# BDM Capstone Project Mid Term Report

**Title:** Devising Innovative Strategies to Improve Organizational Behaviour for Boosting Business Efficiency

Submitted by: Charvi Maini, 22f1001106

1. **Executive summary and title:**

Kumar Milk Products (KMP) is a local vendor operating in North West Delhi, for the last 15 years, selling milk, and its allied products and a little portion of branded bakery products like breads, cookies, cakes, juices, carbonated drinks, chips, etc. KUMAR MILK PRODUCTS is a sole proprietorship-based business operating in a big, middle – class to affluent community. The data was collected for the months from January – April, 2023. The data collected from the owner was cleaned  and analysed using Excel. The household survey was done physically and using the google maps to gauge the total number of family units living within the 2 km radius of the shop. The household survey data tells us that approximately 3000 - 4000 family units could be the potential daily customers for KUMAR MILK PRODUCTS.  In Excel, graphs and charts shall be made to show the most selling products and to gauge the potential for scaling the business for the owner. In the course of the conversation with the owner, it was discovered that approximately 600-700 litres of milk are delivered at his shop daily. Some key figures for the business include annual turnover, which was reported at INR 1.5 -1.75 crore (approx.) per annum for the last financial year, though the owner did not show any document to substantiate this. I believed him to be honest with that as well as respect his privacy with respect to the financials of his business. The authorization letter was shown to the owner, after which he was more cooperative as the necessary trust was established and told us some key figures about the daily sales as well as provided as the data.  For the final report, a regression analysis between quantity and price can be done. More analysis on the data can be conducted to provide us with more insights.

2. **Proof of originality of the Data:**
The data is visible in the link below:
https://docs.google.com/spreadsheets/d/1Pr3ntF0X2EhuoXg5OWI-26YmwAhTesy_/edit?usp=sharing&ouid=110024700641361835768&rtpof=true&sd=true
The photos have been obtained with the consent of the owner of KUMAR MILK PRODUCTS.

Household Survey – The survey was done by visiting the nearby areas and counting the number of houses in a particular block. Since the area is upmarket, the plotting has been

done in a planned manner, and it is quite easy to get the number of households in a particular block quickly.

## TO WHOMSOEVER IT MAY CONCERN

This is to certify that I, Surinder Pal Arora, owner of KUMAR MILK PRODUCTS, on request from CHARVI MAINI, student of IIT Madras, have provided raw data for sales and other information, to the best of our ability, as requested by her. I can confirm that Charvi Maini sought my consent before using and collecting data, pictures / photos and documents from myself and/or my staff and assured us that this shall be used for academic project purposes only, undertaken by her during her studies with IIT Madras.

We wish her all the success in her project and welcome any suggestions she may have to improve our services.

Owner, Kumar Milk Products

M. : 9877300002

**Kumar** MILK PRODUCTS
Specialists in :
...lk, Curd, Ghee, Cream, Butter, Cheese, Khoya, Dhaap,
Soya Chaap & Cow Milk available
An Authorised Distributor of Amul Milk &Fresh Products
QU-176A, Pitam Pura, Delhi-110088

Figure 1 shows the letter of organization and the business card of the organization. The letter has been duly stamped and signed by the owner.

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Figure 2 shows the student conversing with the owner about the business



Figure 3 shows the front of the shop



Figure 4 shows the milk that is delivered daily at the shop



Figure 5 shows an employee working at the shop

### 3. Metadata and Descriptive Statistics

The locality survey undertaken concludes that there are 3000-4000 households within a 2km radius of KUMAR MILK PRODUCTS, of which some about 15% form the customer base of the shop. This means roughly 600 household units are acquired customers of the shop.

Original data contains the following:

- Type of Products sold
- Variants of Product sold
- Quantity sold
- Total quantity sold in one day
- Total quantity of one variant sold over the course of the month
- Units sold per day

The data was collected for January – April 2023. The data was collected in the following format: The data showed us the daily sales of the top 04 SKUs of KUMAR MILK PRODUCTS, which includes Amul milk of 3 variants, Buttermilk of 4 variants, cottage cheese (Paneer) of 3 variants and various types of breads (7 variants). The data gave us the daily and monthly sale of these products. As the transactions are mostly based on cash, the receipts for the same cannot be provided. Since the owner refused to share the data for the past 12 months with us, the revenue or sales prediction cannot be done with accuracy. No revenue analysis will be done with the data as the price of each variant has not been taken into account.

### 4. Detailed Explanation of Analysis Process/Method

The threat from the competition to KUMAR MILK PRODUCTS can be dealt with by using unique marketing and promotion strategies. By offering discounts on combined products, launching monthly saving schemes, giving freebies on a fixed amount of purchase will all go a long way in boosting sales. KUMAR MILK PRODUCTS can leverage its central location in the area and attract a larger customer base, while retaining the existing one. Various pricing strategies can be

used to maximize on its potential. Posters for the same can be made and put around the locality, especially in areas where the competitors exist. This will help to attract new customers. To make the most of the posters, the promotions should be highlighted, and the posters can be made attractive. By identifying the business's unique selling proposition, the business can figure out what sets it apart the most from its competitors and that product can then be highlighted, as KUMAR MILK PRODUCTS keeps a variety of products, it gives the shop a comparative advantage over other, smaller shops selling similar items.

The lack of availability of space problem can be tacked by optimizing the shop layout as the owner has done. Using wall mounted shelves and organizing better, the owner has maximised his space and was able to expand his product line. Using vertical storage, more products can be stocked by using less space. By offering a variety of products, the owner attracted more customers and was able to generate higher sales.

To analyse the data, it first needed to be pre-processed. This included sorting typing errors, imputing missing data etc. The cleaned data was then used to make graphs and charts and draw findings from the same. Various bar charts and line charts have been made which have been explained below.

5. **Results and Findings:**

The figures 1 to 4 highlight the monthly sales trend for the top 4 products, i.e., milk, buttermilk, cottage cheese, and bread. The following table (Figure 6) shows the average quantities of the products sold each month.

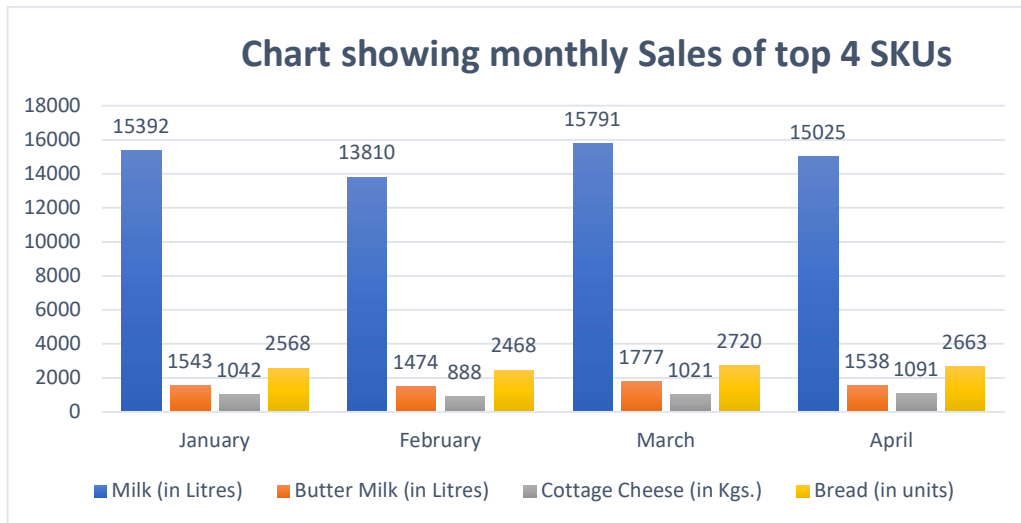| Product\Month | January | February | March | April |
|---|---|---|---|---|
| Milk (in L) | 583.35 | 581.64 | 602.29 | 591.63 |
| Buttermilk (in L) | 119.77 | 128.32 | 138.32 | 123.87 |
| Cottage Cheese (in kgs) | 168.06 | 158.57 | 164.71 | 181.90 |
| Breads (in units) | 82.84 | 88.14 | 87.74 | 88.77 |

**Chart showing monthly Sales of top 4 SKUs**

Figure 7 is a bar chart which shows the quantities all of products sold in the Months of January – April, 2023. As we can see, milk was the most revenue generating product consistently for a quarter.
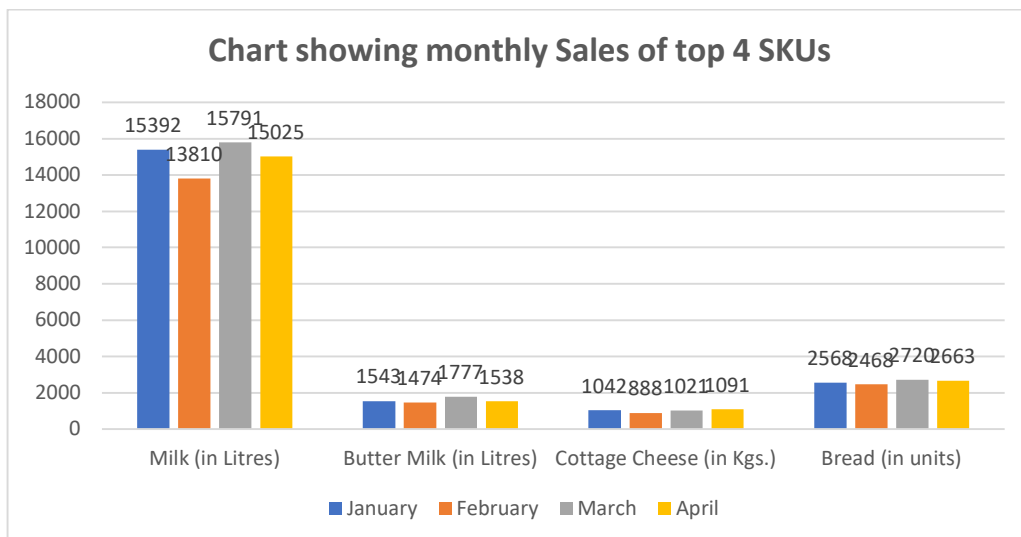
**Chart showing monthly Sales of top 4 SKUs**

Figure 8 highlights that the best - selling product is milk, of all types.

Daily Sales for January
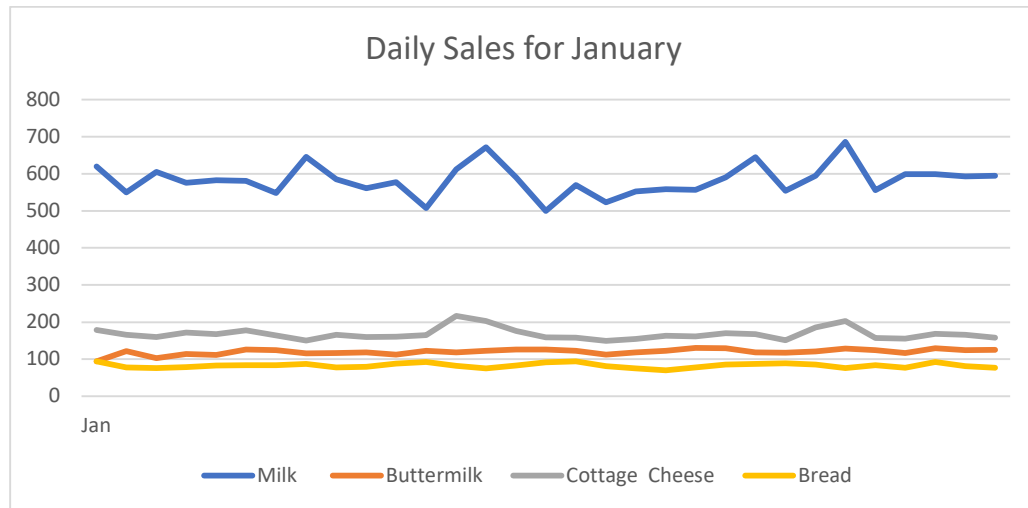
Figure 9 shows the daily sales for January. Some spikes, perhaps due to festive seasons and long weekends, can be witnessed for milk and cottage cheese. The sale of bread and buttermilk remains constant.
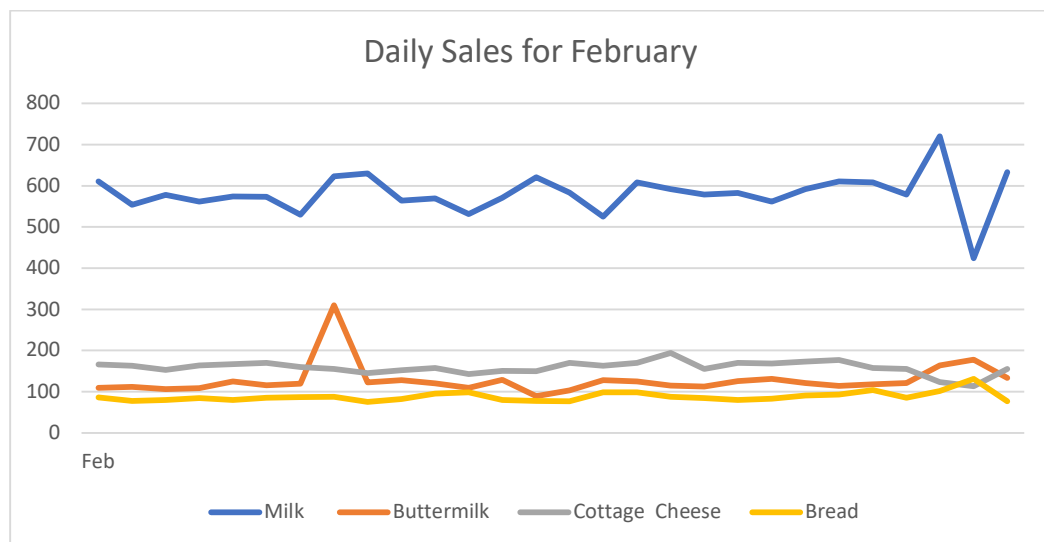


Daily Sales for February

Figure 10 shows the daily sales for February. A sharp spike can be witnessed in the sale of buttermilk, perhaps due to the strong heat Delhi saw in the early days of February. Some unexplained dip can also be seen in the sale of milk, towards the end of the month.
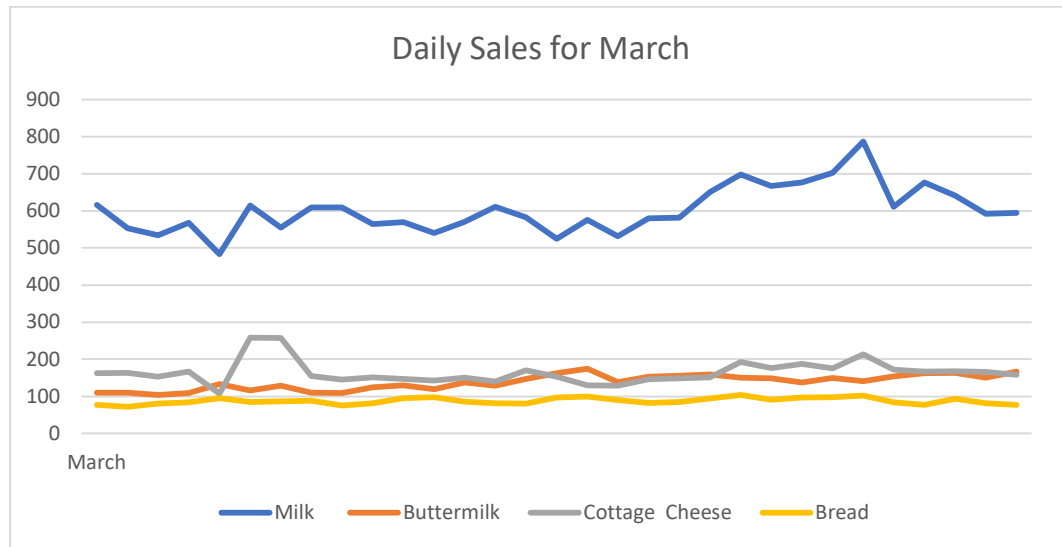
Daily Sales for March

Figure 11 shows some increase in the sale of cottage cheese, and some minor increases in the sale of buttermilk too.
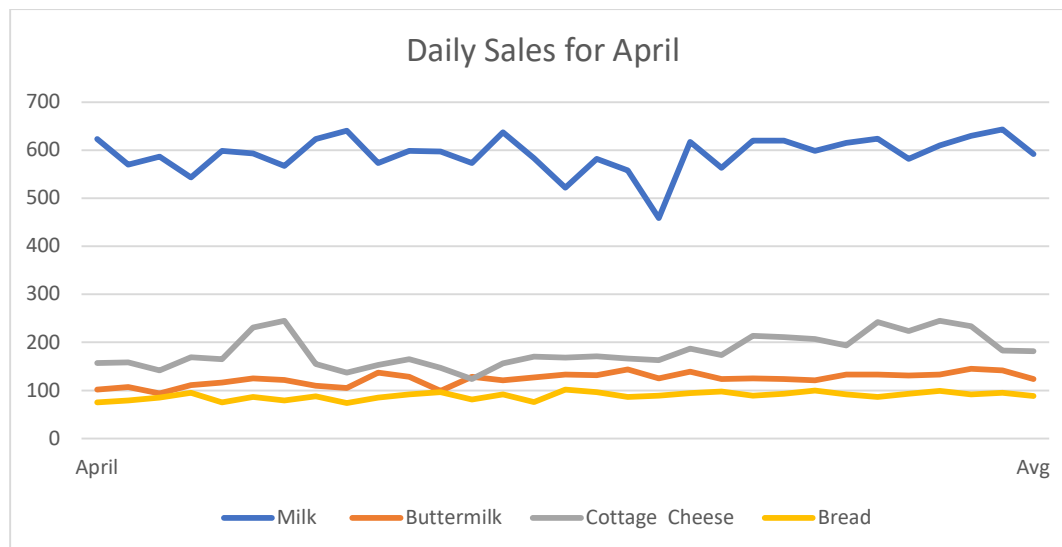


Daily Sales for April

Figure 12 shows the daily sales for April. An upward pattern can be witnessed for all the products, except milk, which sees some occasional decline.