Analyzing Grocery Pricing Trends of Bacel Products in Toronto*

Insights from Vendors: Voila, Metro, and No Frills

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November 14, 2024

This paper analyzes grocery product pricing data from three Toronto vendors (Voila, Metro, and No Frills) using data collected through screen-scraping from Project Hammer. Prices were standardized to 100g units to ensure comparability across vendors. The findings show that there is no correlation between the vendors and the Becel products that are sold. However, a slight pattern is seen that most customers buy products that are in between the range $1.1 and $1.3 per. 100g.

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#Data{#sec-data}

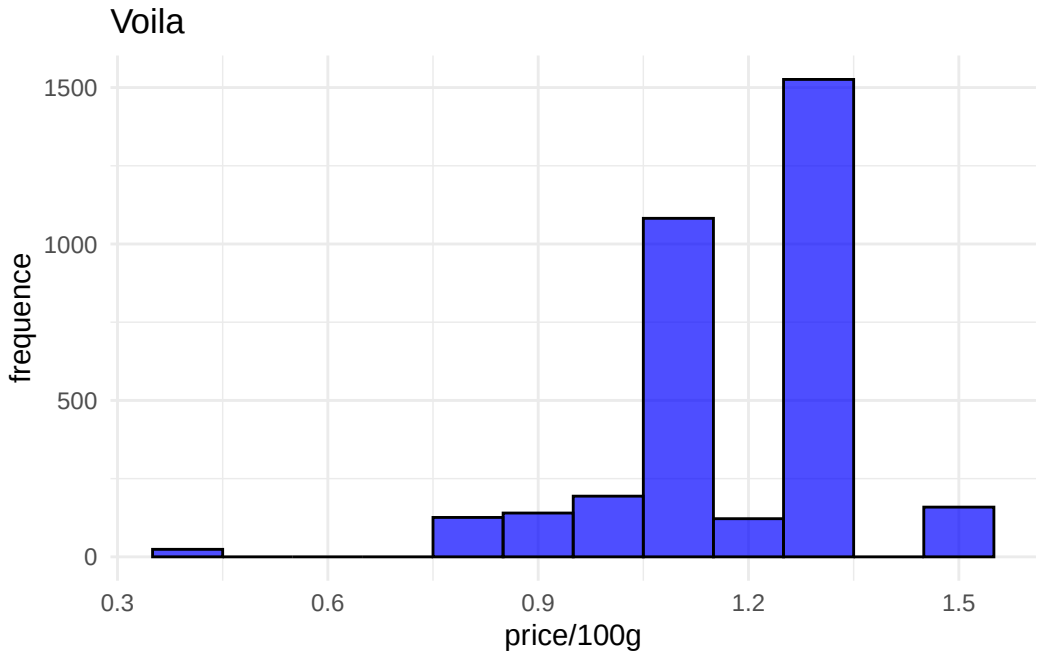
The preparation and manipulation of the original data is conducted using SQL (Chamberlin and Boyce 1970). The steps to conduct the present analysis on the prepared data are carried out using the statistical programming language, R (R Core Team 2023).

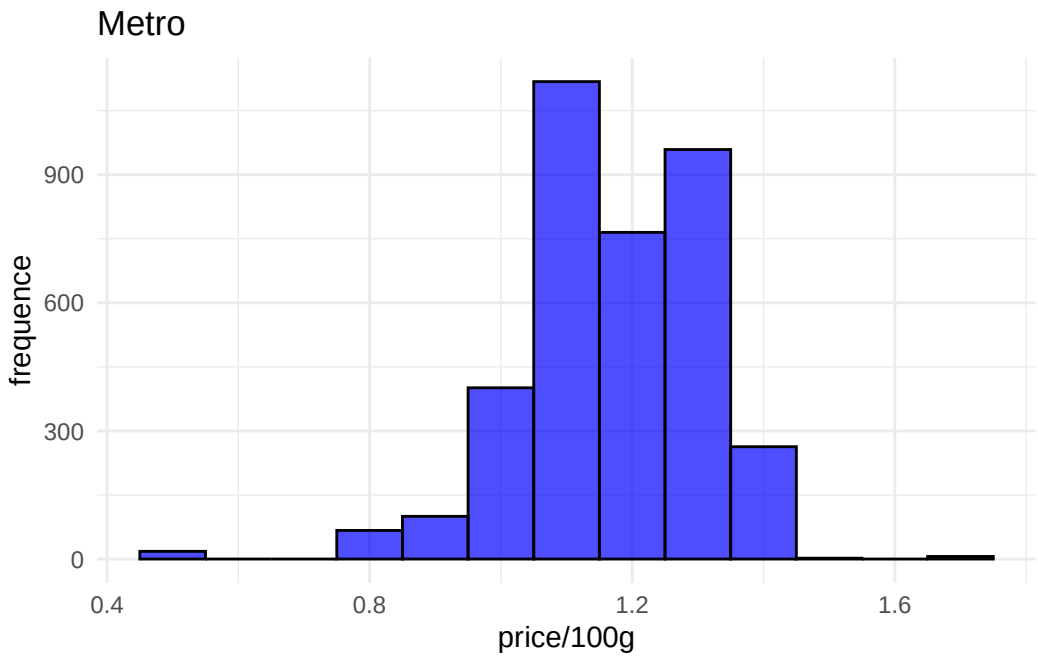
The data for this analysis was obtained provided by Project Hammer (Filipp 2024), and it contains data about product details (e.g. product names, brands, current prices, and old prices, and units for products) for 8 different grocery vendors (Voila, T&T, Loblaws, No Frills, Metro, Galleria, Walmart Canada, and Save-On-Foods). The data is collected through the process of screen-scraping website UIs from vendors within a neighbourhood in Toronto. Data from Project Hammer is available from February 28, 2024, and as this data is collected by extracting information from grocers' websites, it is possible to have missing data, which is

*Code and data are available at: https://github.com/JuliaJLee/grocery_vendor_analysis

more thoroughly addressed in Section . Through the method of screen scraping, the original data aims to measure and reflect grocery vendor decisions and trends in product pricing.

For this analysis, three vendors - Voila, Metro, and No Frills - are considered along with their respective pricing for products that are 100g. The "Price" variable for each vendor in this analysis reflects the current price of their products at the time in which the data was downloaded. The variable, "Units", represents the size of products measured using weight metrics (i.e. grams or kilograms) and counts (i.e. the number of items within a given product). In this case, a weight of 100g is selected to ensure consistency in units across products and vendors. It is also important to highlight that this analysis only considers products from the brand, Becel, across the three vendors.

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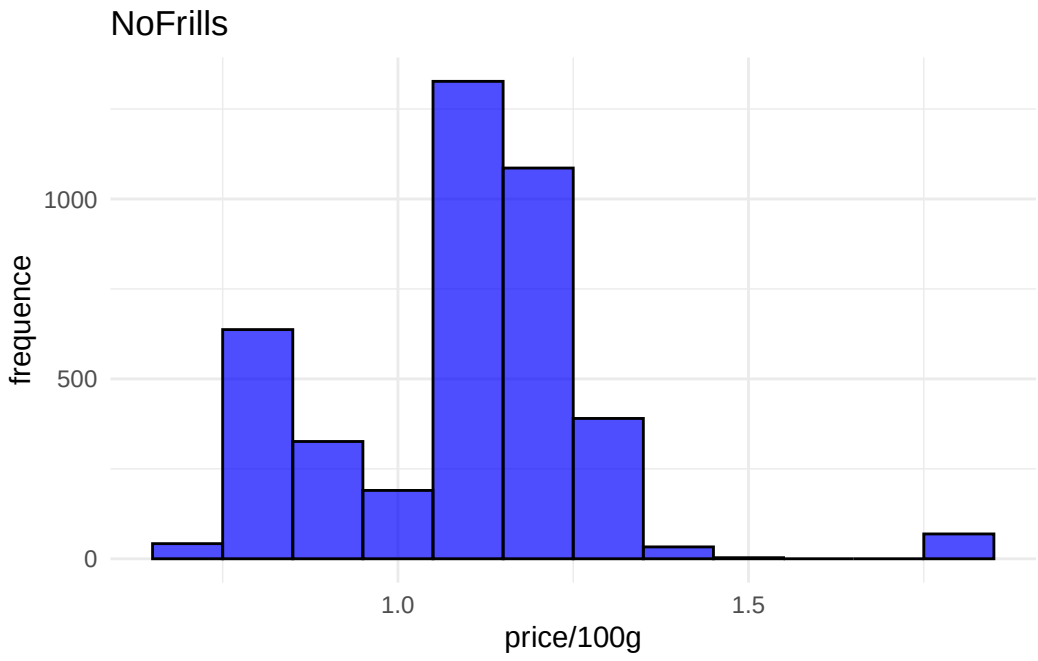
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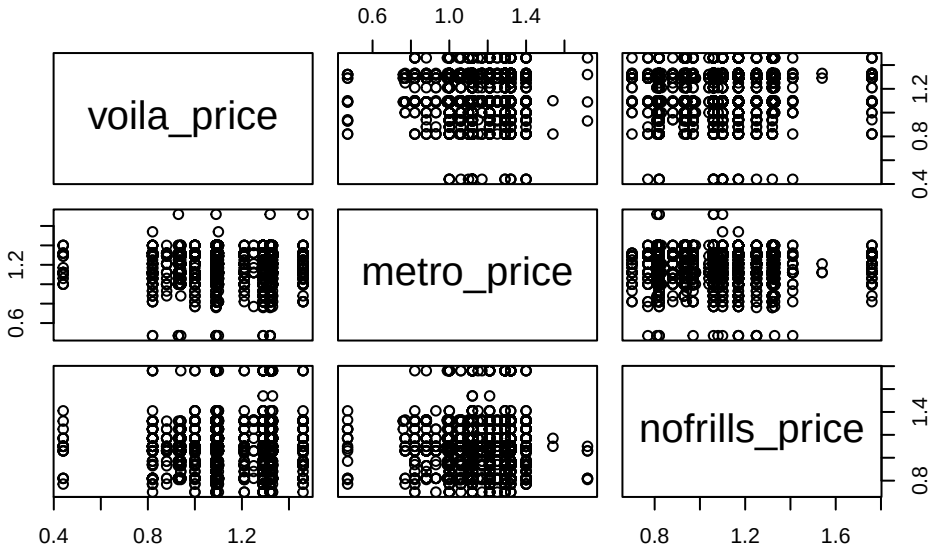

Discussion

Chamberlin, Donald, and Raymond Boyce. 1970. *Structured Query Language (SQL)*. IBM.

Filipp, Jacob. 2024. "Project Hammer." https://jacobfilipp.com/hammer/.

R Core Team. 2023. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/.