

# What Does Crime in New Zealand Look Like in Recent Years?

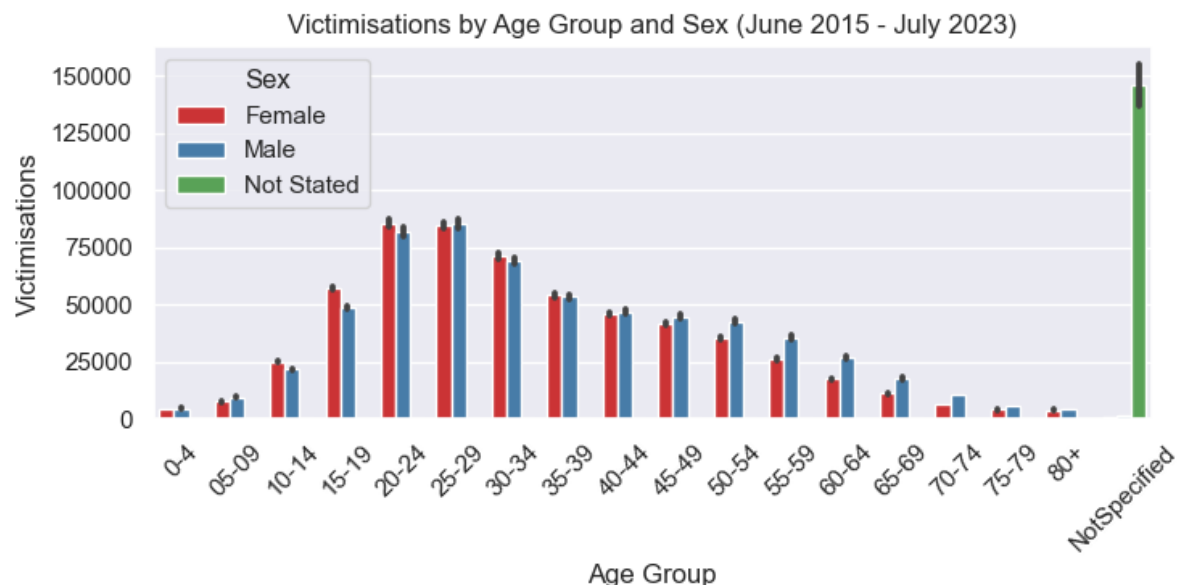
## Premise

Since the COVID-19 pandemic it has been a common opinion that crime in New Zealand is rising. Has it really increased more? What kind of crimes are committed, and by whom and where in the first place?

Firstly, we will look at some basic demographic data of victimisations from the past several years, then how crime numbers look across the day and week, how victimisations due to different types of crime have changed, and where the most changed has occurred.

Note: Time and location data excludes victimisations where such information is not available and therefore do not reflect true volume, only relative volume.

## Age Group and Sex

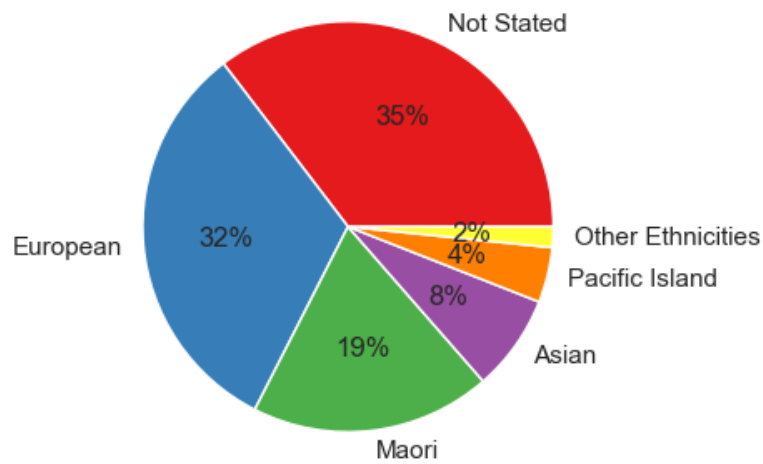


As in the above figure, the number of victimisations grows rapidly from ages 5-9 to 20-24, as kids are growing up. This peak lasts until the early 30s age group where it starts to gradually decline. Eventually, 60 to 64 year-olds are victimised about the same amount as 10- to 14-year-olds, and elderly victimisations are like to young children and infants.

Females tend to be victimised more from people's teenage years to early twenties. Then, it is balanced until the mid-to-late forties where males start to become victimised more.

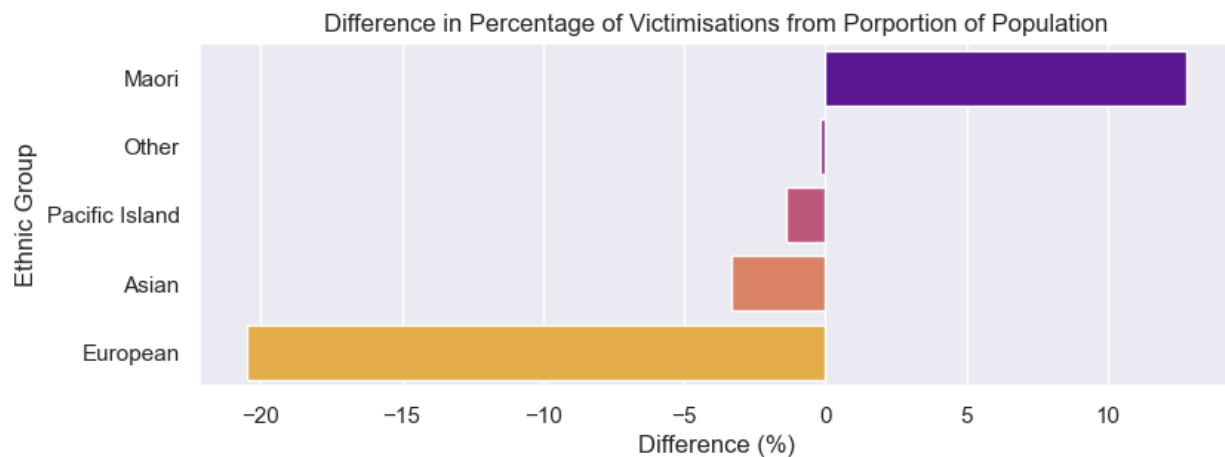
## Ethnic Group

Victimisations by Ethnic Group June 2015 - July 2023



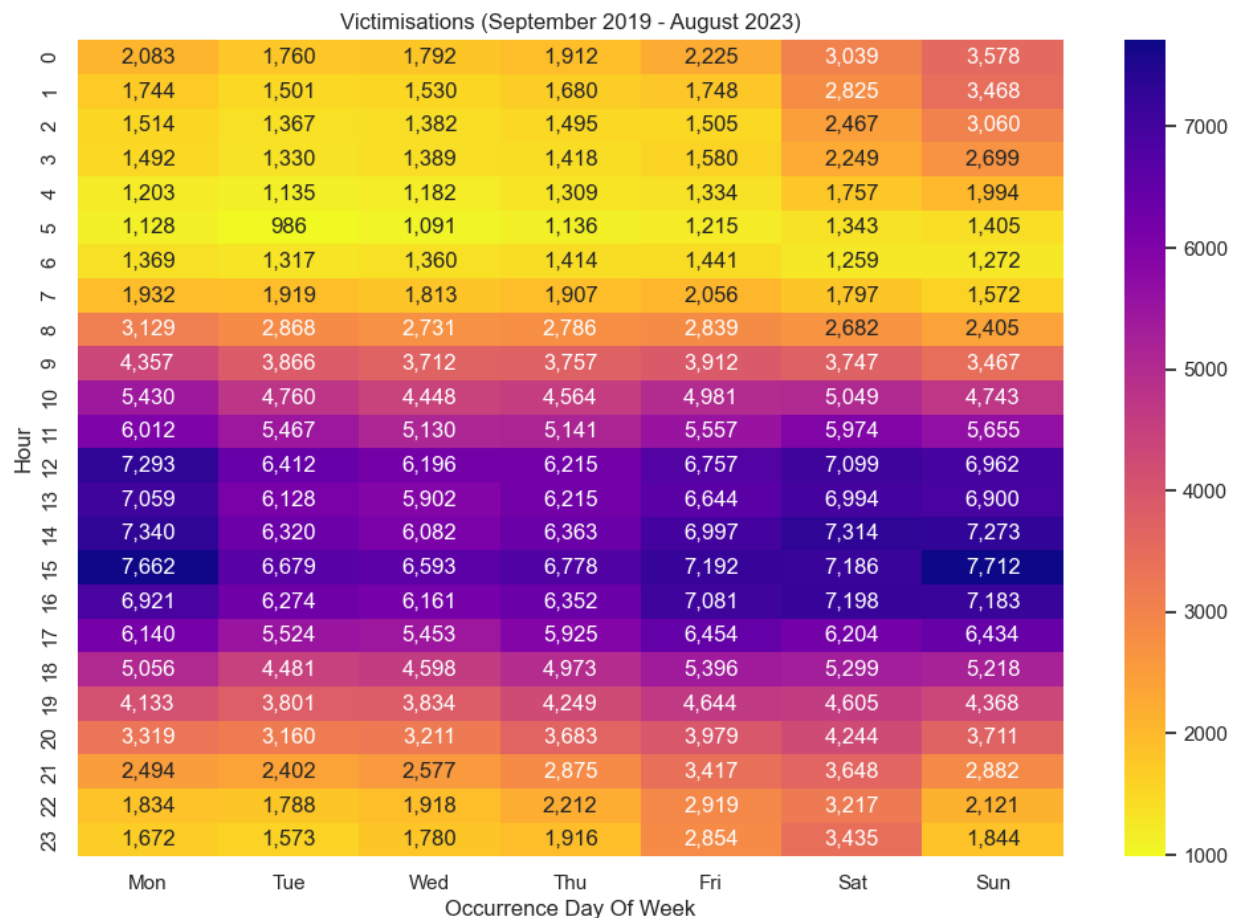
While a large portion of victimisations don't have their ethnic group stated, we can see that Europeans make up most victimisations, followed by Māori and Asians.

How does these compare to the respective proportions of the total population of New Zealand? Are any disproportionately victimised?



Assuming that the unspecified ethnic group victimisations are distributed proportionately to the data that we have, we can see from this figure that Māori are victimised more than their population may suggest. Conversely, Europeans are significantly less victimised compared to their population proportion.

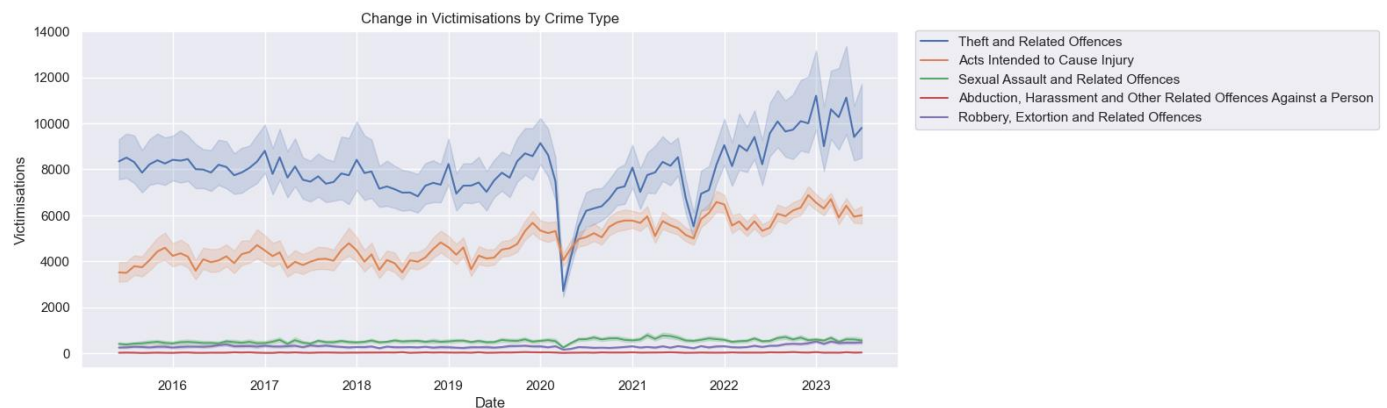
## How are victimisations spread throughout the day and week?



From this figure the afternoon sees the most victimisations, with 3pm as the most active hour on most days. This drops off as the night goes on and victimisations tend to be at their lowest point in the early morning around 5am. This decline is less noticeable on Friday and Saturday night, however, where victimisations are disproportionately high, lasting past midnight – presumably because people are out more on Friday and Saturday nights.

Across the week, victimisations increase towards the weekend starting on Friday. Perhaps surprisingly, this peak lasts until Monday afternoon, being responsible for the highest concentration of crime. Tuesday, Wednesday, and Thursday are the quietest, making those dawn hours the safest!

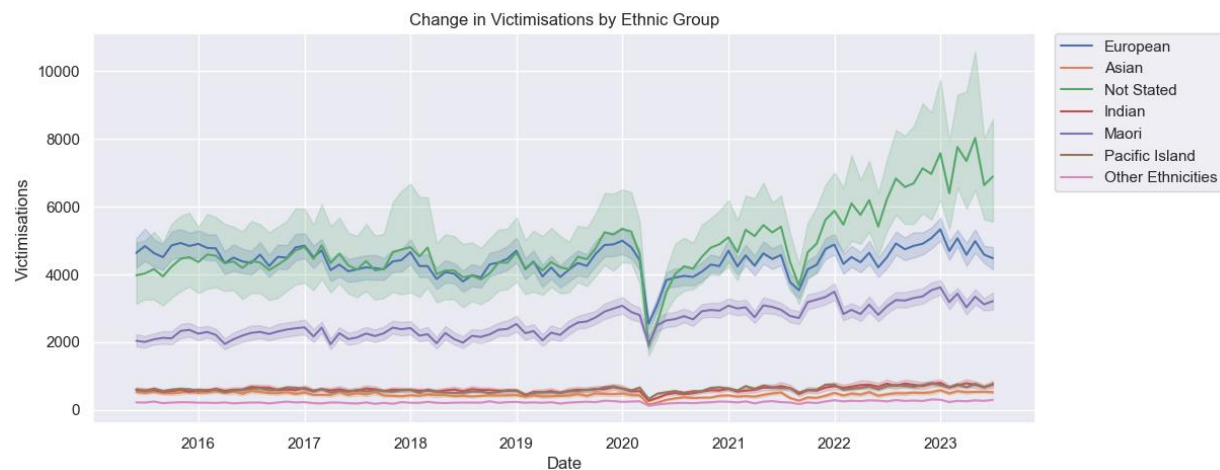
## How the number of various types of crime has changed



From this figure, it is most evident that after a dip in victimisations following the first major nation-wide lockdown in March of 2020, 'Theft and Related Offences' has been on a clear rise.

'Acts Intended to Cause Injury' also has a positive trend during that period, although it doesn't appear to have been affected much by the lockdown, as the dip in early 2020 is in line with seasonal variation. Perhaps this is because isolation would not have hindered crimes such as domestic violence as it would have for theft.

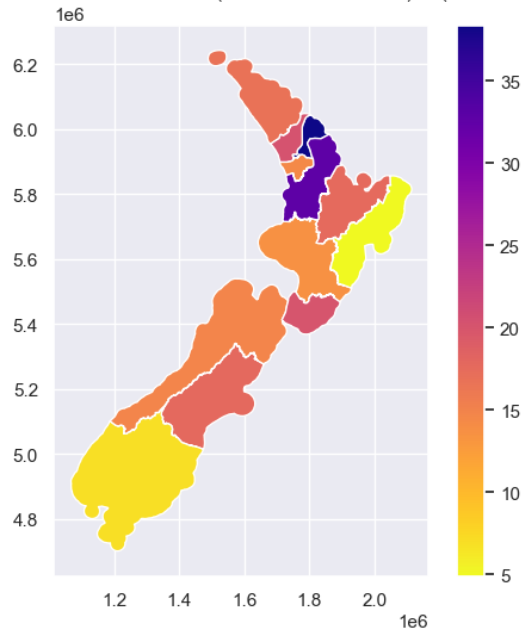
Other categories which are much lower in volume in the first place don't seem to have a clear negative or positive trend, although 'Robbery, Extortion and Related Offences' has seen an increase in the past year.



There is a similar trend when victimisations are grouped by ethnicity – fortunately, there is no specific ethnic group that has been responsible for the increase in crime.

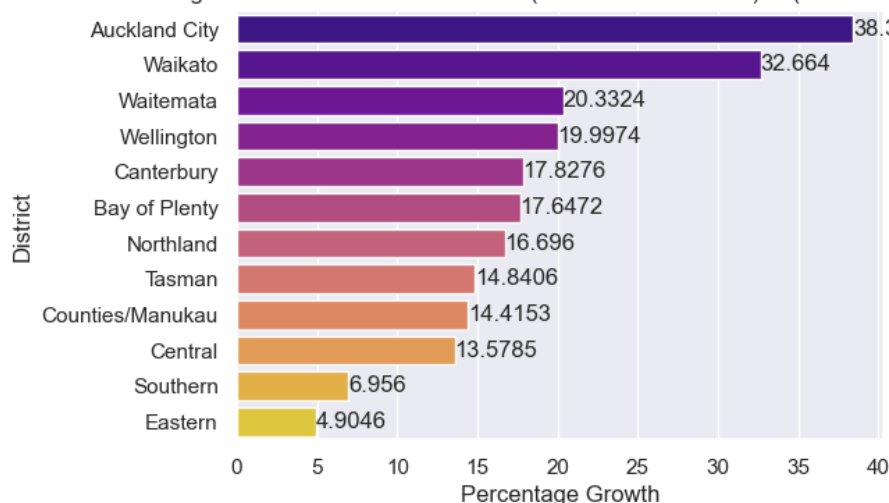
## How has crime changed in different districts?

Percentage Growth of Victimisations from (Jan 2018 - Dec 2019) to (Jan 2021 - Dec 2022)



At a glance, we can see that the more populous districts have experienced a greater growth in victimisations, including Auckland, Waikato, Wellington, and Canterbury. This appears to be somewhat correlated with population density, as Auckland City, Waikato, Waitemata, and Wellington are some of the most densely populated regions of New Zealand, and Southern and Eastern are among the least densely populated.

Percentage Growth of Victimisations from (Jan 2018 - Dec 2019) to (Jan 2021 - Dec 2022)



We can see this more clearly here – Auckland City and Waikato have experienced a 38% and 33% increase in victimisations respectively over 2021 and 2022 compared to 2018 and 2019, distantly followed by Waitemata and Wellington at 20% each.

## Conclusion

Some key points about victimisations in the past several years:

- People in their twenties are victimised the most, and young females and older males are victimised more compared to their age group counterparts.
- Māori are disproportionately subject to more victimisations, the opposite being true for Europeans.
- The afternoon is a hotspot for crime, particularly on weekends and Mondays, and the hours before dawn are the quietest.

And what are the biggest changes?

Crime is certainly growing, particularly in the more densely populated regions of New Zealand, such as Auckland and Waikato, but all regions have experienced an increase in crime. Most of these crimes are theft and acts intended to cause injury.

In the future, correlations with other external economic, social, political factors could be investigated to draw insights into why this may be happening to the general population.

## Data Sources

**Population data sourced from:** <https://www.stats.govt.nz/news/new-zealands-population-reflects-growing-diversity#:~:text=According to the 2018 Census,at least one European ethnicity.>

**Victimisation data:** <https://www.police.govt.nz/about-us/publications-statistics/data-and-statistics/policedatanz/>

**Shapefile data:** <https://www.kaggle.com/datasets/protobioengineering/new-zealand-police-district-boundaries-2021/?select=nz-police-district-boundaries.shp>