

PROJECT TITLE: A Business Analysis of a Ration Shop Specializing in Cattle Feed

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- **EXECUTIVE SUMMARY:**

The following executive summary provides an overview of the business analysis project conducted for "Mahendra Kumar and Brothers", a ration shop specializing in the distribution of cattle feed. The aim of this analysis was to assess the Business's current operations, identify areas for improvement, and propose strategic recommendations to enhance efficiency, profitability, and customer satisfaction.

The analysis encompassed a comprehensive evaluation of various aspects of Business's operations, including sales forecasting, inventory management. By examining historical sales data, we gained valuable insights into the factors influencing product demand and identified potential opportunities for growth.

Many factors affect the actual sales of any product of any given organization, natural or man-made. But the analysis should be resilient enough to provide timely feedback to planning and production to prevent inventory pile up and subsequent losses.

Sales data is primarily will be collected as the sales of 8 high revenue generating product to the business and also have the inventory data on daily basis. Although this may appear to be fairly simple, a lot of information can be gleaned from this data to enable us to analyse probable causes for sales and profitability issues, and provide solutions to overcome them.

- **ORGANIZATION BACKGROUND:**

Mahendra Kumar and Brothers is a well-established shop cum complex dealing in daily ration supplies, wedding food ingredients, and cattle feed. It is situated in the town named Mundawar, Alwar, Rajasthan (301407).

Mahendra Kumar and Brothers is selling products like sugar-sack, refined oil can (10 Litre), Mustard Khal (cattle feed), channi dal (cattle feed), Green cotton seed (cattle feed), Black cotton seed (cattle feed) and mustard oil can (10 Litre) are the main revenue generating product of the shop.

The main costumers of the shop are zamindar(landlord) from the nearby villages, locals of the town buy their daily ration supplies and during wedding session the main business of the shop is to provide essential ingredients for the wedding food.

As the shop is a family business established in 1960s, So, the owner of the business has their loyal costumer and also provide the loan on interest to the zamindars.

- **PROBLEM STATEMENT:**

Mahendra Kumar and Brothers is facing difficulty in inventory management and declines in sales and effect on sales (due to not giving goods on credit). Also, the business has its own transport vehicle for filling stock or inventory by buying goods from the big wholesalers situated 25kms away from the shop. The vehicle needs fuel of 2000 INR for one round of stock fill-up and sometime the shopkeeper got confused in what to order and what to not. Basically, the inventory management issue.

- **BACKGROUND OF THE PROBLEM:**

The problem starts from the opening of new shops in town and in the nearby villages that is affecting the sales of the business and also the Profitability. And also, from last dec 2022 the business tries to put the cap on the sales on goods on credit. That is also affecting the sales of the business.

The second problem is the inventory management from dec 2022. According to the owner the business is facing inventory management sometimes and sometime the wastage of the items also be there.

Due to the change in season the behaviour of animal feed is also changed and that time the business has to decide what to fill up in stock and the prices of these animal feed, sugar and oil fluctuating daily so that is also affecting the profit of the business.

And in all problem mentioned above the data analysis will provide us the important insights and also helps business to maximize profit and grow fast.

- **PROBLEM SOLVING APPROACH:**

**1). Methods to be Used:**

The stated problem will be analysed based on sales data of Mahendra Kumar and Brothers. Pareto analysis shall be used to compare the sales volume w.r.t. dates, weeks and months.

Scatter plots shall be used to get the distribution of sales volume across various months and products.

Graphical representation of the frequency distribution of the collected data shall be used to clearly indicate major contributing factors to sales distribution across the period.

Correlation of sales data with external factors shall be done through Google information analysis, so as to associate with external factors such seasonal, festival demands, and market ups and downs etc. Shall be done.

Flowcharts shall be used to provide solutions to various scenarios evaluated, so that same can be avoided in future.

Trendlines on daily sales to understand the nature and behaviour of the customers.

## **II). Intended Data collection:**

The sales data and the inventory data will be collected from the 16/11/2022 to 16/04/2023. The business has no computerized and excel form data. So, we have to collect the data in raw from the ledger of the owner and have to put it in excel for the further analysis.

The owner and business have the sales and inventory data only with on costumer information. So, we have to analyse this data to get some important and helpful insights.

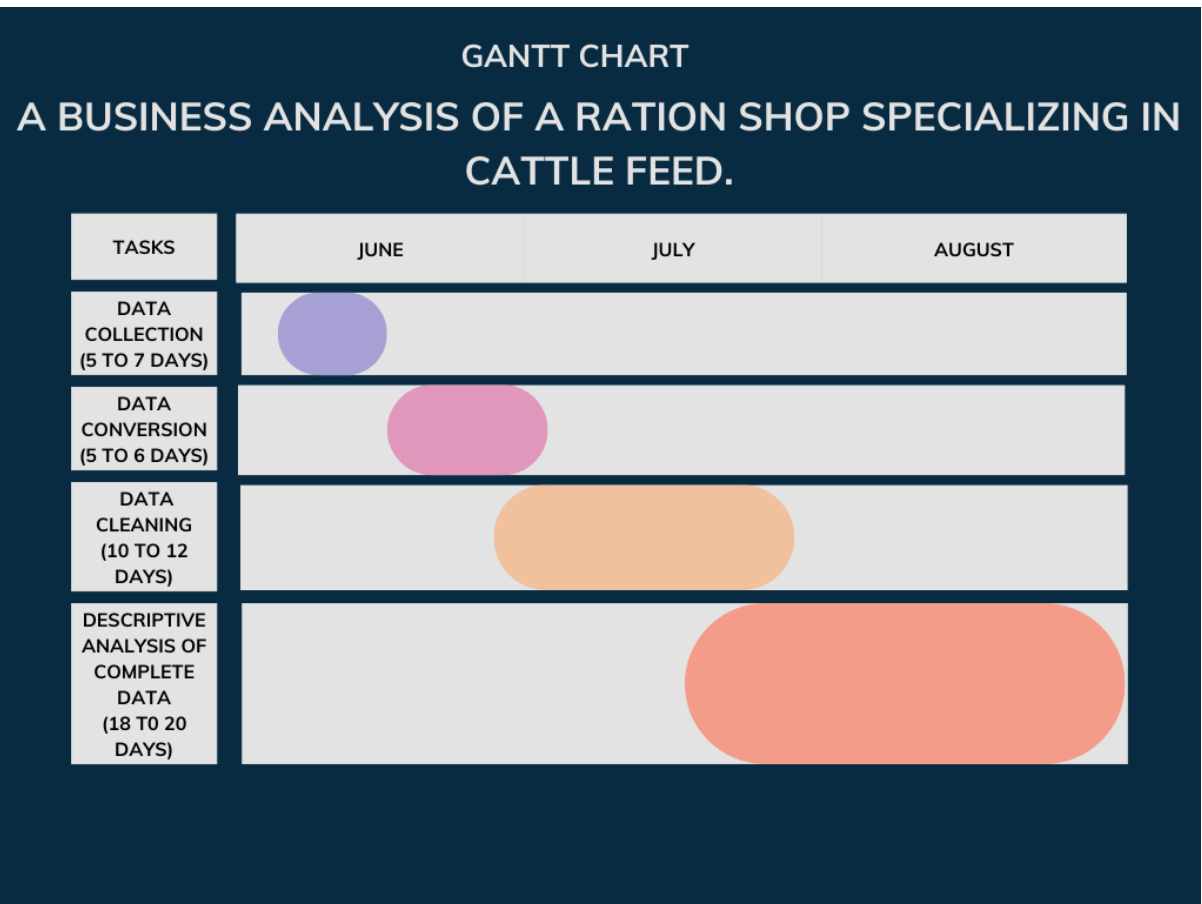
## **III). Analysis tools:**

We will be using MS Excel, Python for the purpose of data collection, analysis and data cleaning (for aberrations or missing data).

Also, will try to put the regression and some machine learning to predict the future sales.

- **EXPECTED TIMELINE:**

	<b>Work break-down Structure</b>	
	Description	No. of Days
1.	Data Collection	5 to 7 days
	Identify the sources of data (ledger)	
	Collect data from each source	
	Consolidate data into a single dataset	
2.	Data conversion	5 to 6 days
	Convert the data from ledger to excel	
3.	Data cleaning	10 to 12 days
	Process the data	
	Identify missing values	
	Standardization	
4.		18 to 20 days
	Define the business problem and objectives	
	Conduct descriptive analysis of the data	
	Interpret the analysis and draw conclusions	
	Develop recommendations and a plan of action	



- **EXPECTED OUTCOME:**

The project shall throw light on the various factors which affect sales of Mahendra Kumar and Brothers and provide suggestions to mitigate such problems, thus reducing losses and improving profitability for the organization.