

COFFEE CUP

BUSINESS ANALYSIS ASSESSMENTS REPORT

BY

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Background

Coffee Cup is into sale of beverages with focus on variants of coffee and tea. It has branches spread across all provinces and territories of Canada. With 102 stores, the profit or return on investment for shareholders is not encouraging. In order to develop growth strategy for profit maximization, sales data across all 102 stores were collected for 2012, 2018, and 2019. Coffee Cup's goal is to be *the neighborhood coffee house you know and love, and you think of when you desire a freshly brewed cup of hot coffee or desire a specialty tea selection.*

Coffee Cup Mission statement

"To provide the world's ultimate coffee shop experience with the highest quality products, most: to have inviting stores, friendliest staff and best value."

In this analysis, some of the performance metrics the management of Coffee Cup wants to look at include Cost of Goods, Store Performance, Customer Loyalty, Profits and Sales, Product Inventory, and any other metrics that the data analyst might want to consider.

Coffee Cup's corporate values include to earn the trust and loyalty of their customers. In achieving this, they want to:

- ✓ *BE REAL - Staff will their authentic and unique self to every situation and opportunity to serve one another and guests better than anyone else.*
- ✓ *EXCEED EXPECTATIONS - Staff will challenge themselves and others around them to perform exceptionally.*
- ✓ *BE PASSIONATE – Staff will personalize service for our guests*

The Coffee Cup's core values are:

- ❖ *PASSION FOR PEOPLE Respecting one another and creating a harmonious environment*
- ❖ *PASSION FOR SERVICE - Delivering our uncompromising Integrity, Quality, and Service with a smile.*
- ❖ *PASSION FOR KNOWLEDGE - Always staying relevant and ahead of the rest.*
- ❖ *PASSION FOR BUSINESS - Providing the best in everything.*

Data Integrity Issues

There are 4248 rows, and 20 columns in the dataset. The dataset gives insights into sales and profits across all provinces and territories in Canada. It covers sales activities for 2012, 2018, and 2019. Dataset was observed to have some integrity issues. Data cleaning was done to improve the accuracy of the analysis. Business decisions are best taken when data leading to such decision has a high standard of integrity.

Name of stores were observed to be in numerical form. Units of measurements for profits, margins, etc were not well labelled. It is difficult to say whether the profits are in \$'000 or \$'000,000. However, in the course of my analysis, I assumed profit to be \$'000. (thousandth)

Data cleaning tools

- Python (Jupyter Notebook): to determine null values
- Microsoft Excel: for sorting and identifying number of rows with "0: value
- Tableau: for transformation of date column

Table below summarizes the data cleaning issues observed with corresponding action or decision taken

Data Cleaning Issues					
S/N	Column Name	Description	#Rows	%	Remarks
1	Budget COGS	Number of "Zeros"	82	2	Ignored in analysis
2	Budget Sales	Number of "Zeros"	24	1	Ignored in analysis
3	Budget Profit	Number of "Zeros"	152	4	Ignored in analysis
4	Marketing	Number of "Zeros"	66	2	Ignored in analysis
5	COGS	Number of "Zeros"	66	2	Could not be optimized. May impact computations for Net Margin and Gross Margin
6	Profit	Number of "Zeros"	32	1	Could not be optimized. May impact computations for Net Margin and Gross Margin
7	Inventory	Negative values	88	2	Ignored in analysis
8	Date	(a) Not in a date format (b) The year 2012 has incomplete data on products. 2013 to 2017 were missing			(a) Transformed to date format using Tableau. (b) 2012 was ignored in analysis

Basic Questions and Insights 1: Business Questions the Data Can Answer

Several business problems could be solved by the dataset given. Some of these problems and question include:

1. From the dataset, we can determine the peak season and off-peak season. We observed that sales were highest during the warm season (summer)
2. Sales by product and product type could be determined
3. Most profitable cities by net margin and gross margin
4. Most profitable province by net margin and gross margin
5. Best performing store by gross margin
6. Best performing store by net margin
7. Ratio of cost of goods sold to profit
8. Effects of marketing on sales



9. Number of stores across cities
10. Spread of stores across provinces and territories
11. Products percentage contribution to profit
12. Global growth in sales from 2018 to 2019
13. What is the most sold product?
14. What product has the lowest cost of goods
15. Sales performance in 2018 and 2019. Which year has better sales?
16. Which province has the most inventory?
17. Profit margin by product
18. Which store has the highest expenses?
19. Quarterly sales by cities and provinces
20. Quarterly sales by product and product types?

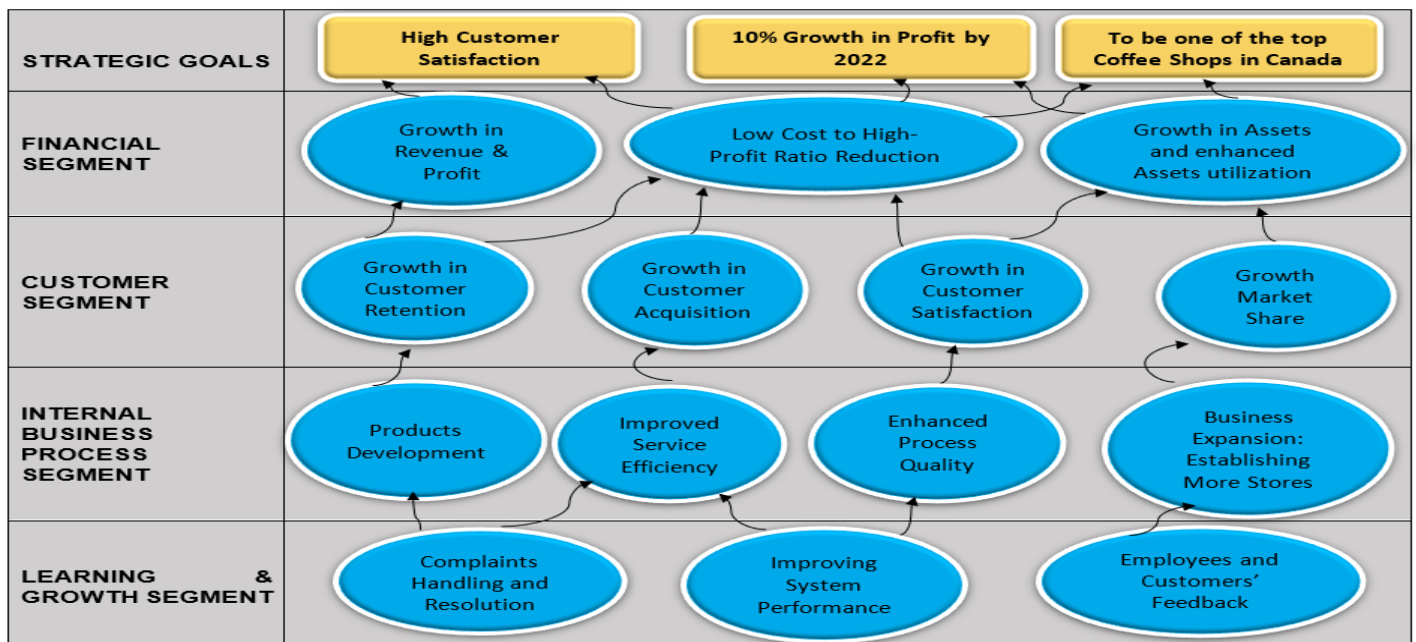
Basic Questions and Insights 11: Business Questions the Data Cannot Answer

There were some key issues and concerns the data could not answer. Such questions include:

1. The most profitable store is #6000. Store #6000 is situated at Amherst in Nova Scotia. Amherst is a small town of less than 10,000 people. (https://en.wikipedia.org/wiki/Amherst,_Nova_Scotia) The dataset cannot answer if Coffee Cup is the only coffee shop in Amherst.
2. The dataset cannot give insights to competitors analysis. Where and who are our competitors?
3. The dataset cannot explain the business strategy of having more stores in less populated province like Saskatchewan and Prince Edward Island.



The Strategy Map

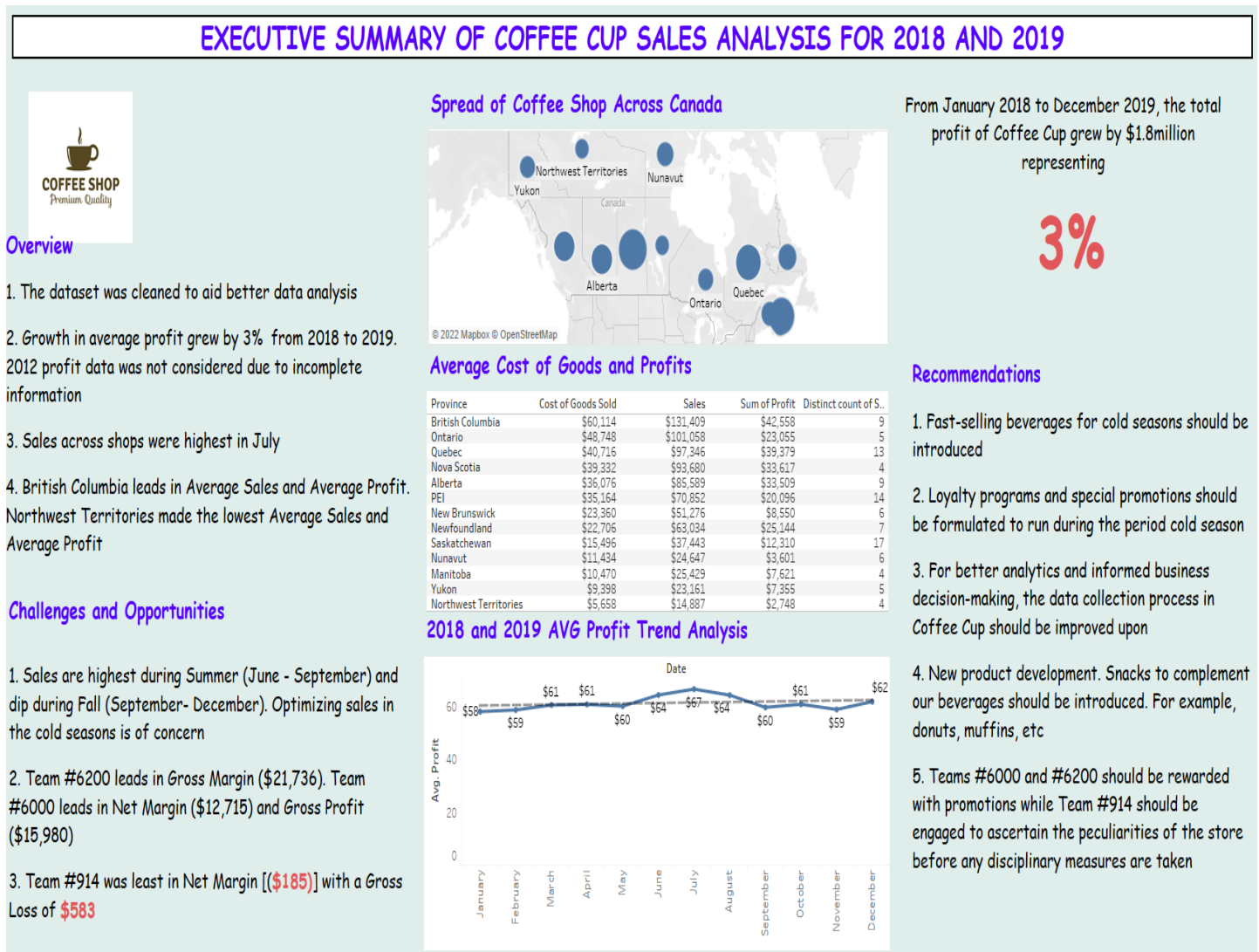


Insights on Data Analysis: The Executive Dashboard

Below is a copy of the executive board It gives overview of the entire dataset. It can be observed that profit grew by 3% from January 2018 to December 2019. 3% percent growth in 24 months is not impressive. This is a cause for concern. If Coffee Cup must remain in business, detailed analysis, and investigation into the cause of low growth in profit must be carried and necessary actions taken.

It is quite impressive that Coffee Cup has good spread across Canada. There are 102 stores spread across all provinces and territories in Canada. Coffee Cup can leverage on its remarkable spread to grow profit.

Executive Summary



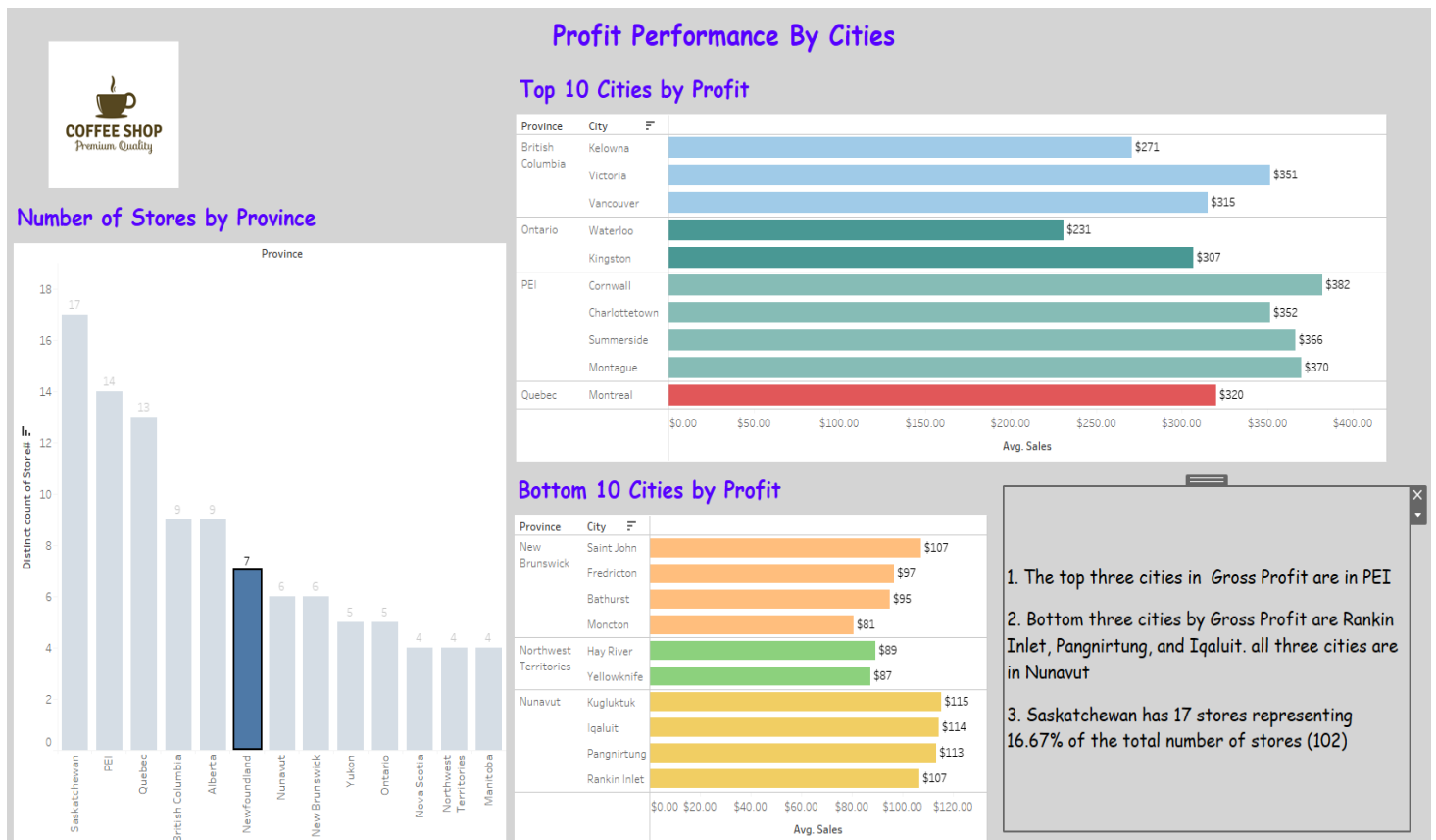
Sales gets to its peak in summer and sees its lowest dip in winter. This tends to explain why British Columbia is having the highest in sales and profit. British Columbia is the warmest province in Canada., Store #6000 led I Gross Margin and Gross Profit by \$12,736 and \$15,980 respectively. Store #6200 was the best in Gross Margin with a value of \$21,736. However, figures from store #914 are not encourage. The store came lowest in Net Margin of **(\$185)** and a loss with a value of **(\$583)**.

Profit Performance by Cities

British Columbia was the highest in sales followed by Ontario. The two provinces have 9 stores and 5 stores respectively. British Columbia sold \$131,409 while Ontario sales was \$101,058. Ironically, Saskatchewan and Prince Edward Island with 17 stores and 14 stores respectively are not on top of sales ladder.

However, it is important to also state that the highest four cities in profit were in Prince Edward Island

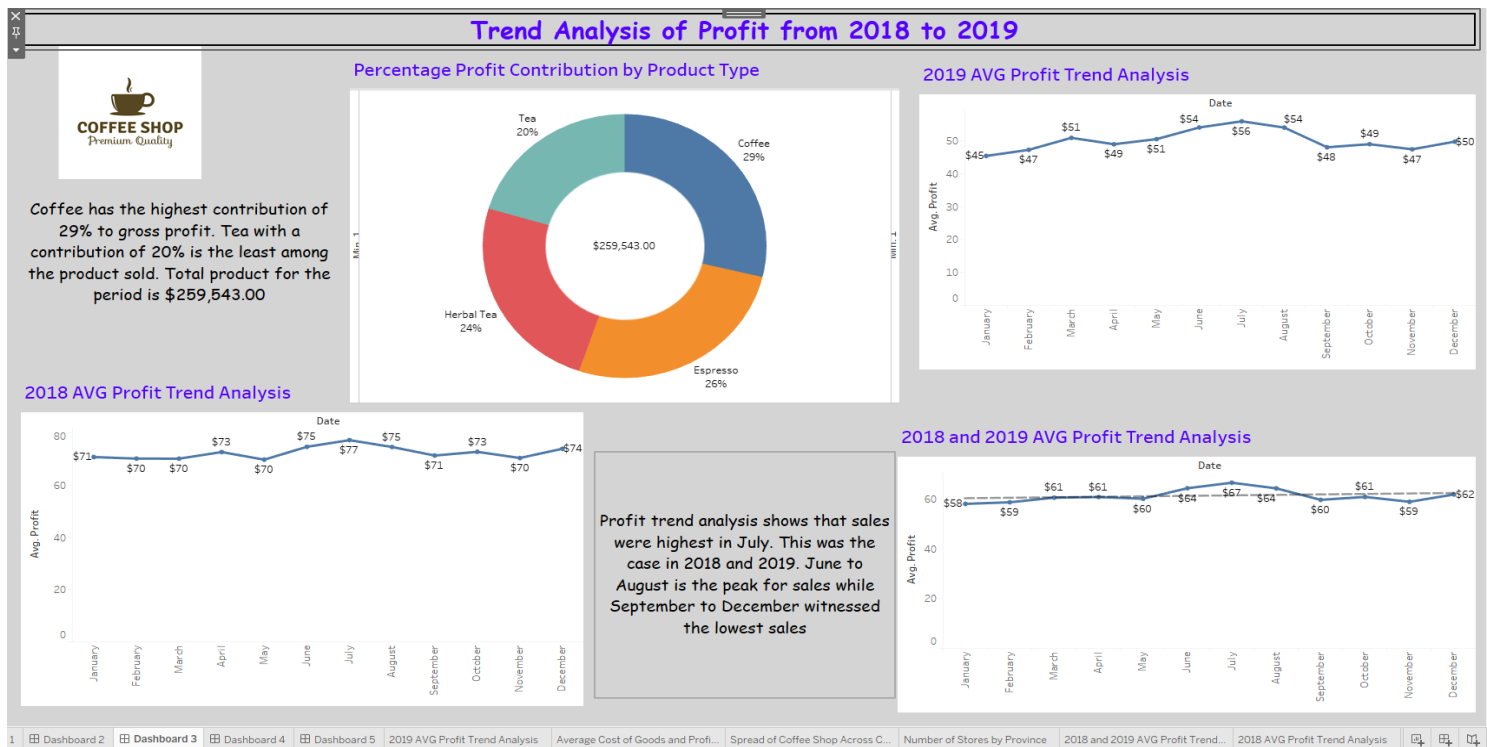
- ✓ Cornwall - \$382
- ✓ Montague - \$370
- ✓ Summerside - \$366
- ✓ Charlottetown - \$352



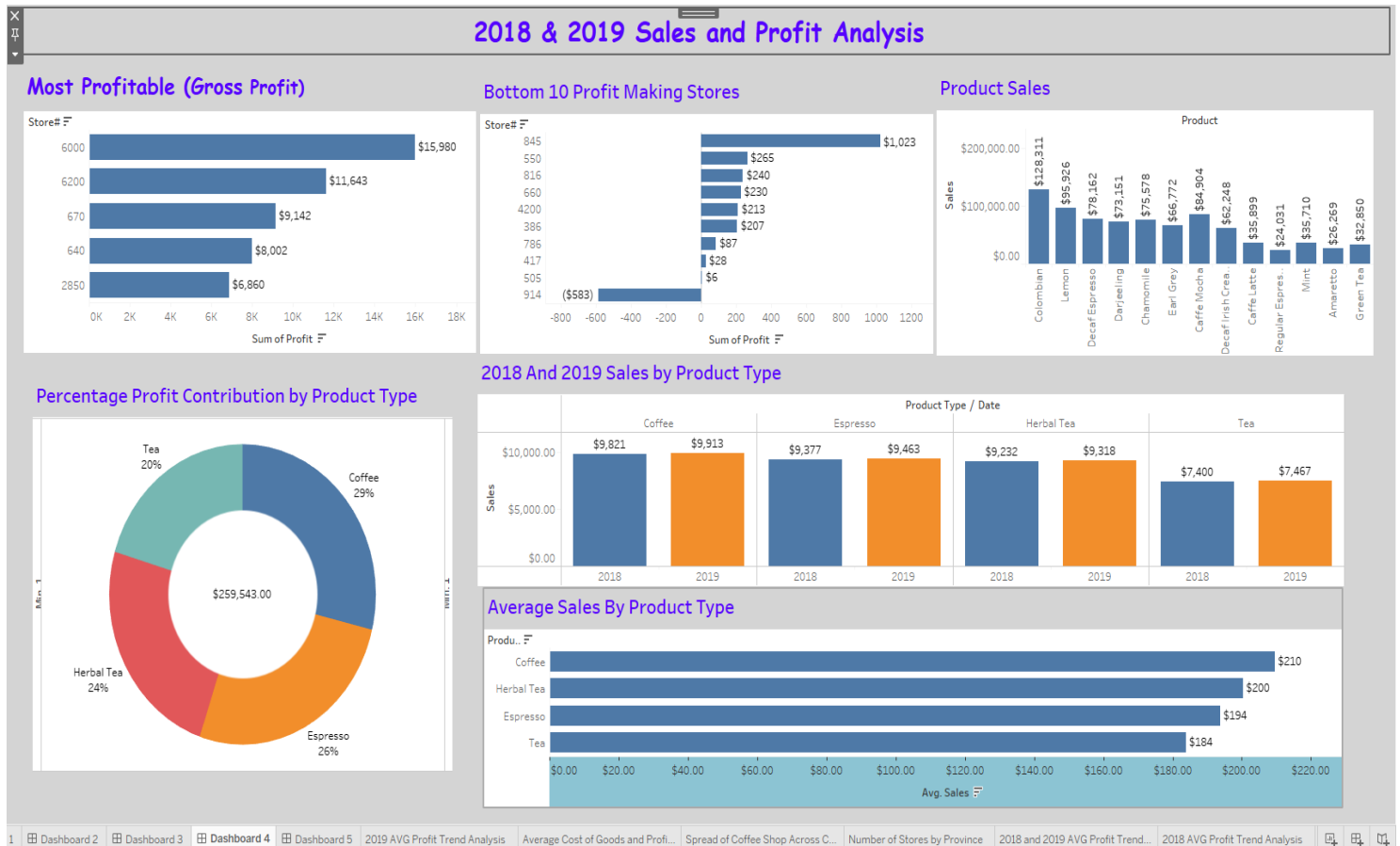
17 Stores in Saskatchewan represent 17% of total number of stores owned by Coffee Cup.

Trend Analysis of Profit from 2018 to 2019

Growth in profit from January 2018 to December 2019 was 3%. Sales was highest in the summer season and lowest in winter. Coffee had the highest contribution representing 29% of total profit realized. Tea with 20% had the lowest contribution. Increase in sales in summer may explain why British Columbia is the best in performance. Summer is the warmest season, and British Columbia is the warmest province.

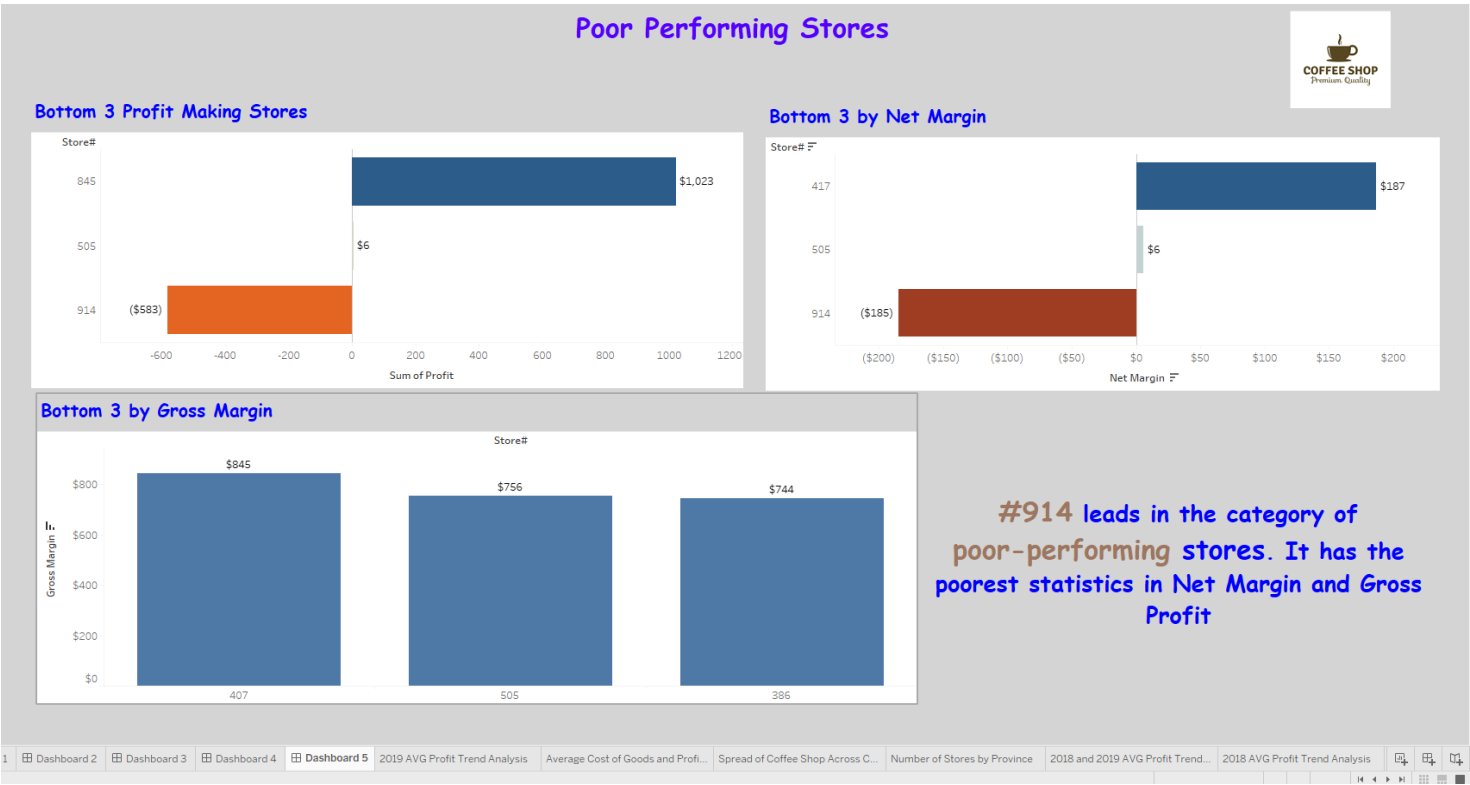


In 2018, the highest average profit was \$77 recorded in July. This was lower in 2019 when \$67 was recorded. The lowest average profit in 2018 was \$70 recorded in February, March, and November. For 2019, lowest average profit was recorded in February and November with a value of \$59.

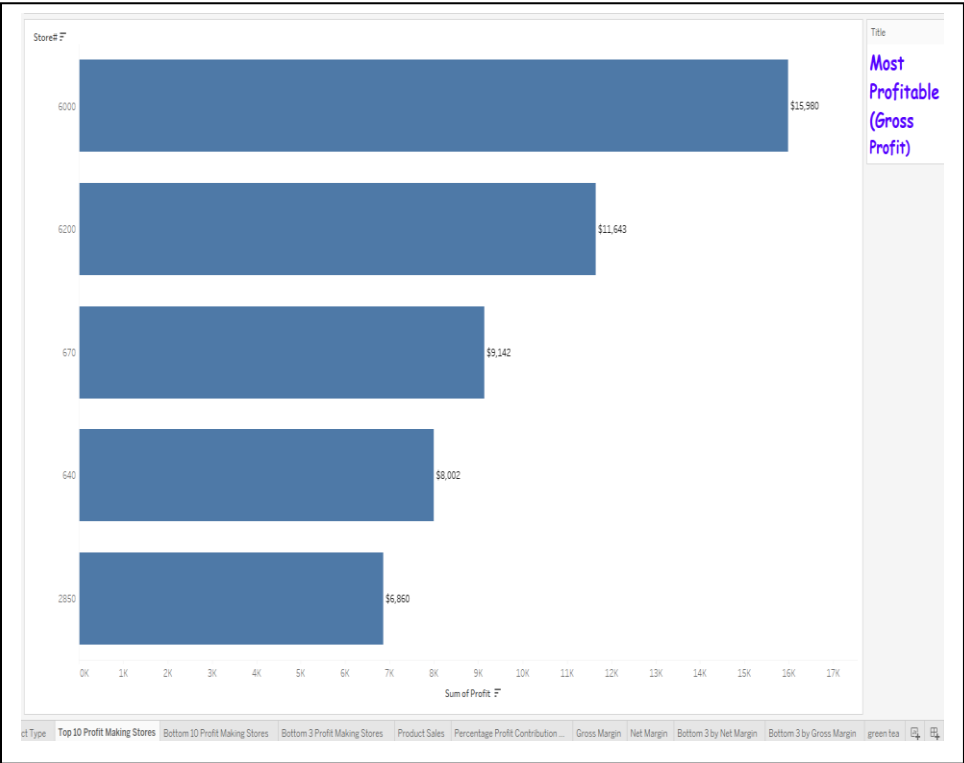


Poor Performing Stores

Store #914 led in the category of poor-performance. It has the poorest statistics in net margin (\$185) and gross profit (\$583).



Most Profitable Store (dollars)



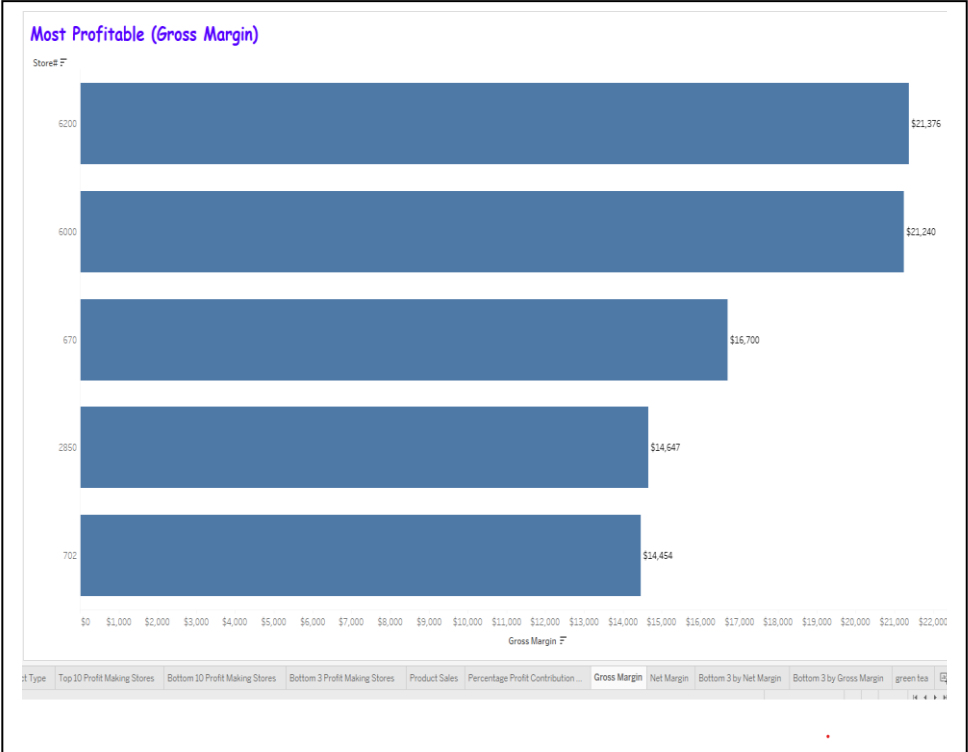
Store #6000 had the highest Gross Profit of \$15,980. The store location is in Amherst, Nova Scotia with a population of about 10,000 people.

Population (2021)^[1]

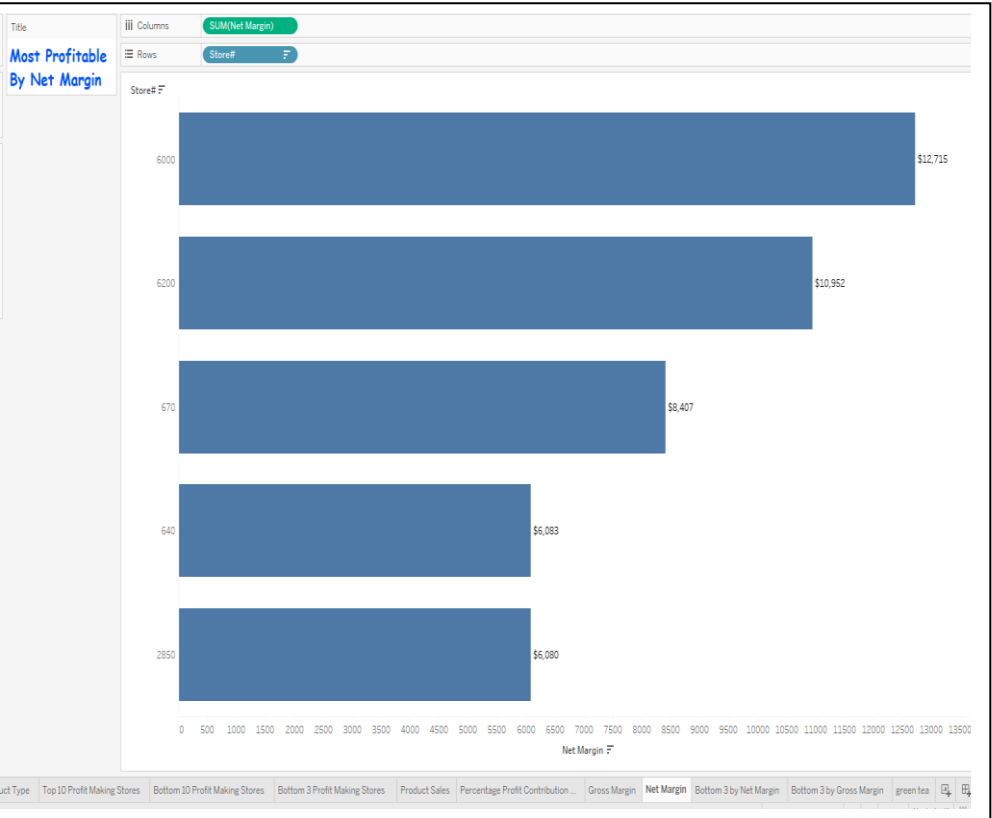
• Town	9,404
• Density	779.4/km ² (2,019/sq mi)
• Urban	9,550
• Urban density	770/km ² (2,000/sq mi)
• Change 2016-21	▼-0.1%
• Census Ranking	452 of 5,162

MOST profitable (best GROSS margin)

Store #6200 has the highest Gross Margin of \$21,376. Store #6200 is situated in Cape Breton Island, Nova Scotia. Population of Cape Breton Island is less than 135,000.(source: Wikipedia)



MOST profitable (best NET margin)



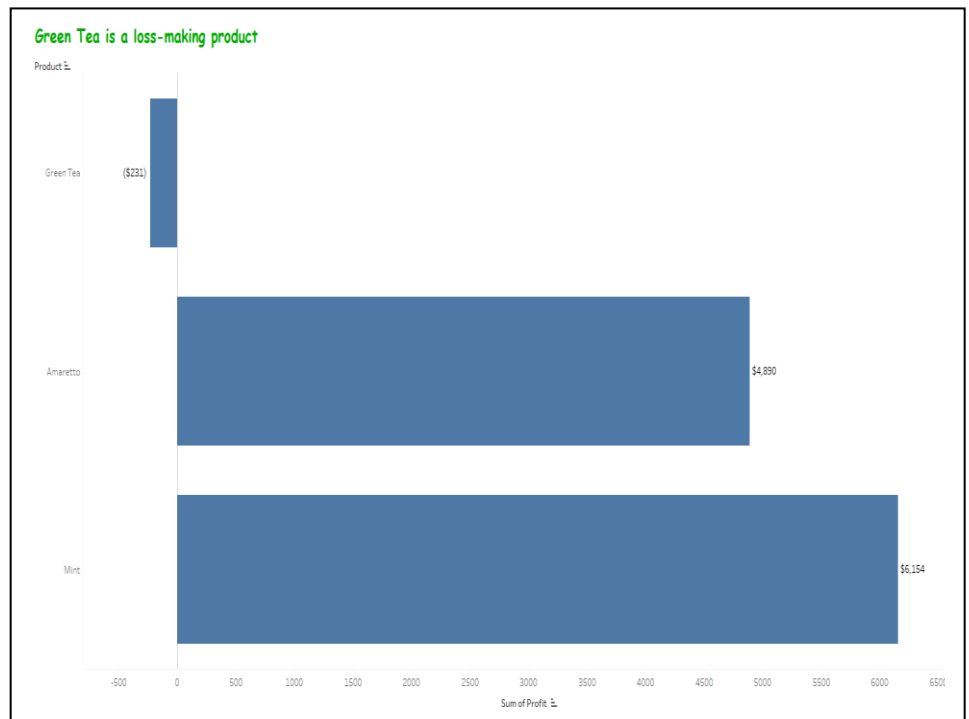
Store #6000 has the highest Gross Net Margin of \$12,715. Store #6000 is situated in Amherst, Nova Scotia. Population of Amherst is less than 10,000 people.



Which products should be dropped and why?

Loss of \$231 was recorded against Green Tea. With my earlier assumption that profit is in thousandth (\$'000), this implies a loss of \$231,000. This is a significant amount. Therefore, it would be suggested that

- I. Green Tea shop be dropped from our menu list. This will help in preventing more losses by keeping Green Tea in our menu.
- II. Comprehensive research and survey should be carried out to enable us to ascertain the cause of losses in the sale of Green Tea. If the



cause is found to be within our control, then leakages could be corrected and the stores will resume sale of Green Tea, else, Green Tea is forever dropped from our menu list.

Which products should be added and why?

- Complimentary products should be introduced to help improve sales.
- Products like donuts and muffins can be consumed together with tea, coffee, etc.
- Introduction of chocolate drinks (hot and cold variants) is also recommended.
- A closer look at our sales analysis indicates that our sales are best during the summer. It is a generally acceptable knowledge that ice-creams sell optimally during the summer season. We are also recommending the introduction of ice-cream to our menu list



Growth Strategy



- ✓ Loyalty programs and promotions should be well-defined for the peak season (Summer) and off-peak season (Winter).
- ✓ More stores should be established in BC.
- ✓ Product diversification (complementary products)
- ✓ Comprehensive survey and research should be done ascertain customers taste (preferences)
- ✓ Rebranding should be done after the introduction of new products. Rebranding would be sensitive the public (market)

Recommendations

- We are making losses from Green Tea; hence it should be dropped from our menu.
- Complimentary products should be introduced to help improve sales. Products like donuts and muffins can be consumed together with tea, coffee, etc.
- Introduction of chocolate drinks (hot and cold variants) is also recommended
- Growth Strategy: (1) Loyalty programs and promotions should be well-defined for the peak season (Summer) and off-peak season (Winter). (2) More stores should be established in BC. (3) Product diversification (complementary products)
- For better analytics and informed business decision-making, the data collection process in Coffee Cup should be improved upon
- Teams #6000 and #6200 should be rewarded with promotions while Team #914 should be engaged to ascertain the peculiarities of the store before any disciplinary measures are taken