

Effects of COVID-19 on Unemployment Rates

A summative investigation into unemployment rates during COVID-19 peak (March 2020-21) and post peak (September 2021-22) levels.

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Introduction

Topic question

How has COVID-19 affected unemployment rates?

Aim

To investigate the recovery of unemployment rates post peak Covid, discover if they have recovered since Peak-Covid levels.

Hypothesis

It is predicted that unemployment rates have recovered significantly post-peak COVID-19 compared to peak COVID-19 levels.

Background information

Covid-19 had a massive influence on the daily living of all Australians. Many employees lost their jobs during this period, as businesses struggled to stay profitable. To combat this issue, the government released initiatives, most notably Job Keeper. This helped businesses pay wages and keep on employees, limiting the loss of employment. As the economy began to recover after the perceived peak of Covid, people began returning to jobs. This was assisted by government initiatives and the creation of industry work. This has led to the lowest unemployment rates in years, a steep contrast to rates experienced during Covid lockdowns.

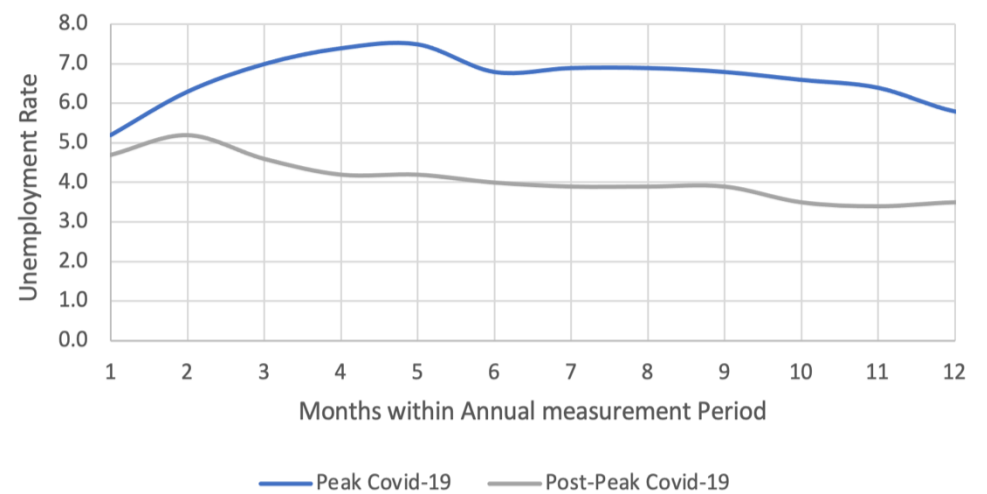
Discussion

Through the conduction of this investigation, the results shown reflect a clear disparity between unemployment rates within two separate timeframes. This is peak COVID-19 and post peak COVID-19 levels. The data conveys a clear effect of the influence that government measures and a stimulated economy have on the recovery of unemployment rates in Australia. This aligns with our hypothesis, as we predicted that unemployment rates would recover significantly post peak COVID-19 levels.

The data was obtained through a secondary source from the Australian Bureau of Statistics (ABS). It has limited bias, as the data is professionally acquired through the Australian Government. If bias was prevalent, it could affect the legitimacy of the results.

An interesting observation from the data is that the graphs are relatively symmetrical in unemployment percentage over time, as it decreased with ongoing months.

Comparative Graph of Unemployment Rates in Peak and Post-Peak Covid-19



Analysis

The data collected in this investigation suggests that unemployment rates have recovered significantly since peak COVID-19 levels. To ensure the data's reliability however, the impact of outliers has to be considered. Outliers can influence the display of data, whilst also affecting measures such as the mean and standard deviation. To test outliers the following equations can be used. This includes the use of, 'Q1 - 1.5 x IQR' and 'Q3 + 1.5 x IQR'. Solving them gives 2.15 and 5.75 for post-peak levels meaning that the influence of outliers is insignificant to the data as a whole. This is followed by scores of 4.7 and 8.3, meaning that outliers can be disregarded as affecting results. As two data sources were used (unemployment rates, number of employed people) they have different properties. A property of the unemployment rate data set is that it is a numerical continuous form of data. As it is continuous, the modality and shape of the data is constantly evolving. In the data selected, the spread is somewhat symmetrical and has a small range including outliers. In the total employed people statistic, the data can be described as numerical discrete. It has a larger range and further spread than the unemployment rate data. The shape is closely related to unemployment rates however, as it is a relationship of opposites.

Mean and standard deviation table for unemployment rates during selected periods

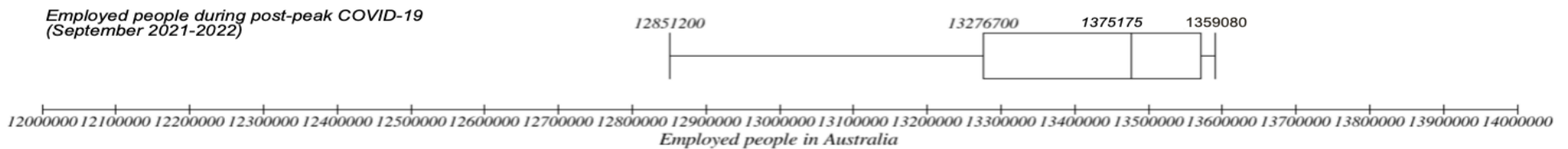
	Peak COVID-19	Post peak COVID-19
Mean	6.55	4.04
Standard Deviation	0.65	0.52

Comparative box plot comparing number of employed people in Australia during peak and post-peak COVID-19

Employed people during peak COVID-19 (March 2020-2021)



Employed people during post-peak COVID-19 (September 2021-2022)



Conclusion

In the summarisation of this investigation, the influence that external factors such as COVID-19 can be seen to dramatically effect unemployment rates. Using two selected timeframes - COVID-19 peak (March 2020-21) and post peak (September 2021-22) levels, a comparison between unemployment rates can be made. This aligns with the aim of the investigation, as we successfully investigated the difference in rates within these periods of focus. In reflection of the results, the data found, reflected our conceptions surrounding the effects of COVID-19 on unemployment rates. This further realigns with our hypothesis and helps us to understand the vulnerability of the workforce when exterior factors influence the economy.