

# AS91226 (version 2) Economic Theory and Practice

## Analyse statistical data relating to two contemporary economic issues

Te whai hua - kia ora!

**sorted**  
*in Schools*

Student name:

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Class:

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LEVEL

2

CREDITS

4

SORTED THEMES

Savings  
KiwiSaver  
Retirement

**This workbook provides activities that you can use to develop and demonstrate your understanding of the analysis of statistical data relating to two contemporary economic issues.**

The module is based on the societal issues of inequality and climate change so the first two activities introduce these themes.

**Theme A:**  
**Introduction to inequality**

**Theme A, Activity 1**

Decide whether you think the following situations are fair or unfair. Explain your choice. There may or may not be one common answer for each.

		Fair? Yes or No	Why?
1	Females on average earn about 80% of the income received by males.		
2	Females receive the same amount in superannuation payments from the government per fortnight as males.		
3	Female models in the clothing industry are generally paid more than male models.		

		Fair? Yes or No	Why?
4	Female tennis players receive the same amount of prize money for winning a Grand Slam tournament as male tournament winners.		
5	Female rugby players are at best semi-professional and often earn less than \$50,000 per year while many male rugby players earn well in excess of \$100,000 per year.		
6	Airline pilots are paid more than bus drivers.		
7	Police officers are paid more than nurses.		

## Theme A, Activity 2



**Section 21 of the Human Rights Act (1993)** outlines the prohibited grounds for discrimination. Can you think of any other grounds for discrimination that should be prohibited? Discuss your choice with someone else.

Discussion notes:

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## Theme B:

### Introduction to climate change

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#### Theme B, Activity 1

Read Time Magazine's article: The Climate Crisis Is Global, but These 6 Places Face the Most Severe Consequences.

List five features that you think these places have in common.

- 1 .....
- 2 .....
- 3 .....
- 4 .....
- 5 .....

#### Theme B, Activity 2



Watch the Sorted in Schools Climate Crisis video and answer the following questions:

- a. One of the suggestions of what you can do to reduce climate change is to buy locally produced ethical goods. List three of the other suggestions.

- 1 .....
- 2 .....
- 3 .....

- b. Explain how you buying locally produced goods will reduce greenhouse gas emissions.

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## Theme B, Activity 3

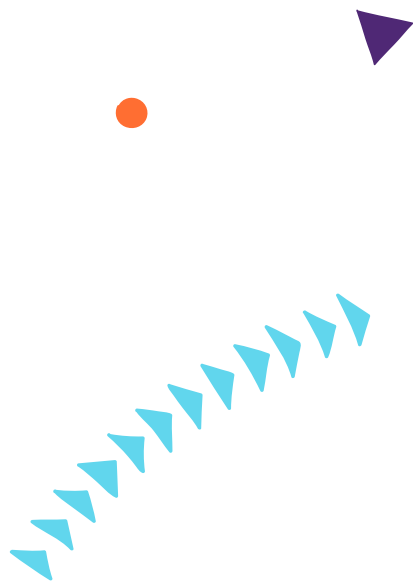
Changes to land use and agricultural practices are likely to have major influence on New Zealand's ability to reduce and manage our greenhouse gas emissions. These changes are likely to occur at a significant cost, but there is also the possibility that new opportunities will arise.

List three benefits or opportunities that you predict are likely to arise from changes to land use and agricultural practices.

1

2

3



## Topic One:

### Processing and presenting statistical data

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#### Topic 1, Activity 1

##### Processing inequality data

This activity uses an Excel spreadsheet of data showing the number of active/provisional KiwiSaver members, by income bracket that you can test yourself with. Make sure you use a calculator.

- a. In June 2022 what percentage of the total number of contributors earned \$120,000+?
- .....
- b. In the same period of time, what percentage of the total number of contributors earned \$1-\$20,000?
- .....
- c. What was the percentage change in the number of \$120,000+ income earners between 2017 and 2022?
- .....
- d. What was the percentage change in the number of \$1-\$20,000 income earners between 2017 and 2022?
- .....

Need more practice processing statistical data? Try doing the same four calculations for 2021 and the period 2016 to 2021.

Would you like to do the calculations a different way? Copy the spreadsheet, create two additional columns, and enter the formulae. Let technology do the work for you!

# Topic 1, Activity 2

## Processing climate change data

Here is some climate change data to test your processing skills on:

The total insurance cost of weather-related events (storms, floods, tornadoes, and fires) in New Zealand 2010 to 2019 [2].	
Year	Cost (\$m)
2022	351.26
2021	324.94
2020	274.27
2019	206.28
2018	226.30
2017	242.66
2016	51.80
2015	116.30
2014	152.80
2013	175.30

- a. The 2022 Cyclone Dovi cost a total of \$54.84m, which is what percentage of the total weather-related insurance costs for 2022?
- b. In 2019 Timaru hailstorm cost a total of \$130.7m, which is what percentage of the total weather-related insurance costs for 2019?
- c. What was the percentage change in the total amount between 2021 and 2022?
- d. What was the percentage change in the total amount between 2018 and 2019?

## Topic 1, Activity 3

### Presenting consumer loan data

Present the following data on the graph provided on the next page.

Total Consumer Loans (as at year end) [3]	
Year	Amount (\$million)
2022	13,866
2021	13,983
2020	15,070
2019	17,030
2018	17,140

## Topic 1, Activity 4

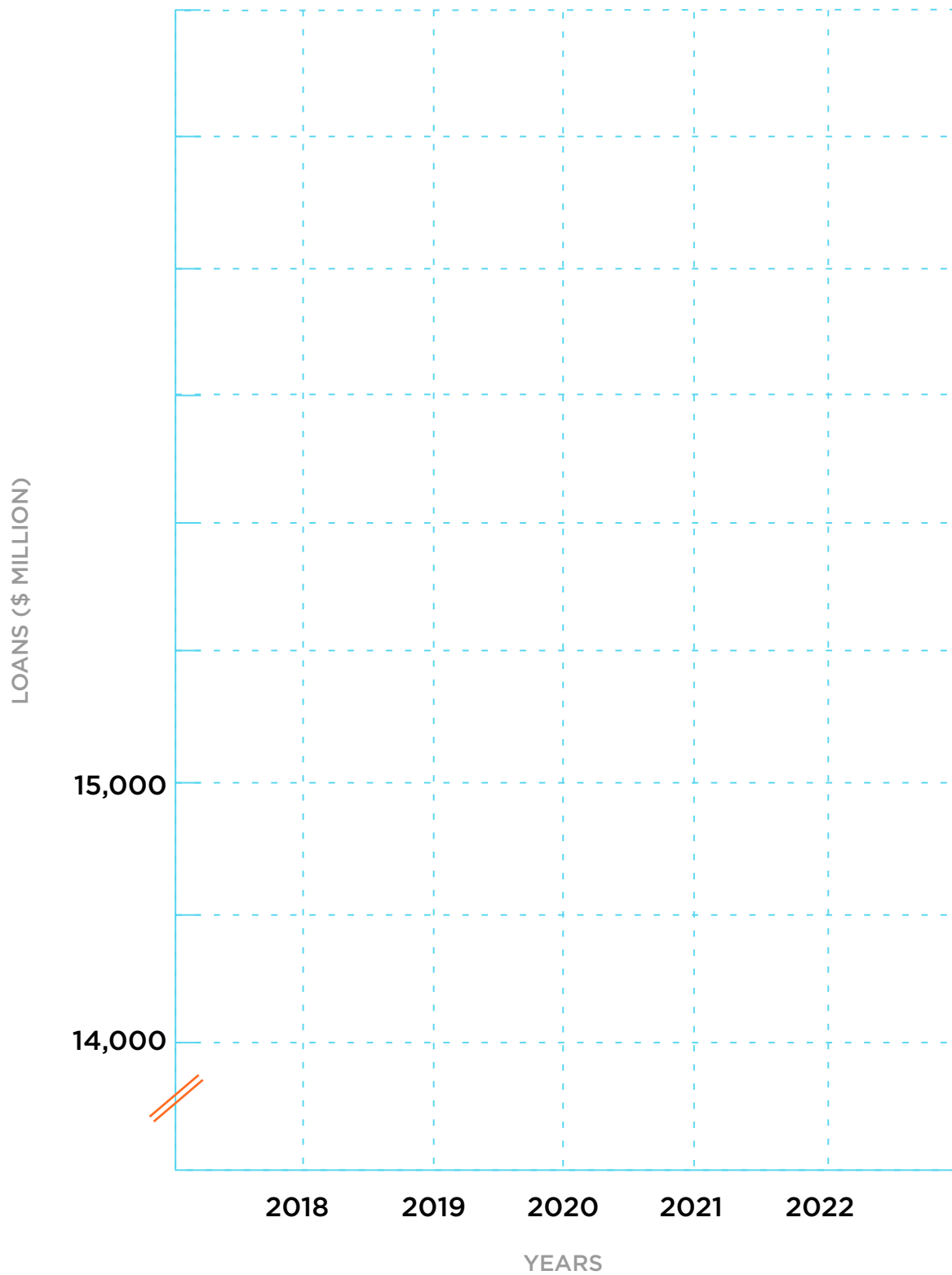
### Presenting percentage changes in electric vehicle (EV) registrations data

Present the following EV percentage change data on the graph provided on page 10.

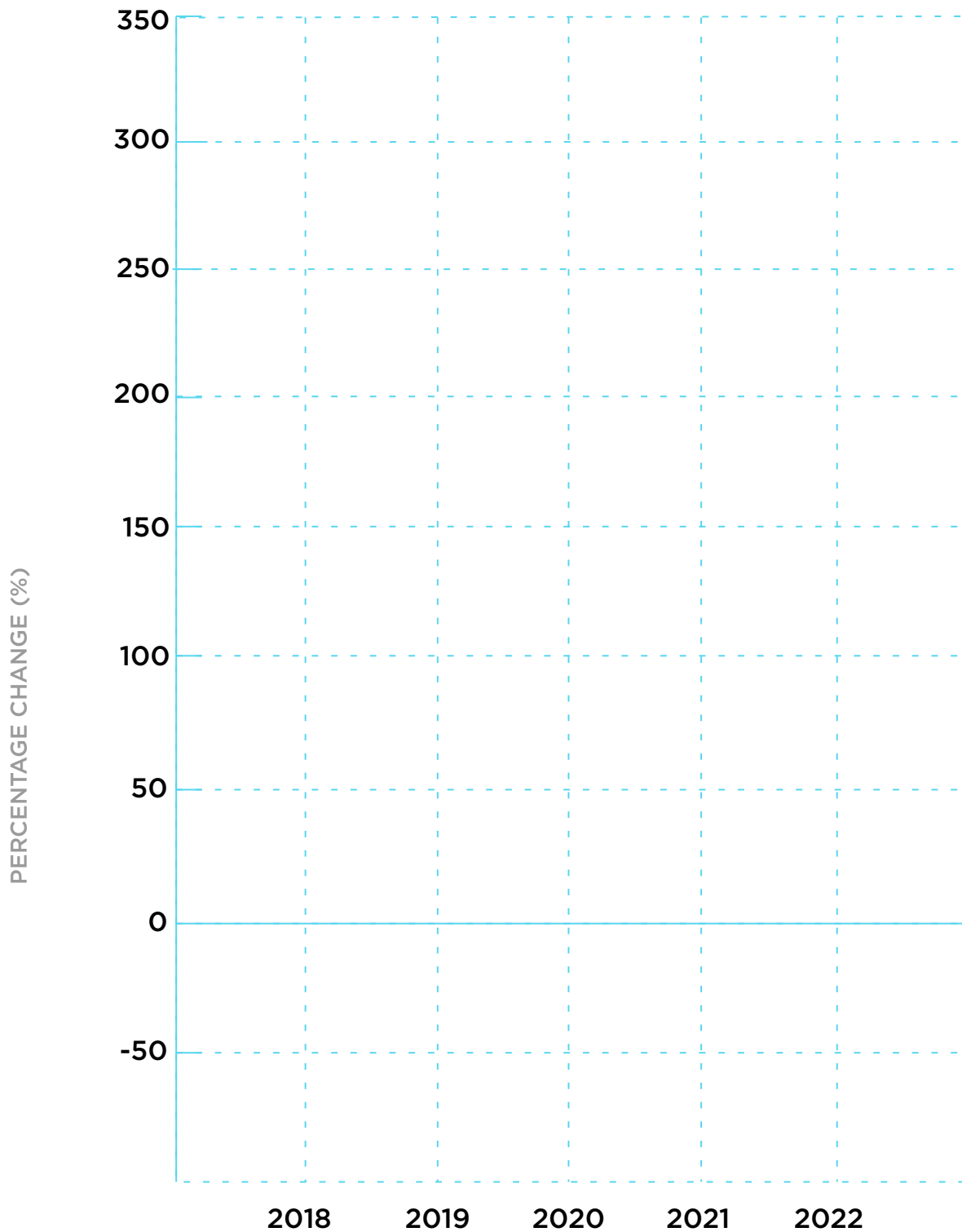
Monthly EV Registrations (for the month of July) [4]		
Year	Month of July Registrations	Percentage Change (%)
2022	1828	-6
2021	1949	304
2020	482	-14
2019	560	2
2018	550	90
2017	292	



**Total Consumer Loan (as at year ended)**



**Percentage Change in Month of July EV Registrations**



### Topic 1, Activity 5

Insert an appropriate trend line onto the graphs that you have drawn for activities three and four.

## Topic Two:

## Explaining trends in statistical data

## Topic 2, Activity 1

**a.** What is meant by the term “relative poverty”?

**b.** What is meant by the term “tragedy of the commons”?

**c.** How is climate change likely to impact on production in New Zealand? Consider whether you think the total output of goods and services will rise or fall. Also think about whether the types of goods and services New Zealand produces will change, and whether the way that those goods and services are produced will change.

## Topic 2, Activity 2

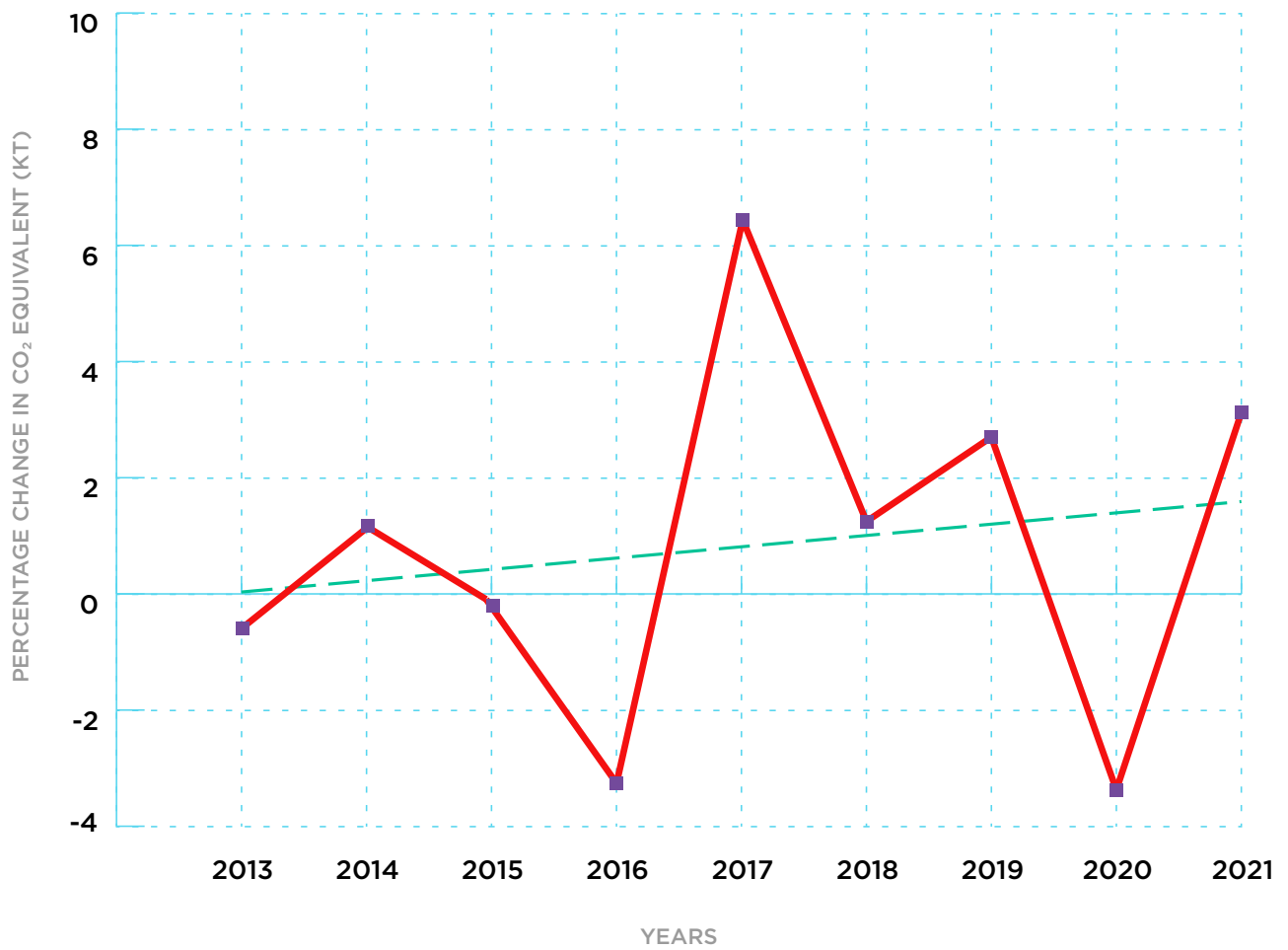
There is a recognised relationship between income and savings. The following resource is an explanation of this relationship, but the sentences have been jumbled. Rewrite the paragraph putting the sentences into an order that creates a detailed economic explanation of the relationship between income and savings.

Higher income households have more choice about how they spend their money because a greater percentage of their income is left over after paying for essential goods and services like food, housing, and energy. The reason for this is that these households have higher disposable income and are more able to save. Households that have higher incomes are more likely to have higher savings. Data from the [Motu Working Paper 'Household Wealth and Savings'](#) that tells us between 2004 and 2006 median individual savings were \$1,248 whereas the savings of the 75th percentile were \$32,221, supports this statement.

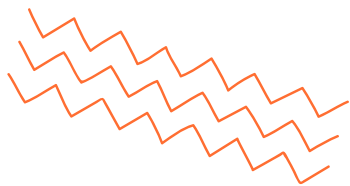
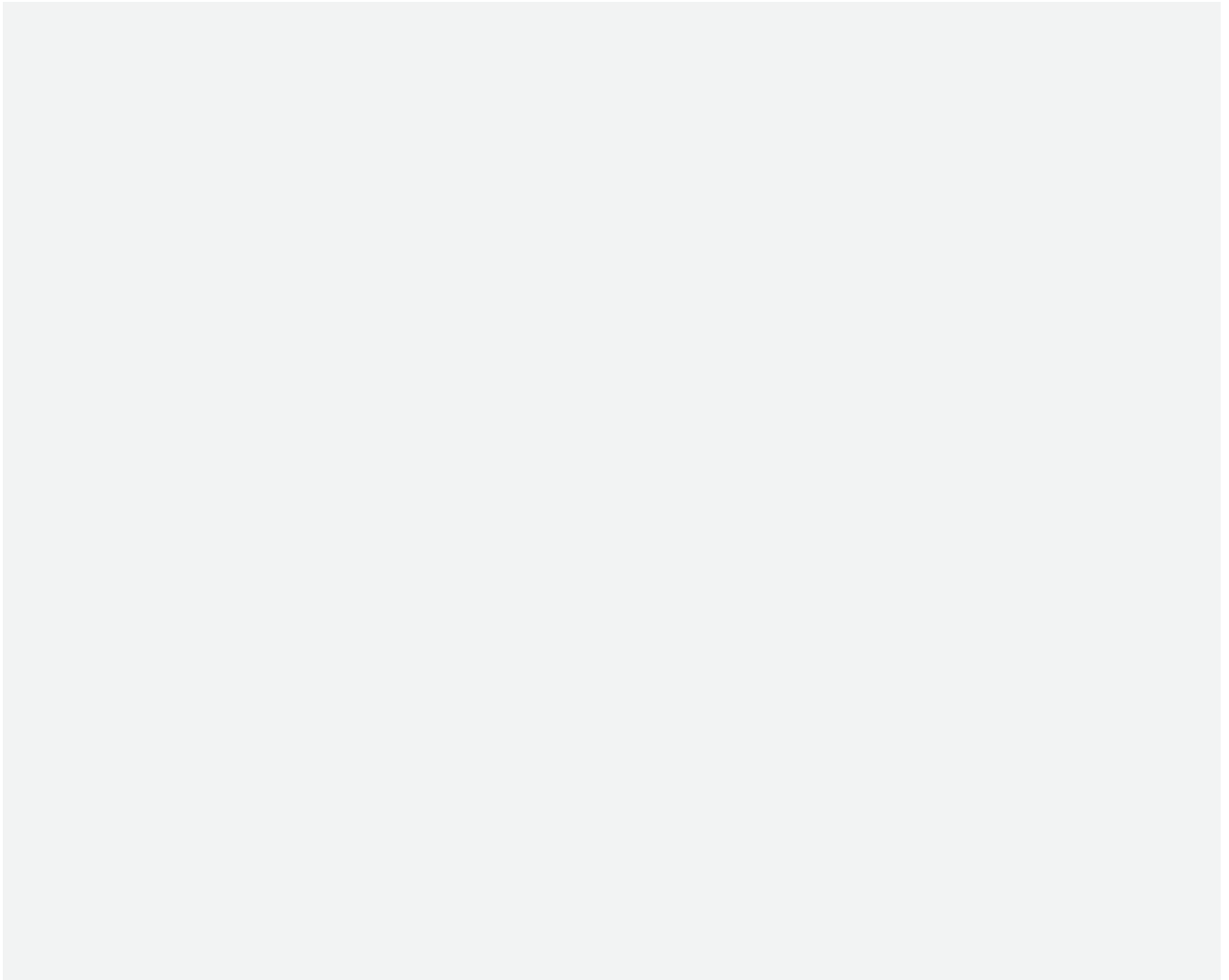
## Topic 2, Activity 3

Use your answer to Topic 1, Activities 4 and 5, and the following graph from the Student Booklet, to provide a detailed explanation of the relationship between electric vehicle registrations and climate change.

## New Zealand Greenhouse Gas Emissions 2012-2021



Space to insert a model:



## Topic Three:

## Explaining the inter-relationships between climate change and inequality

## Topic 3, Activity 1

- a.** Identify an economic model that you could use to help explain the inter-relationships between climate change and inequality.

- b.** Use the diagrams from topic three in the Student Booklet to explain in detail the inter-relationship between climate change and inequality.

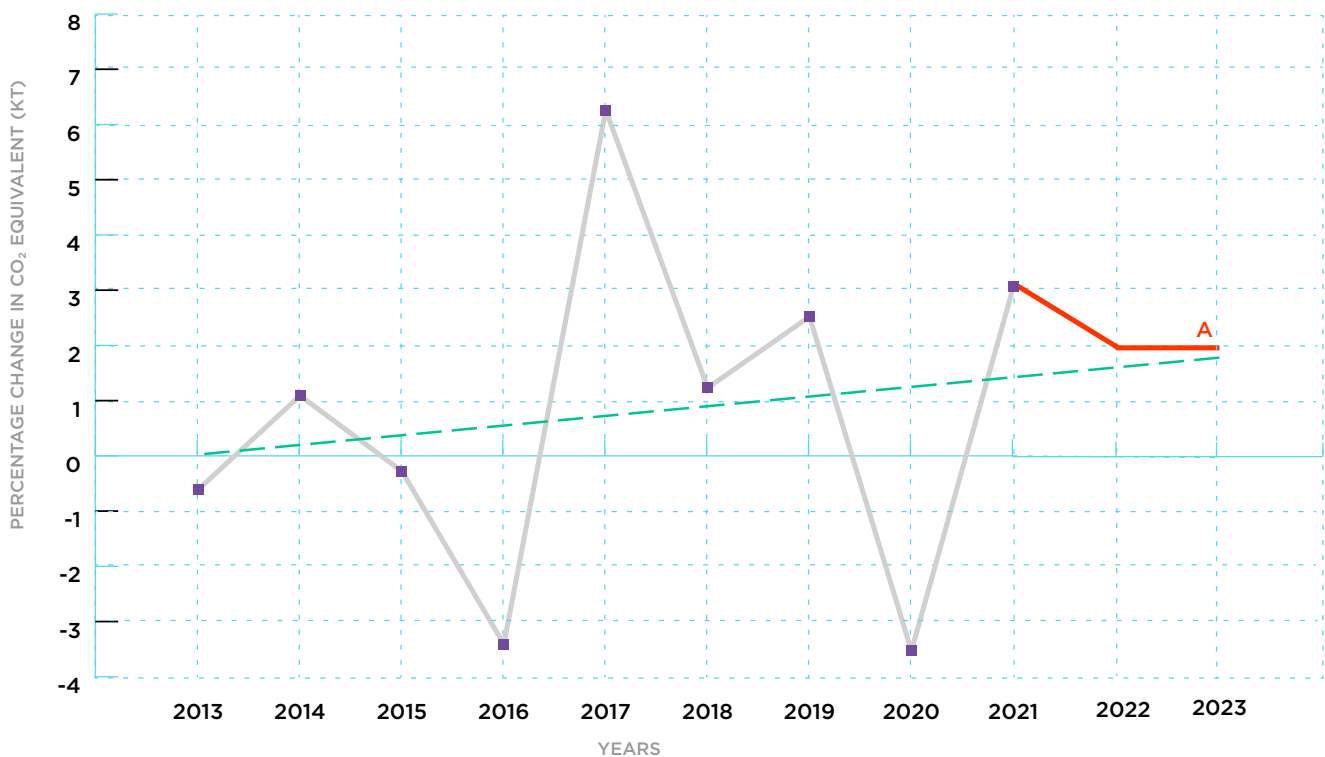
- c. Underline the economic terms and concepts that you have used in your explanation.

## Topic Four:

### Making a justified forecast

#### Topic 4, Activity 1

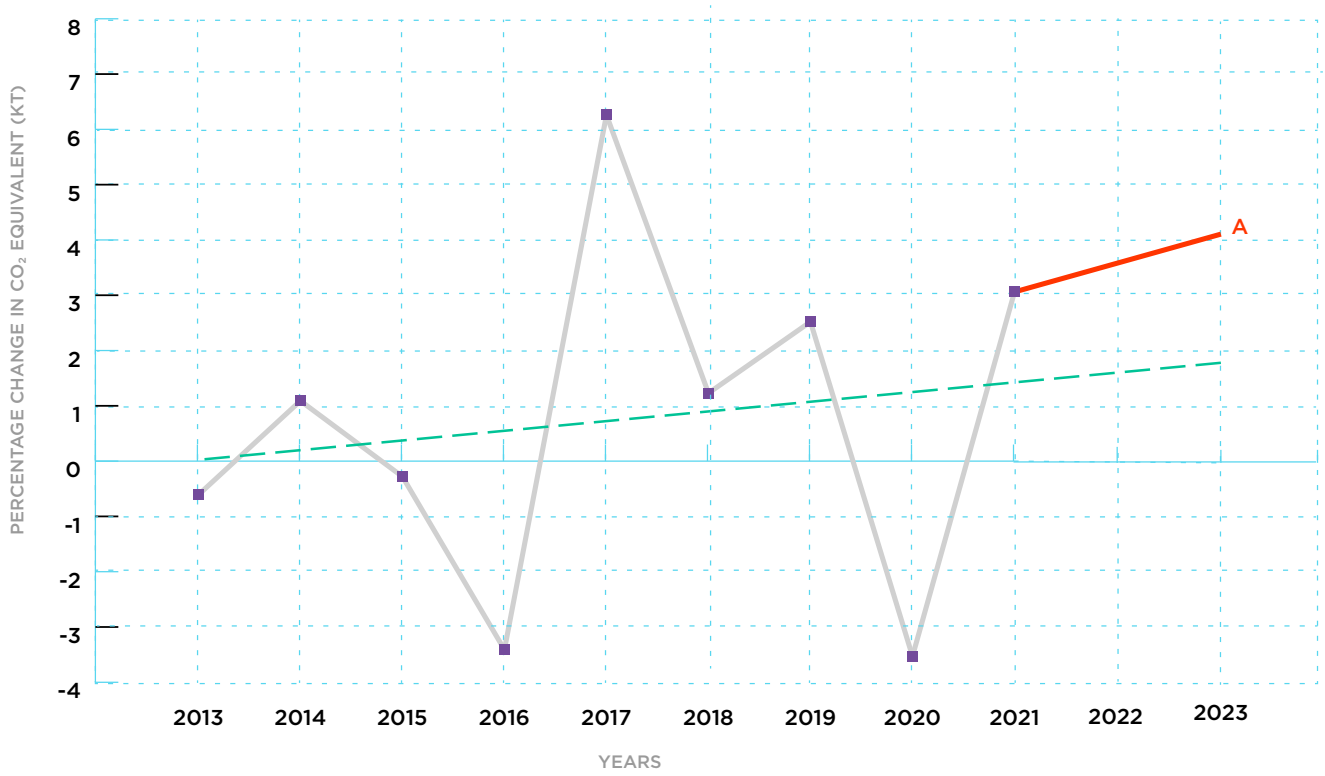
New Zealand Greenhouse Gas Emissions 2013–2021



The example from the Student Booklet, copied above, uses past data as a justification.

- Use the cyclical nature of the economy to provide a justification for the forecast below.

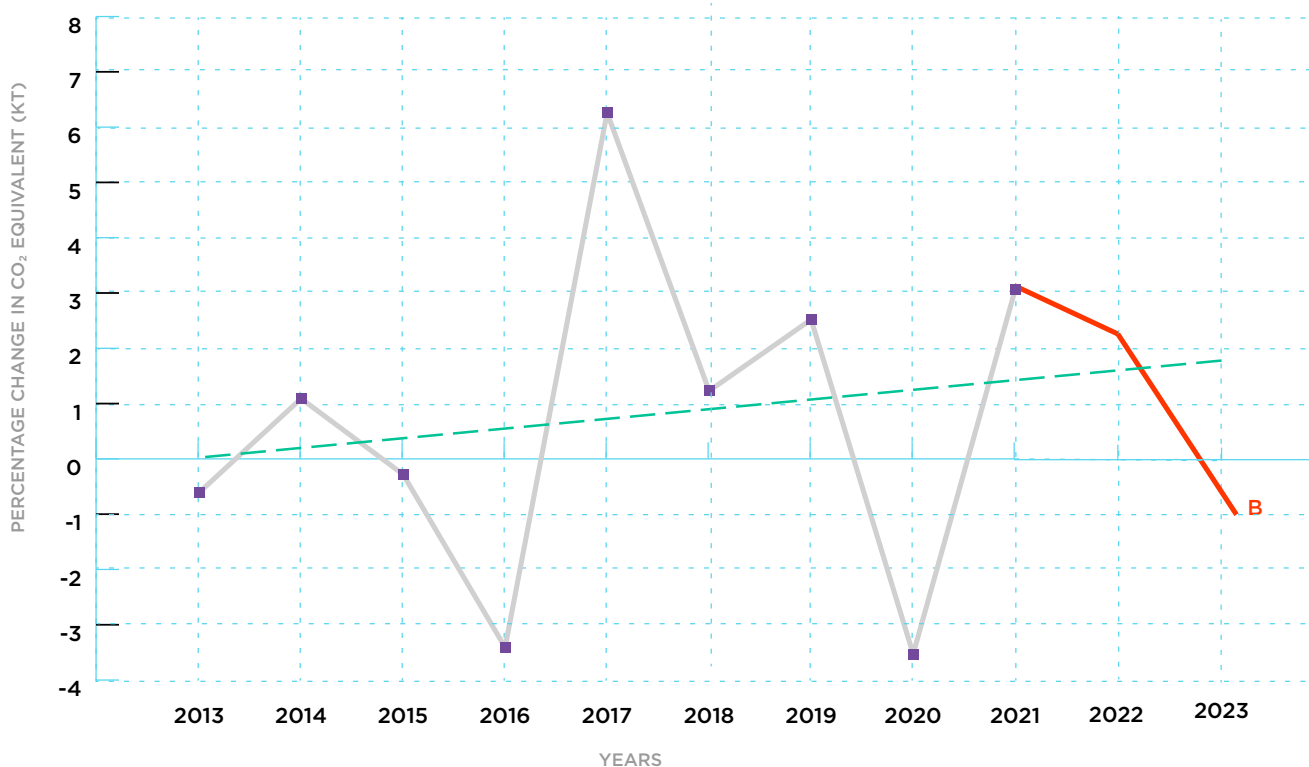
## New Zealand Greenhouse Gas Emissions 2013–2021



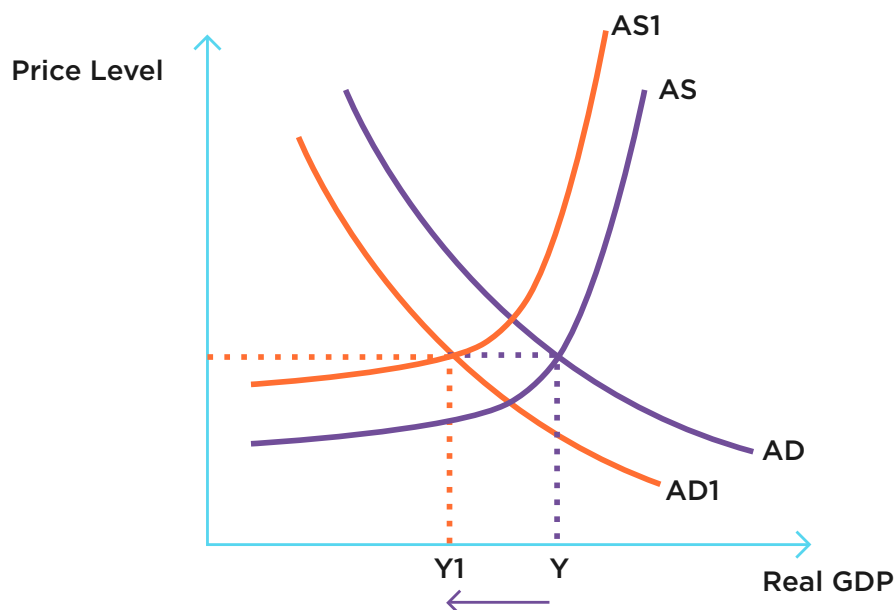
- b. Use the known impact on the economy of high interest rates (due to persistently high levels of inflation) to provide a justification for the forecast below.

As an additional challenge try to use the aggregate supply and aggregate demand model as part of your justification.

### New Zealand Greenhouse Gas Emissions 2013-2021



### AD/AS Model



## References

- 1) <https://www.ird.govt.nz/about-us/tax-statistics/kiwisaver/datasets>
- 2) <https://www.icnz.org.nz/natural-disasters/cost-of-natural-disasters/>
- 3) <https://www.rbnz.govt.nz/statistics/c22>
- 4) <https://www.transport.govt.nz/mot-resources/vehicle-fleet-statistics>

