



BDM Capstone Project

Final Submission Report

Title

**Fruitful Solutions: Finding Opportunities for Growth
and
Profitability of a Fruit Chaat Vendor's Business**

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Executive Summary

This report marks the end of the BDM capstone project on data collected over three months. Throughout this period, the implementation of paperless tools helped in improving the pace and consistency of the data collection and analysis.

Shri Balaji Fruit Chaat Bhandar owned by Keshav Ram Kashyap being a fruit chaat and juice vendor in the unorganised sector was very quick to adapt the paperless tools like google forms for data collection.

The use of such tools not just for analysis but for data analysis but for data collection has enabled a very consistent data format that is being collected given the nature of the business which is unorganised and does not track records and statistics of their sales and inventory.

This final report being collected over a period from 20-April-2023 to 30-June-2023 contains a comprehensive analysis, both for the sales and the inventory management.

Besides analysis on sales and inventory the report also includes other recommendations regarding weather and places where to setup business for the day.

Explanation of Analysis Methods

During the course of my analysis, I employed a variety of analysis methods.

Google Forms emerged as a pivotal tool, offering a easy to use format which involved less typing and more buttons so that filling the form was easy to fill on a daily basis to gather data easily.

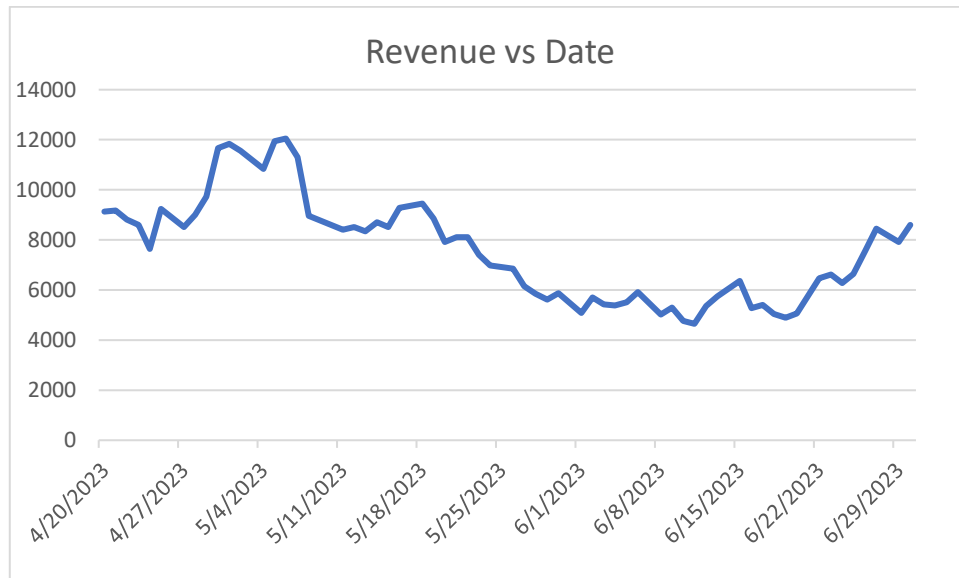
The google form being linked to my email ID, facilitated the automated population of data directly into Excel sheets, minimizing manual intervention and reducing the risk of errors. This approach not only enhanced the efficiency of data collection but also ensured that data collection is less hectic, paperless and consistent. This approach was very ideal for Mr Keshav who is not very tech savvy hence making the collection process digital while simple was important.

Central to this process of data analysis was excel and its features like VLOOKUP and pivot tables, offering functionalities for data manipulation and aggregation. VLOOKUP enabled to efficiently retrieve and consolidate relevant information from disparate datasets. Pivot tables, on the other hand, provided a framework for summarizing and visualizing, allowing for exploration of trends and patterns.

A variety of charts and graphs are used to better visualize and understand the nature of the data and make conclusions.

Findings in the Collected data

Revenue



The average revenue earned is **7597.29 Rs** and it is observed that the peak revenue is observed in the month of April and the lowest in the month of June.

Looking at the data, to conclude that the revenue is declining would be wrong, there are other factors that are at play which is affecting the slight dip in revenue aside from the usual traffic fluctuations the weather is by far the most significant player that affects the fluctuations in revenue and profits.

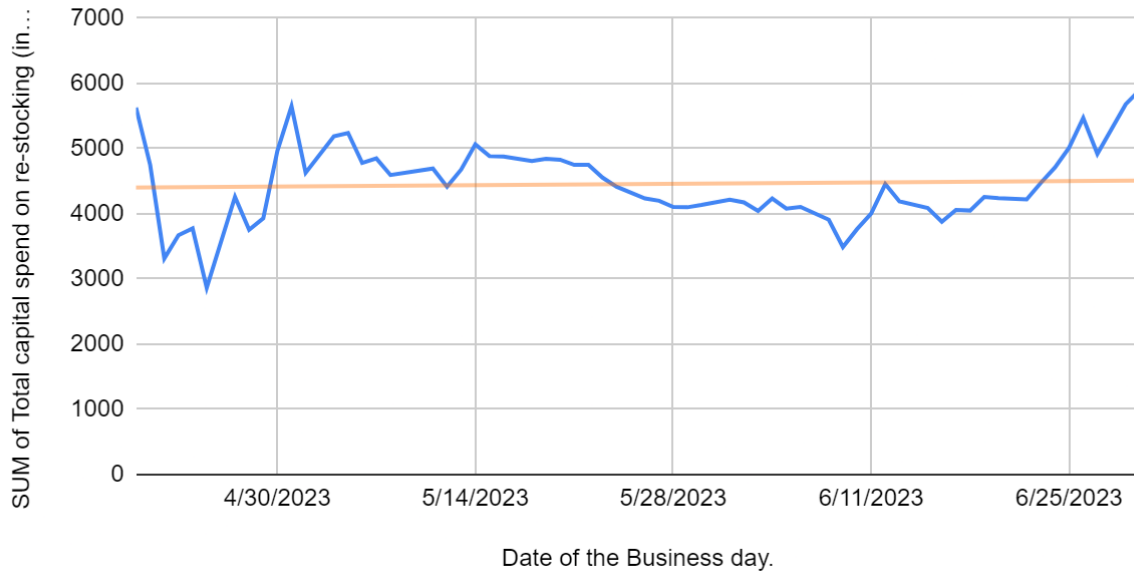
The affect of precipitation is further discussed in the Profit section of the report.

Implementing dynamic pricing strategies that allow for flexible pricing based on demand, seasonality, and other factors will be crucial.

Utilize pricing analytics and revenue management software to adjust prices in real-time, optimizing revenue without alienating customers.

Inventory stocking

SUM of Total capital spend on re-stocking (in Rs) vs Date of the Business day.



Raw ingredients used

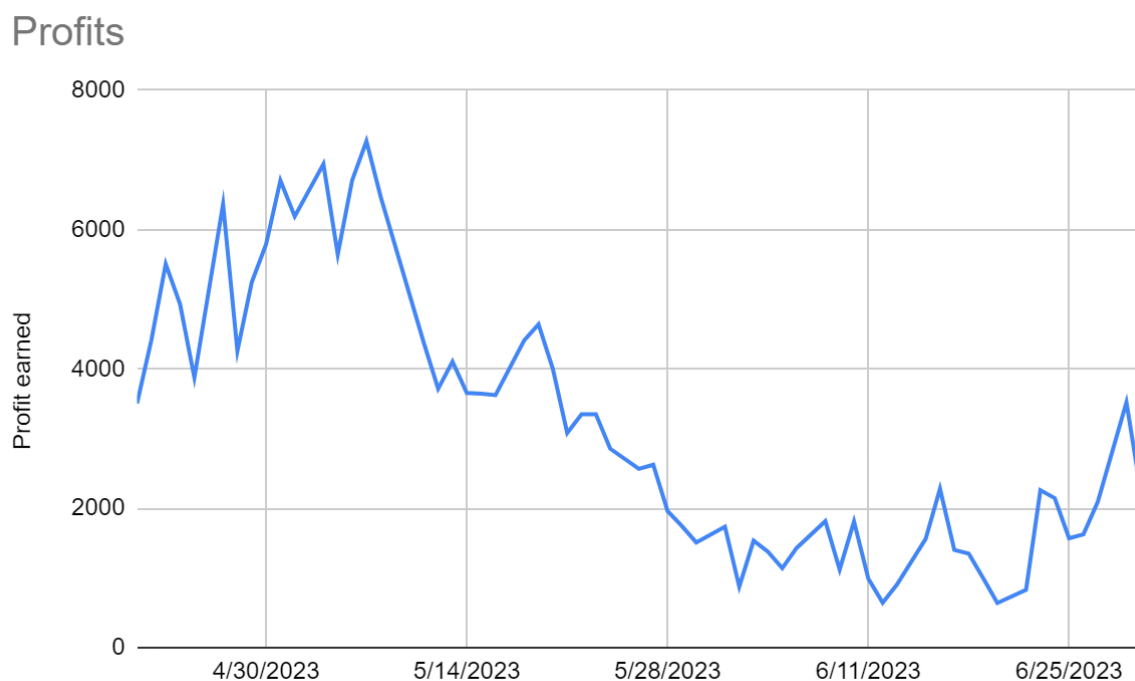
Apples	Pineapples	Bananas
Grapes	Papaya	Lemons
Beetroot	Dal Moth (Pluses)	Yellow Peas
Muskmelon	Watermelon	Peas
Onions	Tomatoes	Jeera

Before commencing the business Mr. Keshav makes a visit to the local farmers and mandi to stock up on the raw materials for the day.

This is due to the nature of the raw ingredients which have a very short shelf life. Hence the raw ingredients are re stocked every day.

The average the capital spent on the inventory stocking is **4456.377 Rs** and looking at the graph trend, there is not much aside from the usual fluctuations, the trend line remains about constant.

Profits



The profits show about the same kind of graph that we see in the revenue graph. And there is a very good explanation as to why it shows a similar graph to the revenue earned. The formula for Profit is:

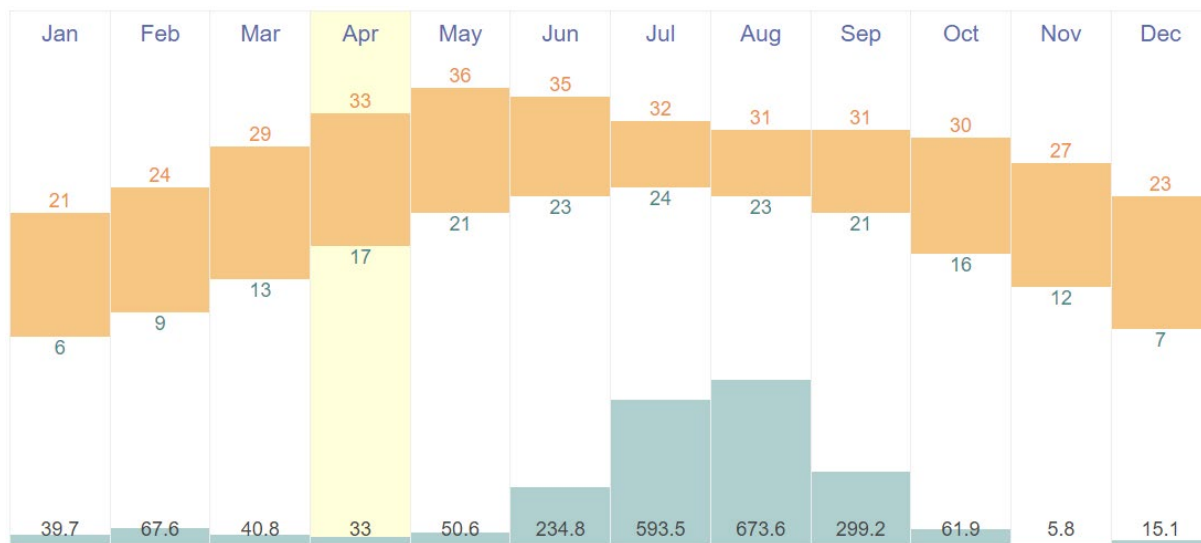
$$\text{Profit} = \text{Revenue} - \text{Expenses}$$

And since the expenses or the inventory stocking follow a constant trend hence the profit and revenue graph are shaped similar.

The average profit is about **3140.918 Rs**.

Conducting regular profit margin analysis to assess the profitability of products, services, and business segment and identifying high-margin offerings and prioritize resources to maximize returns is very important.

Effects of precipitation



In the above graph for precipitation in the same date range when the data was collected, we can see why the Profits and the Revenue boxes follow the same kind of shape.

Here, the **orange box's height** represents minimum and maximum temperature for the month.

And the **blue bar** represents the precipitation for the month.

From April to July, the correlation between the profits and the temperature and precipitation is looking to be positive.

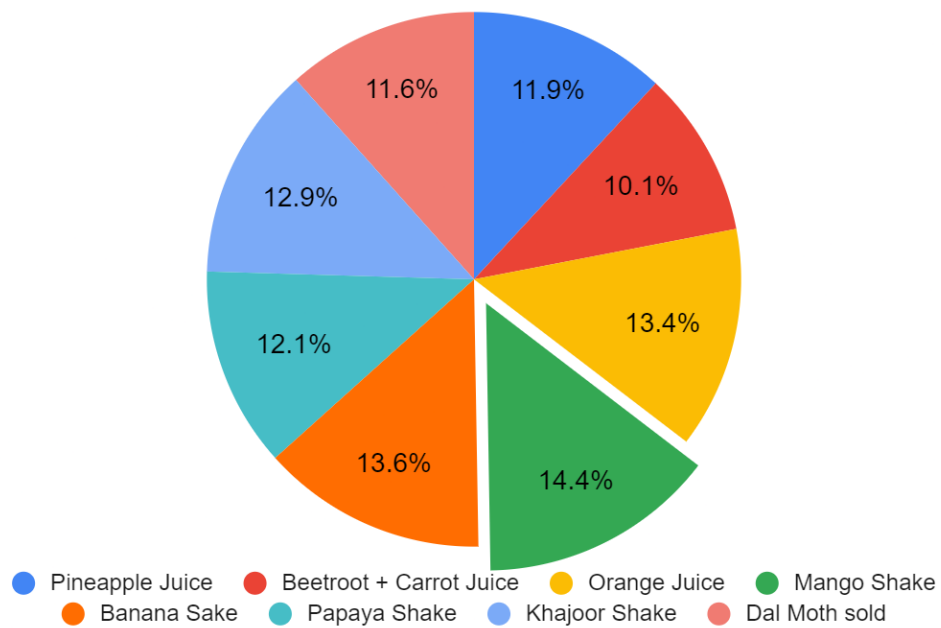
Here the **Blue bars** are very important as they represent precipitation, and when the **precipitation goes up the revenue and profits take a dip**, indicating the sensitive and volatile nature of the business.

Proportions of Item Sales

Categories	Products	Prices
Chaat	Dal Moth Chaat	30/40/50 Rs
	Fruit Chaat	50 Rs
Shakes	Mango Shake	30 Rs
	Papaya shake	30 Rs
	Banana Shake	30 Rs
	Khajoor (Dates) Shake	50 Rs
Juices	Apple Juice	50 Rs
	Pineapple Juice	50 Rs
	Carrot + Beetroot Juice	30 Rs
	Orange Juice	40 Rs

Above is the list of all the items sold by the Shri Balaji Fruit Chaat Bandhar

Menu Item Performance



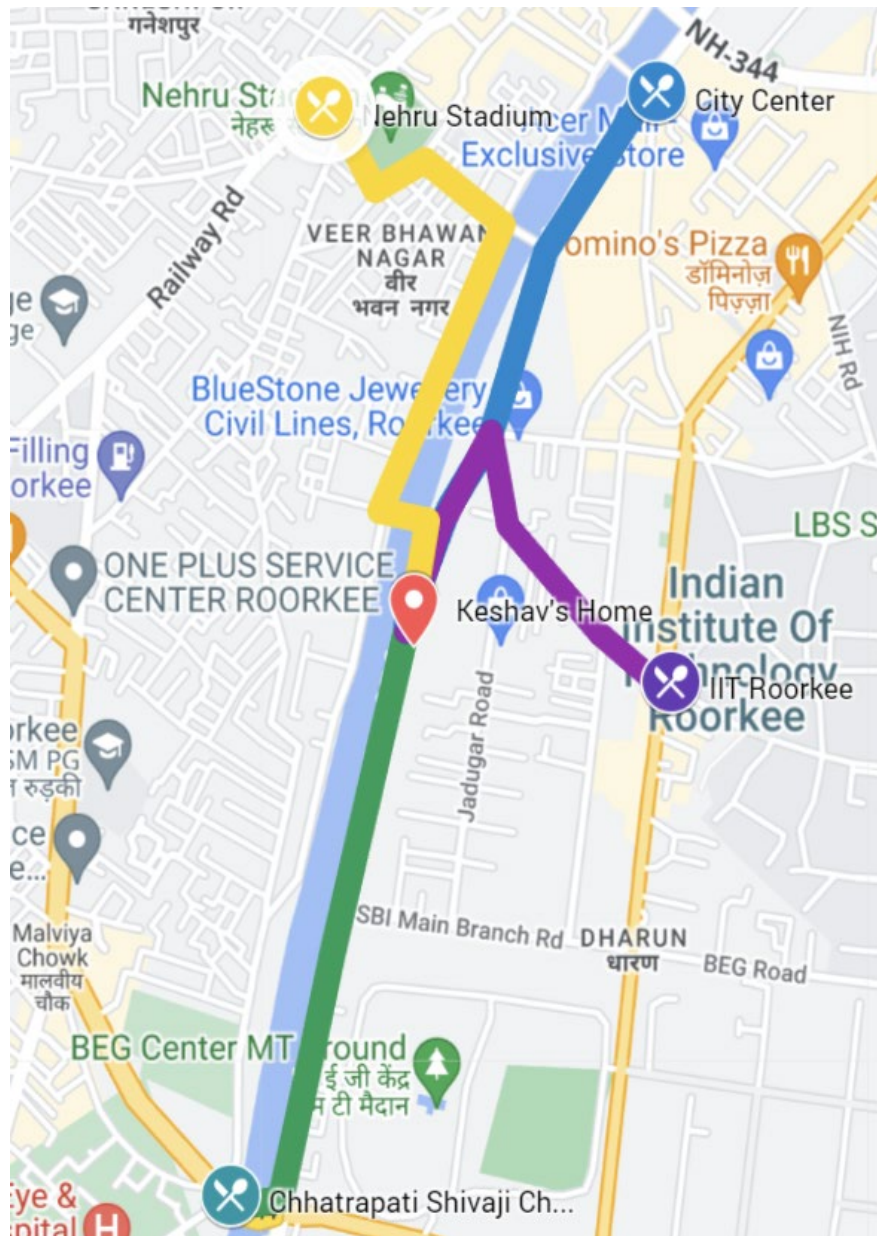
As per the data collected, the chart above tells us that the Mango shake item takes up the biggest share of the items sold but not by a wide margin.

This indicates that the menu items are equally popular in the market which is a good sign that the menu is up to date as per the market needs.

Recommendations

1. Inventory stocking – before going to restock a check on the weather ahead is highly recommended.
2. Location of business day – A weather check on the day forward is also helpful to make sure that business goes smoothly.
3. Menu Optimizations – Since all the menu items seem to be doing well there is no need to hurry to change the menu. But since the market is ever changing
4. Promotional Strategies - Implement promotional campaigns or specials to highlight specific menu items and create excitement among customers. This can help drive sales of particular items without neglecting others. For example, offering limited-time promotions or bundle deals can incentivize customers to try new or less popular items.
5. Implement effective inventory management practices - to minimize stockouts, reduce wastage. While Mr. Keshav is able to make use of the leftover materials as fertilizer or as cattle feed. But still wastage of materials is very common after that.

6. Better Potential hotspots



1. **Roorkee City Centre (Main)** – The city centre is marked with **Blue** the main stop where Mr Keshav takes his stall daily, while the stop has a very high traffic and potential for sales is very good but there are other sports listed below which provide very good opportunities as well.

2. **Chhatrapati Shivaji Chauraha** – Marked with **Green** is the second most traffic intensive area in the city, there are many banks and offices nearby the cross section therefore making it a very good spot for business.
3. **IIT Roorkee** – Marked with **Purple** is a very good spot for business as the place sees a huge traffic of college students during the afternoon and evening hours.
4. **Nehru Stadium** – Marked with **yellow** may not be a frequent place to visit but is ideal on match/busy days.

All the above suggestions are based on traffic and the amount of competition around it, also every suggested point is about 1 km in distance.

Mr. Keshav visits the city centre every day. It is advised to him to visit all the above places not on the same day but on alternate days depending in factors like weather, traffic, festivals, rallies etc.

SWOT Analysis

SWOT analysis is a strategic planning tool used to assess the internal strengths and weaknesses, as well as external opportunities and threats, facing a business.

It helps in identifying what the business does well, where it needs improvement, what opportunities it can exploit, and what risks it faces.

By analysing these four factors, we can take proactive steps to address any problem the business has or may have in the future.

While Shri Balaji Fruit Chaat Bandhar is popular in the locality but like every other business there are some weakness and threats that are to be addressed.

Below is a SWOT matrix which highlights some of such points that needs attention.

SWOT Matrix

Strength

- Less competition
- Open to take online UPI transactions
- Very near to the city center

Weakness

- Low shelf life of raw ingredients
- Very sensitive to weather fluctuations

Opportunities

- Unexplored localities for business
- Owner lives very near to the city's busiest cross-sections.

Threats

- Rapid urbanization and setup of local organized businesses.

Presentation and legibility of the report

The report showcases a clear point to point view of the report of the state of the business. There are many charts highlighting the statistics of the sales and the inventory data, such that readability and the look of the report stays good. Therefore, helping me to make clear and concise recommendations for the business.