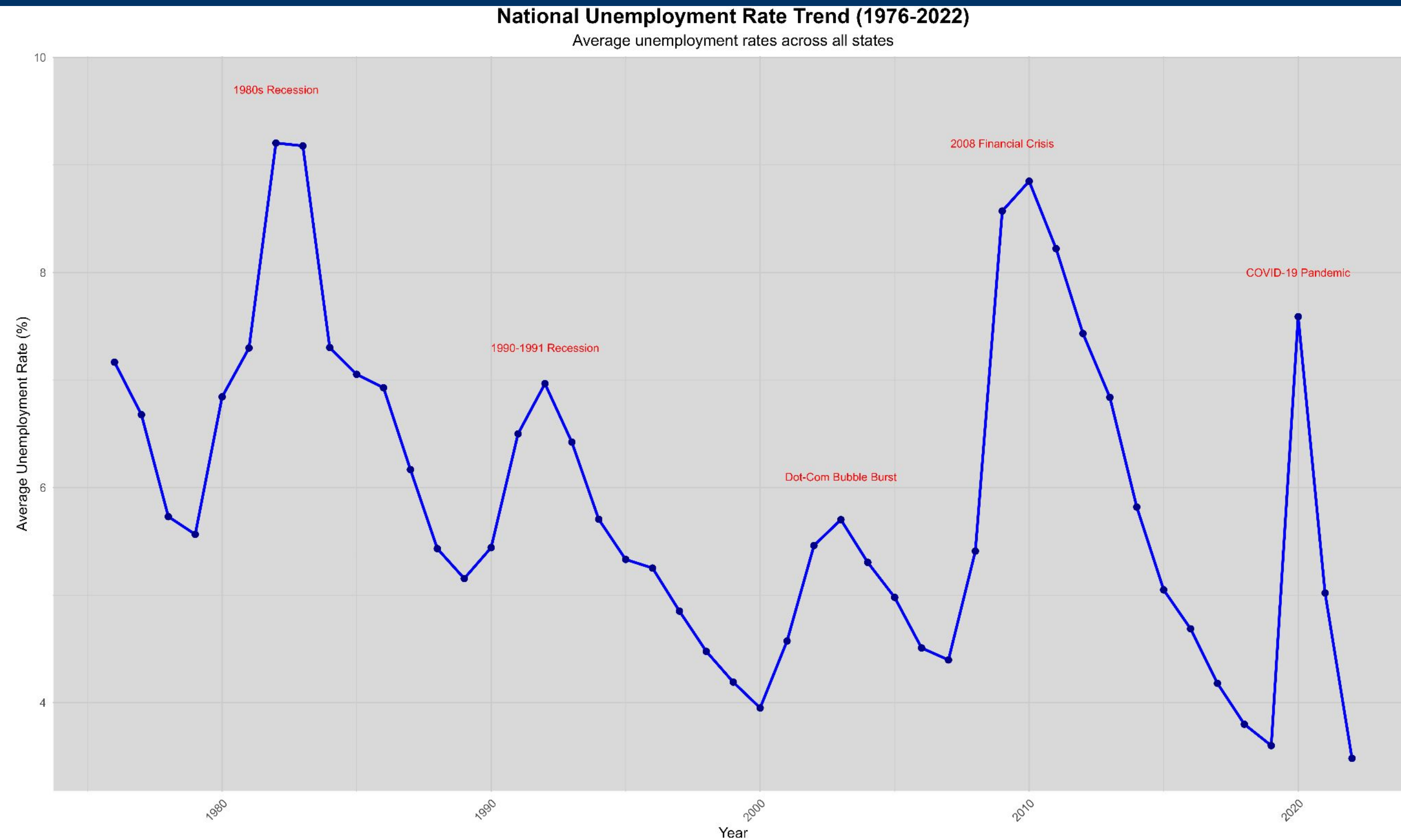## What are the major historical events that correlate with spikes in unemployment rates?

Fig 2 - Line Graph of Average Unemployment Rates in the U.S

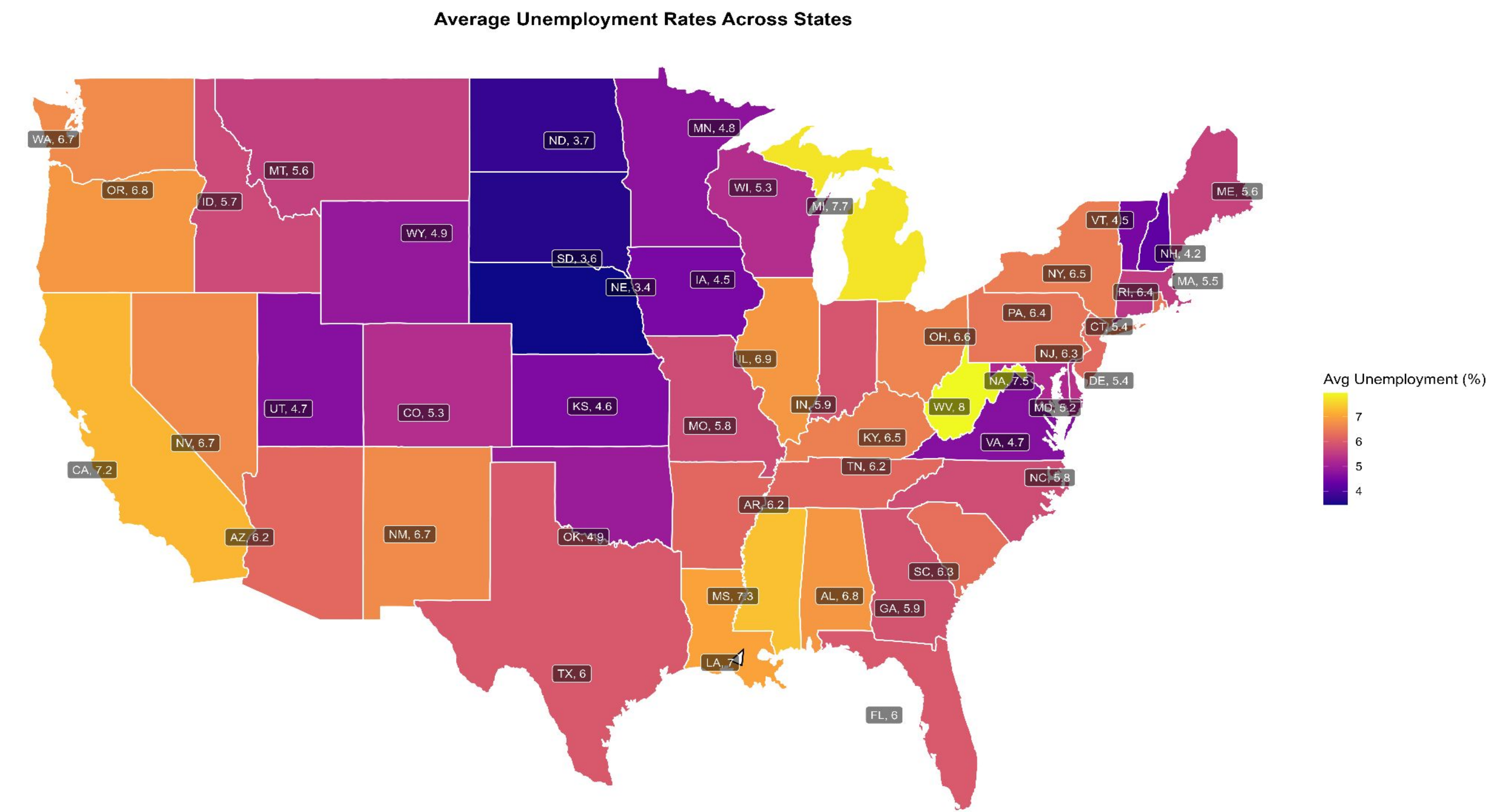## What is the distribution of average Unemployment Rates among the states?

Fig 3 - Average National Unemployment Rates

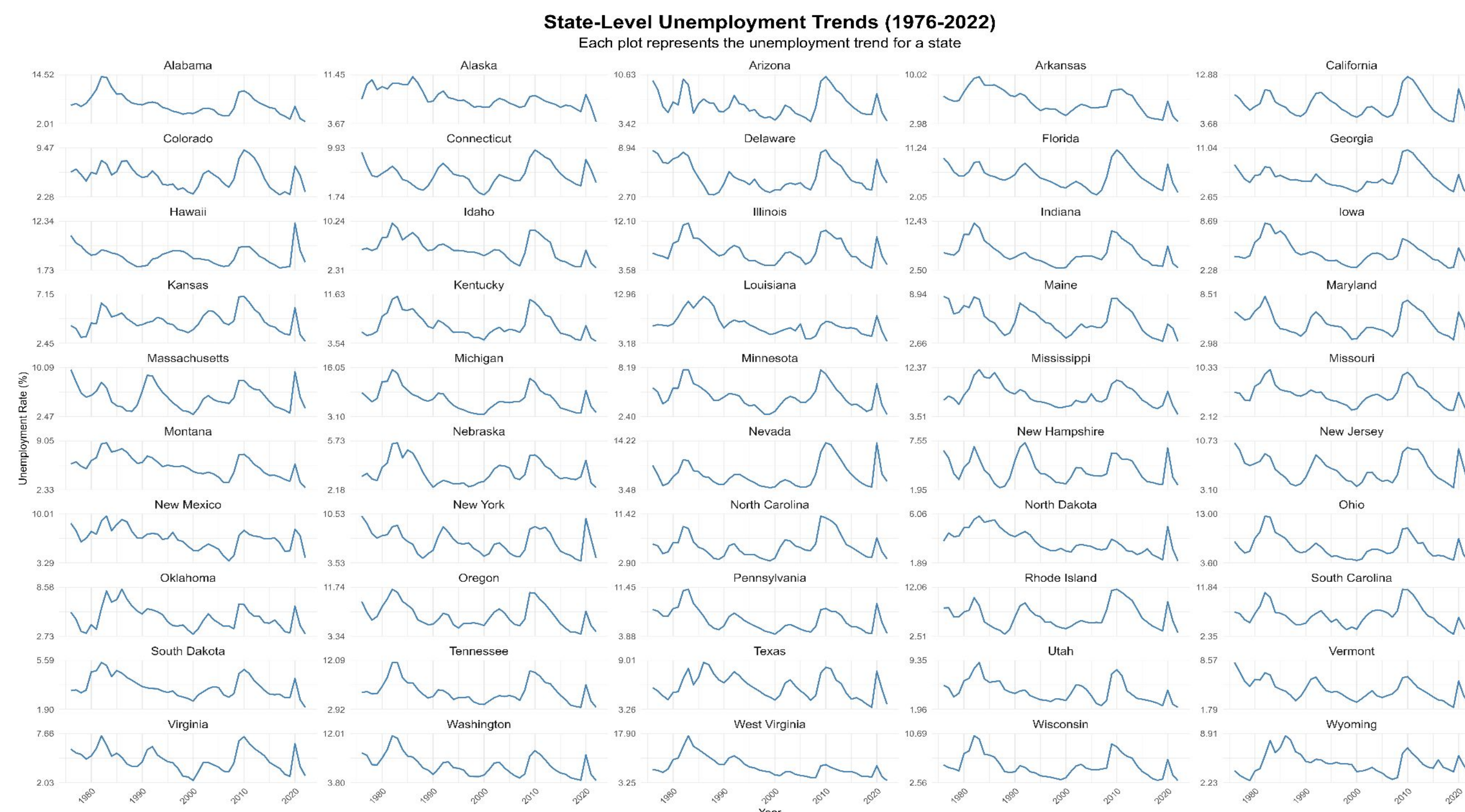## What does the timeline for the state-average unemployment rate look like?

Fig 6 - Small multiples showing unemployment trends across U.S. regions.