

Question 5

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Abstract

In this project, I will analyze the inflationary impact on the quintessential South African braaibroodjie over a three-year period, using data from Stats SA and daily scraped prices from a major retailer. By constructing a Braaibroodjie index and visualizing price trends of its key ingredients, I will create clear and compelling visualizations to effectively communicate the inflation trends to a non-technical audience, while also providing a detailed technical comparison between the Braaibroodjie index and the official SA Inflation index for potential publication by Stats SA.

1. Introduction

In this project, I will analyze the inflationary impact on the quintessential South African braaibroodjie over a three-year period. Utilizing detailed data from Stats SA and daily scraped prices from a major retailer, I will construct a Braaibroodjie index that tracks the price changes of essential ingredients: white bread, cheddar, margarine, tomatoes, onions, salt, and chutney. The goal is to create clear and compelling visualizations that make inflation trends easily understandable for a non-technical audience. Key graphs and tables will illustrate time-series trends, individual ingredient indexes, and rolling correlations.

Additionally, I will provide a comprehensive technical analysis comparing the Braaibroodjie index with the official SA Inflation index. This includes summarizing the data, highlighting discrepancies, and demonstrating the reliability and relevance of the constructed index. The findings will be presented concisely to ensure clarity and impact, with the aim of convincing Stats SA to publish the Braaibroodjie index. The visualizations will be meticulously crafted to be both informative and engaging for the upcoming segment on eNCA, where I will share these insights with viewers.

To begin, I will create a plot to visualize the price changes for each braaibroodjie ingredient over the three-year period. This initial visualization will highlight the individual trends and inflationary

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impacts on white bread, cheddar, margarine, tomatoes, onions, salt, and chutney, providing a clear overview of how each product's price has evolved.

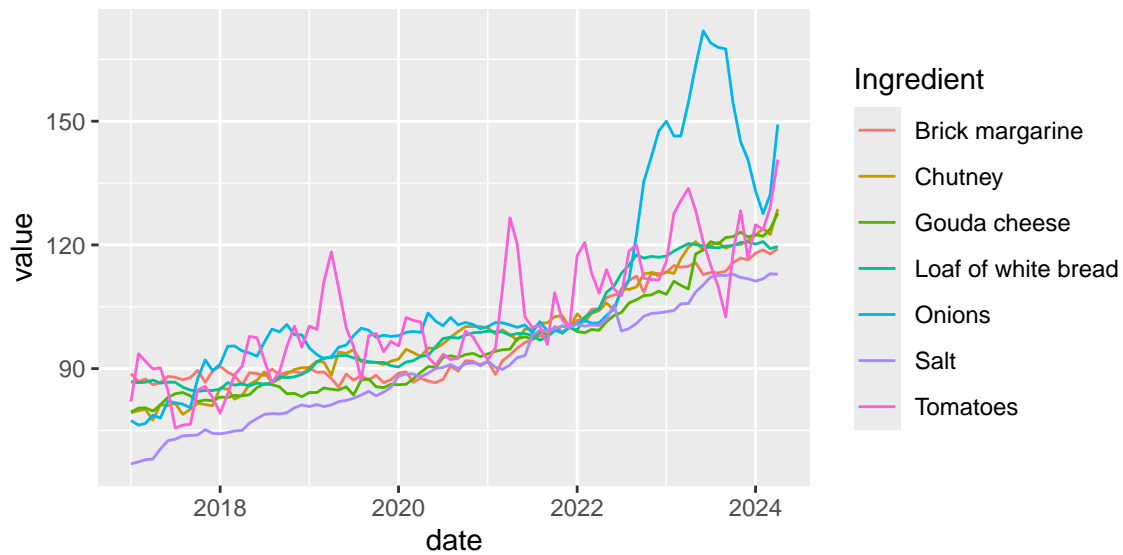


Figure 1.1: Price changes of braai broodjie ingredients over time

This initial visualization reveals that all these prices have increased over time.

Next, I will analyze how the overall price of a complete braai broodjie has changed over time. This will involve aggregating the prices of all the ingredients to understand the cumulative inflationary impact, revealing that a braai broodjie would cost 100 rand more today than it did four years ago.

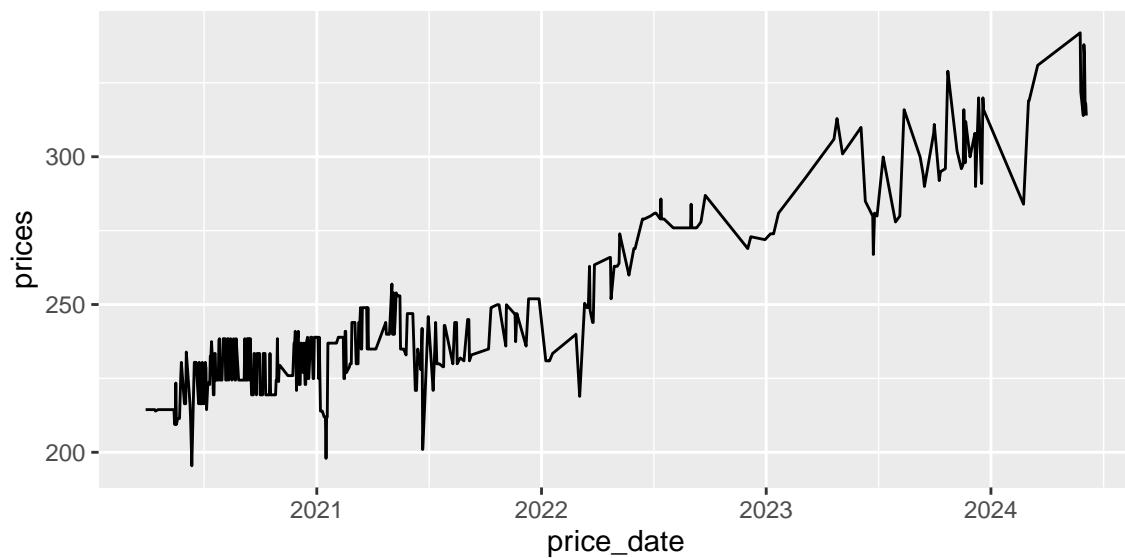


Figure 1.2: Cost of producing a Braaibroodje over time

The braaibroodje index in the context of general consumer price trends

I will then compare my Braaibroodje index to the official CPI index. This comparison will help contextualize the specific inflationary impact on the braaibroodje within the broader framework of general consumer price trends in South Africa.

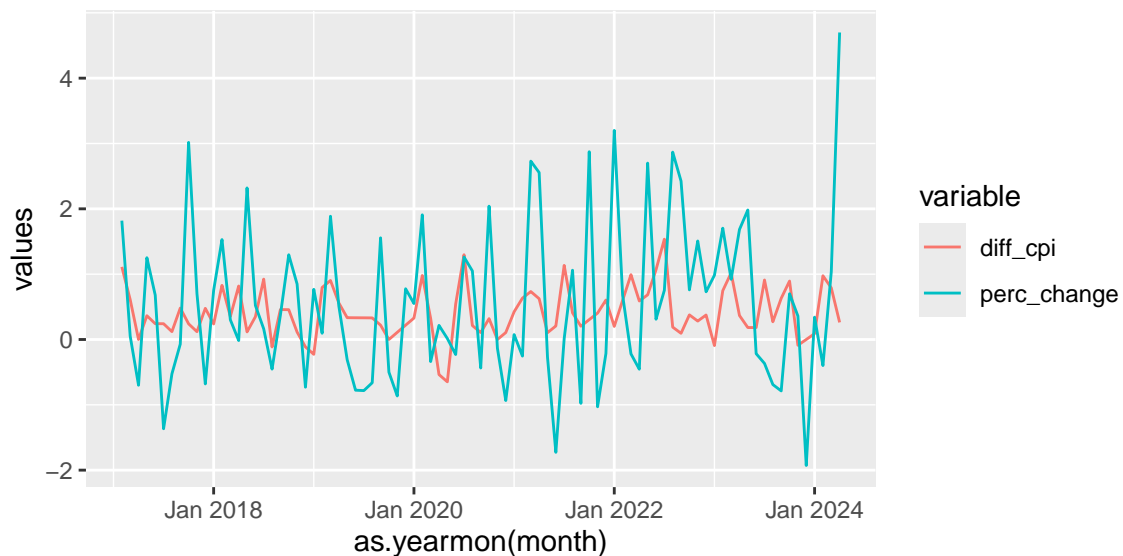


Figure 1.3: Accuracy of the braaibroodje index

The results show that while the changes in the CPI and the Braaibroodjie index are similar, the price fluctuations are more extreme for the Braaibroodjie. This indicates that the specific ingredients of the braaibroodjie have experienced greater volatility compared to the overall basket of goods measured by the CPI.