



The effect of inflation in New Zealand

DATA ANALYSIS AND INTELLIGENCE

Inflation is a rise in prices, which can be translated as the decline of purchasing power over time.

Hypothesis & Question

- How can a large organisation run without breaking its primary integrity towards society? Will this system affect the major population in New Zealand? Is the company willing to take risk for a different form of system?
- H0: The company will run on its USUAL form of system along with the major crisis in economy.
- H1: The company will run on a DIFFERENT form of system along with the major crisis in economy.

Quick summary

Table

302,874.03

Sum of Inflation, GDP def...

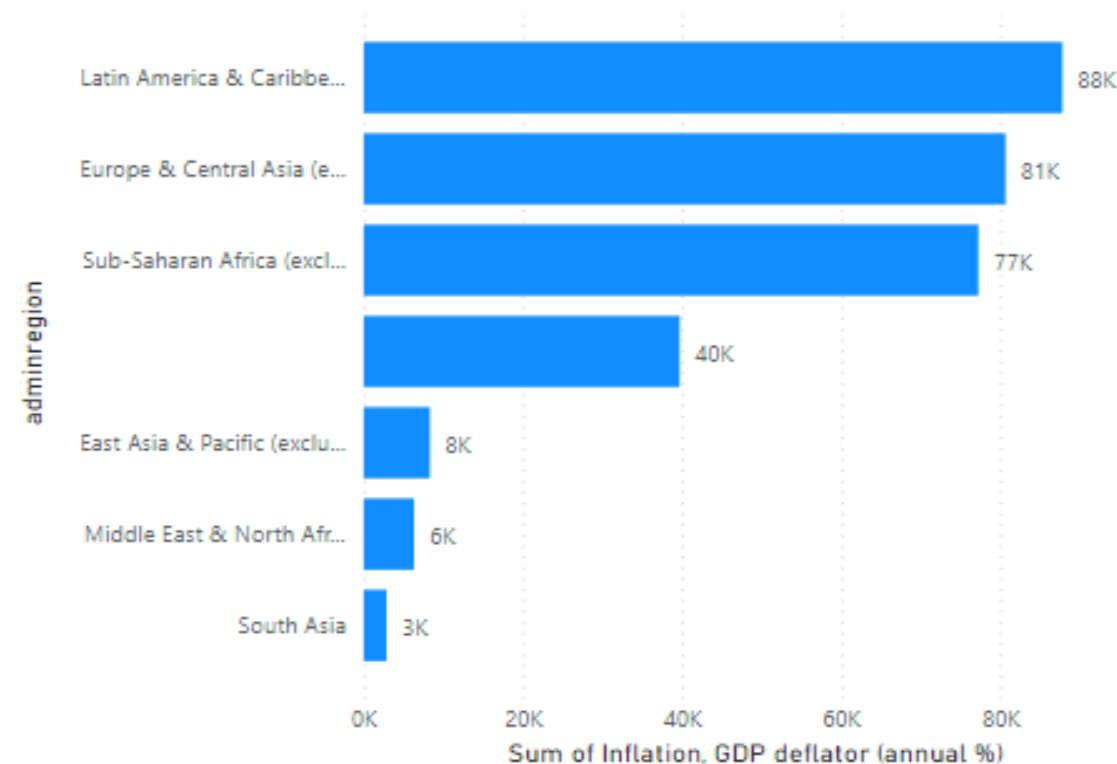
206,537.46

Sum of Inflation, consum...

58,312.14

Sum of Unemployment, t...

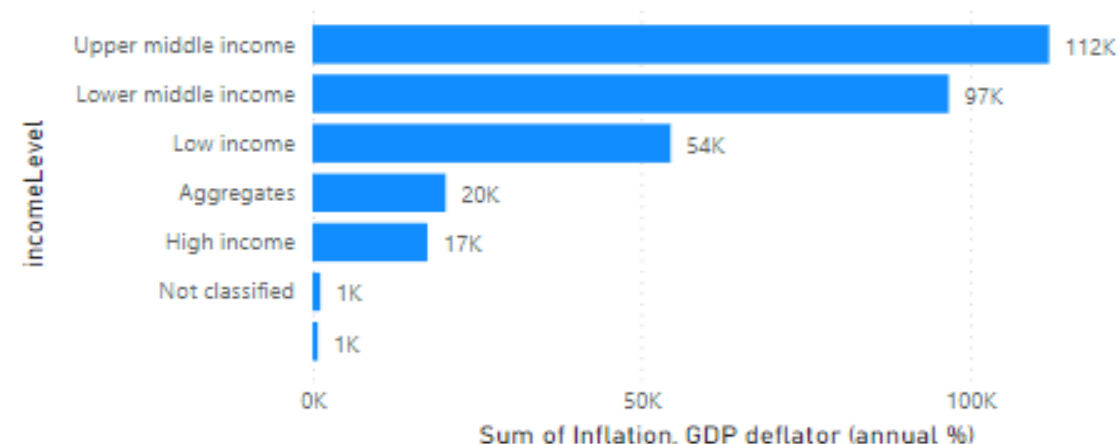
Sum of Inflation, GDP deflator (annual %) by adminregion



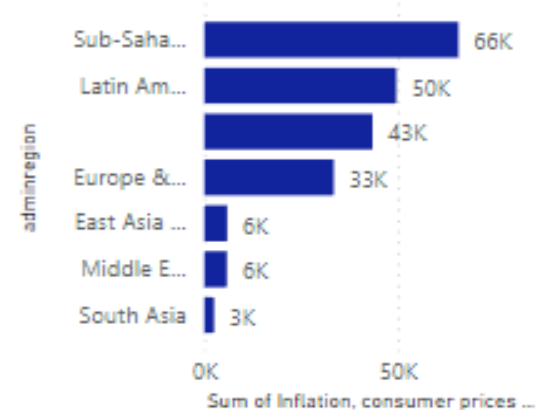
At 87,785.70, Latin America & Caribbean (excluding high income) had the highest Sum of Inflation, GDP deflator (annual %) and was 2,961.98% higher than South Asia, which had the lowest Sum of Inflation, GDP deflator (annual %) at 2,866.96.

Latin America & Caribbean (excluding high income) accounted for 28.98% of Sum of Inflation, GDP deflator (annual %).

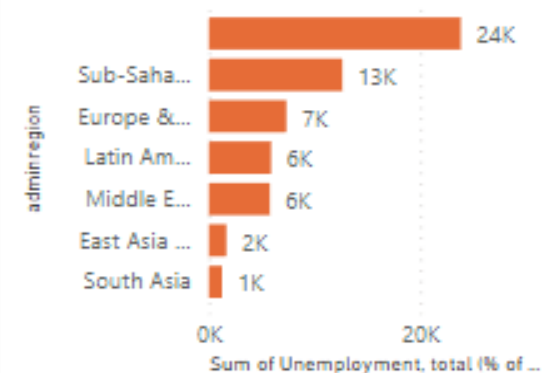
Sum of Inflation, GDP deflator (annual %) by incomeLevel



Sum of Inflation, consumer prices (annual %) by adminregion



Sum of Unemployment, total (% of total labor force) (modeled ILO estimate) by adminregion



In [13]:

```
continuous.describe()
```

Out[13]:

	Inflation, consumer prices (annual %)	Inflation, GDP deflator (annual %)	Real interest rate (%)	Deposit interest rate (%)	Lending interest rate (%)	Unemployment, total (% of total labor force) (national estimate)	Unemployment, total (% of total labor force) (modeled ILO estimate)
count	9582.000000	10981.000000	4171.000000	4587.000000	4413.000000	5175.000000	7285.000000
mean	21.554734	27.581644	5.701813	44.861938	39.848116	8.039002	8.004411
std	308.738258	384.623088	15.832082	1937.879398	1503.303258	5.797750	5.848274
min	-18.108630	-31.904748	-97.693477	-0.412654	0.000000	0.050000	0.100000
25%	2.462827	2.405343	1.903593	3.250000	8.125000	4.170000	4.100000
50%	5.128995	5.732131	5.756335	5.916667	11.891010	6.780000	6.326000
75%	10.095799	10.841762	9.972434	9.756671	17.286667	10.185110	10.480000
max	23773.131774	26765.858252	628.319666	130591.969638	99764.532950	57.000000	38.799999

Quick summary

Table

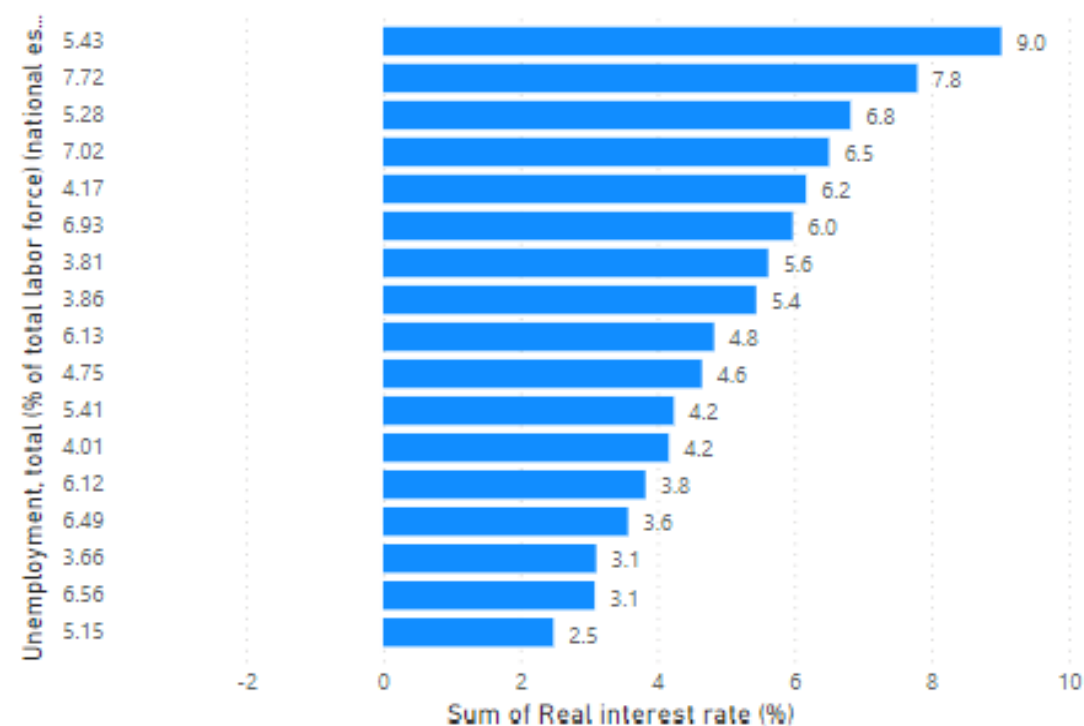
87.70

Sum of Real interest rate ...

137.96

Sum of Lending interest r...

Sum of Real interest rate (%) by Unemployment, total (% of total labor force) (national estimate)

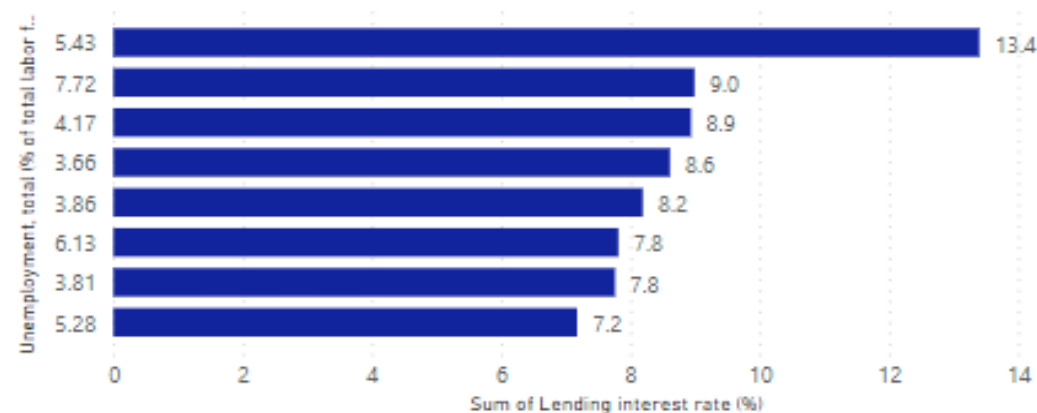


At 9.02, 5.43 had the highest Sum of Real interest rate (%) and was 551.96% higher than 4.33, which had the lowest Sum of Real interest rate (%) at -2.00.

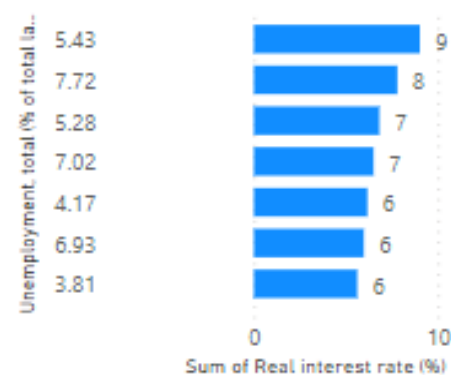
5.43 accounted for 9.83% of Sum of Real interest rate (%).

Across all 20 Unemployment, total (% of total labor force) (national estimate), Sum of Real interest rate (%) ranged from -2.00 to 9.02.

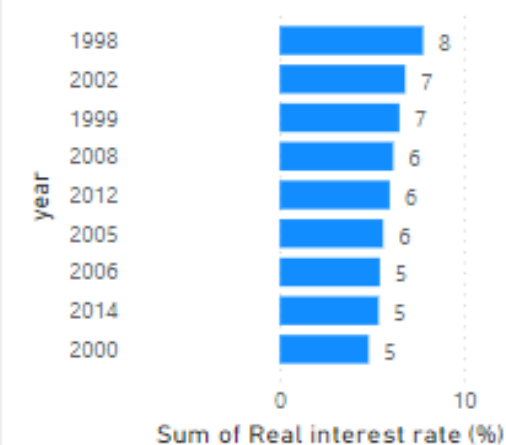
Sum of Lending interest rate (%) by Unemployment, total (% of total labor force) (national estimate)



Sum of Real interest rate (%) by Unemployment, total (% of total labor force) (modeled ILO estimate)



Sum of Real interest rate (%) by year



Big business in New Zealand

- FoodStuff NZ is one of the biggest businesses in New Zealand it operates a number of supermarket chains across the country.
- As one of the leading companies that operates in New Zealand we can assume that there are setbacks in terms of running the company.
- Inflation is one of the leading factors that highly affects a country's economy and New Zealand is not an exception in this kind of crisis.

Inflation: Towards the people

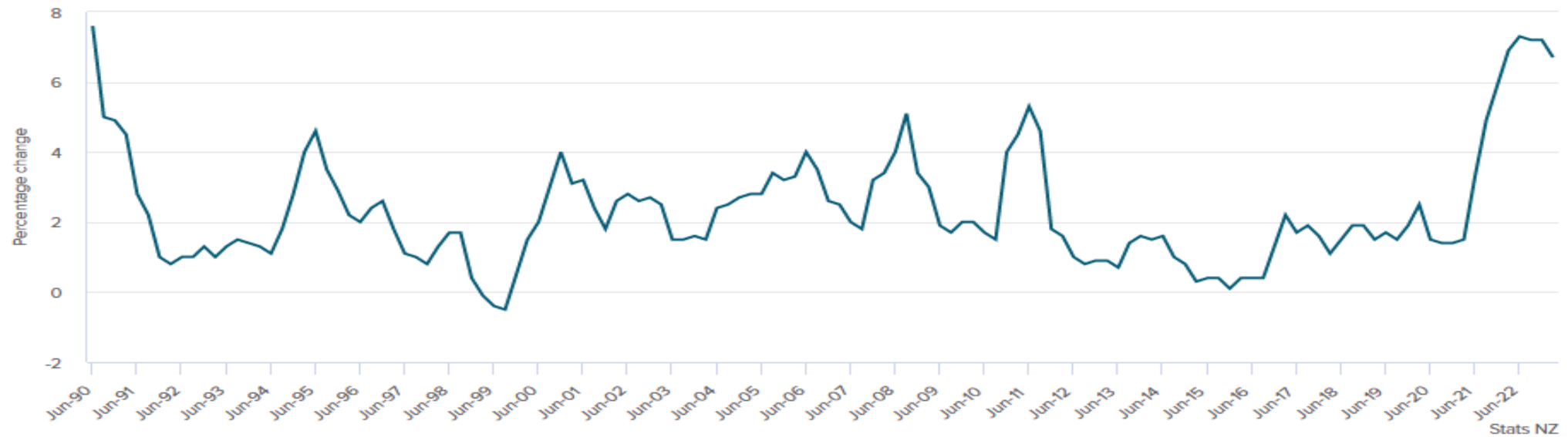
- According to stats.gov.nz (A national government-based statistical agency that is responsible for collecting and analyzing data exclusively in New Zealand)
- As of March 2023 there is a 6.7 increase in the consumers price index (CPI). Compared this percentage back in 2012 and 2019, we can observed that increase was significantly high.

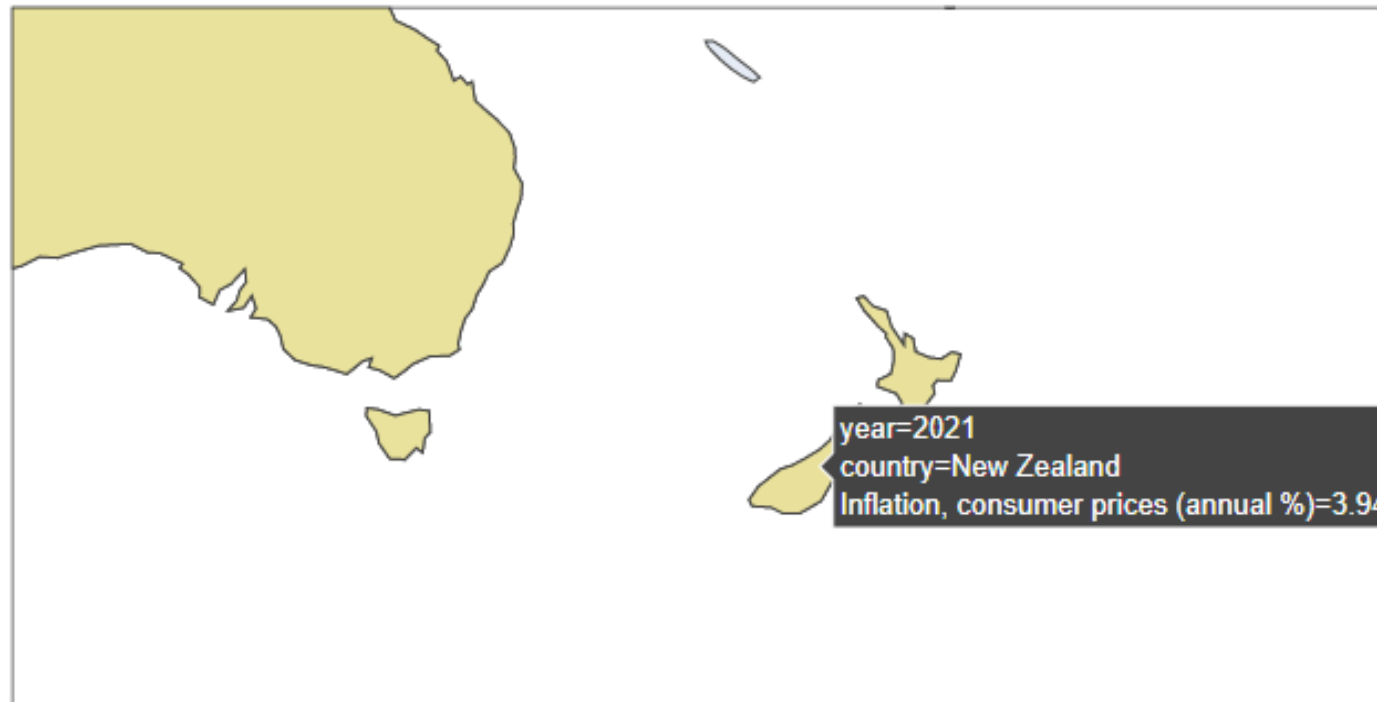
New Zealand: CPI or Inflation graph

GRAPH

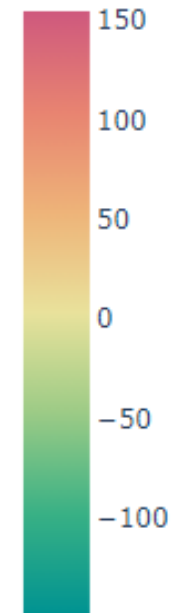
TABLE

Consumers price index, annual percentage change, June 1990–March 2023 quarters

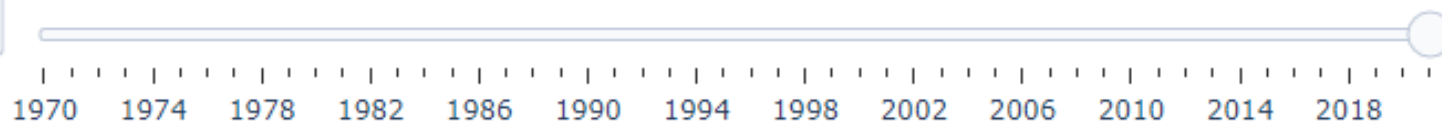




Inflation, consumer prices (annual %)



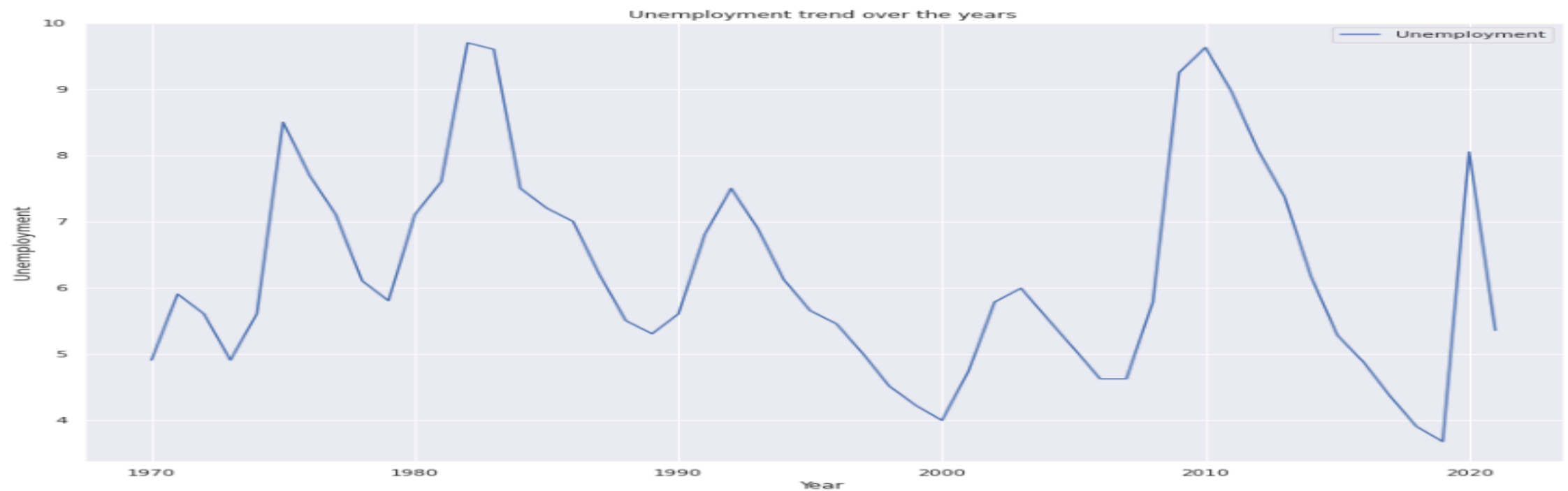
year=2021



Effects: Towards the people

- We have to understand that this organisation is a reliable source of food and supplies which means that we can't ignore the people that are also relying on these supermarket chains around New Zealand.
- One of the major impact that greatly affects the people, are the consumer prices that is also increasing proportionally with the rate of inflation.

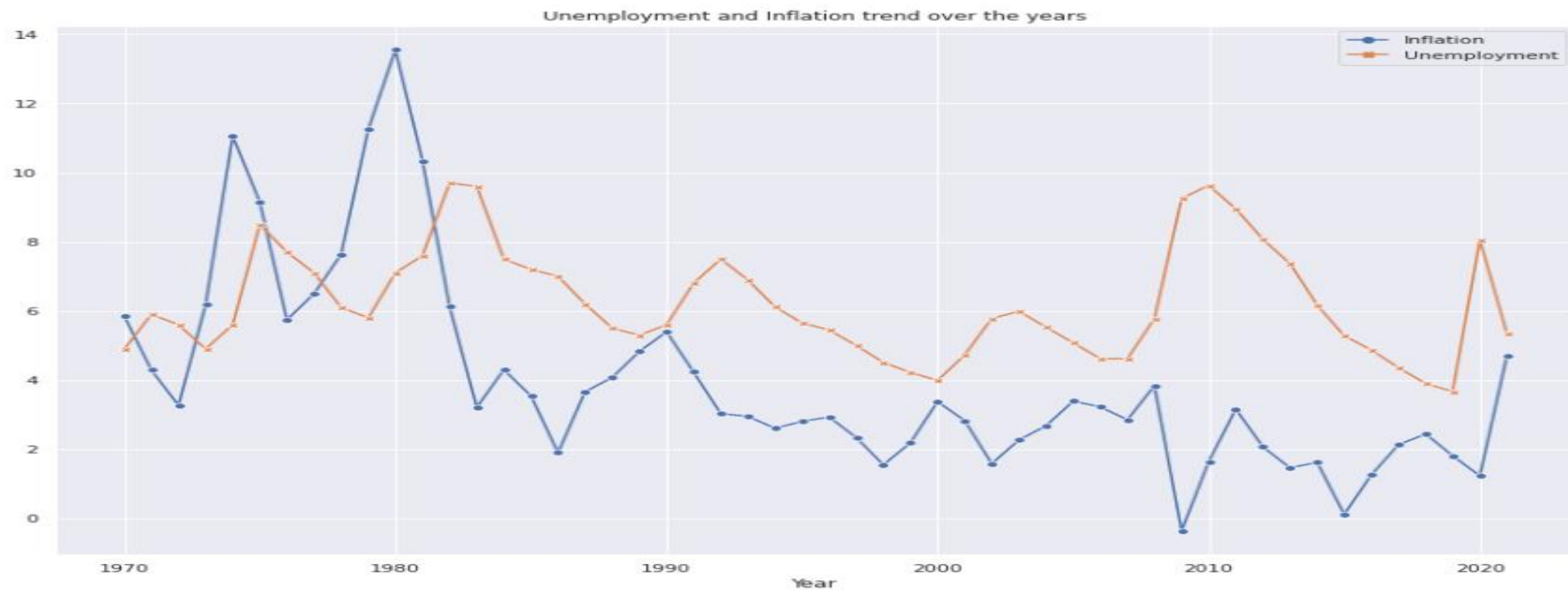
Graph



Effects: Towards the people

- Unemployment will increase
- Prices of foods and supplies will also increase
- Businesses will be forced to raise wages

Graph



Inflation: Foodstuff NZ

- There are several data that can potentially be used to develop good insights to deal with inflation.
- Foodstuff NZ provided several changes that happened during the increase of inflation from last year (2022)
 - The business starts to cut off hours from the workers
 - The business starts to reduce people
 - Increase of wage
 - Based on stats NZ as of June 2022 there is an increase of LCI or Labour Cost Index about 3.4 percent (Annually)
 - An increase of 6.4 percent for the average ordinary time (hourly)

Data

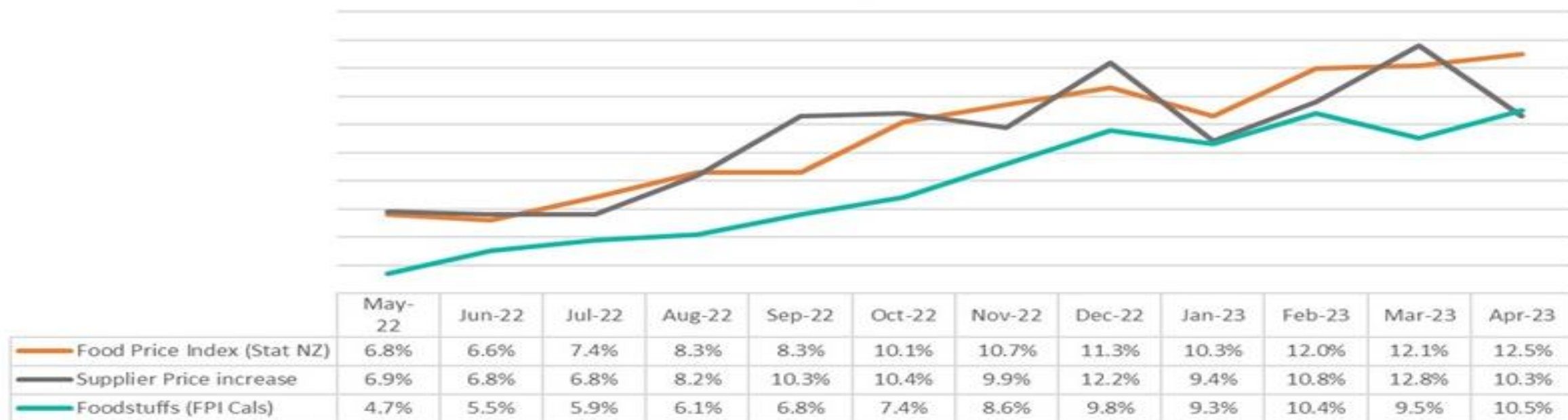
“Supplier costs continue to increase, although momentum in the cost increases to supermarkets has eased compared with 2022. The Infometrics-Foodstuffs New Zealand Grocery Supplier Cost Index (GSCI) shows an 8.8%pa increase in what suppliers charged supermarkets for goods in May 2023.”

("Media release: Cost increases from grocery suppliers to supermarkets increase 8.8% in may," 2023)

Underlying drivers of inflation keeping pressure on food prices

11 May 2023

Food Price Index - Monthly YoY Growth %



Conclusion

- Based on the information that I have gathered there are no accurate numbers in terms of confidence that could help me justify my hypothesis.
- But using the information that was published by a legitimate company such as stats NZ, I have to acknowledge the null hypothesis that the company will run on a DIFFERENT form of system along with the major crisis in economy.
- It is expected that there will be a change in the system considering that the world went into a massive pandemic.

Conclusion

- We can consider that such big businesses in New Zealand are willing to risk doing a different form of system for the sake of the business to continue running.
 - example:
 - The supermarket are one of the industries that was allowed to be open during the pandemic.
- Inflation heavily affected most of the population in New Zealand
 - Unemployment
 - CPI

Thank you



References

Annual inflation 6.7 percent | Stats NZ. (2023, April 20). Home | Stats NZ. <https://stats.govt.nz/news/annual-inflation-6-7-percent/>
(2022). Annual Reports. <https://annualreports.foodstuffs.co.nz>

Annual wage inflation rises to 3.4 percent | Stats NZ. (2022, August 3). Home | Stats NZ. <https://www.stats.govt.nz/news/annual-wage-inflation-rises-to-3-4-percent>

FSNI fact checker. (2022, May 20). Kia ora, we're Foodies North Island. <https://www.foodstuffs.co.nz/news-room/fsni-fact-checker>

Media release: Cost increases from grocery suppliers to supermarkets increase 8.8% in may. (2023, June 12). Infometrics. <https://www.infometrics.co.nz/article/2023-06-mr-grocery-supplier-cost-index-may-2023>

New Zealand inflation rate - 2022 data - 2023 forecast - 1918-2021 historical. (n.d.). TRADING ECONOMICS | 20 million INDICATORS FROM 196 COUNTRIES. <https://tradingeconomics.com/new-zealand/inflation-cpi>

Underlying drivers of inflation keeping pressure on food prices. (2023, May 11). Kia ora, we're Foodies North Island. <https://www.foodstuffs.co.nz/news-room/2023/Underlying-drivers-of-inflation-keeping-pressure-on-food-prices>

What is sustainable business. (n.d.). What is sustainable business. <https://www.business.govt.nz/getting-started/business-planning-tools-and-tips/what-is-sustainable-business/>