BDM PROJECT MID TERM SUBMISSION

(MAY 2022 TERM)

FINDING MAJOR FACTORS AFFECTING THE SALES OF THE BUSINESS

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PROJECT TITLE

Executive Summary:

Clothing is an important part of a person's life and when we shift our focus specifically to female clothing, there is a lot of variety and choices available specifically in India.

Saree is something which plays a vital role in the Indian subcontinent clothing culture, having its presence way back to the Indus Valley civilization which flourished during 2800-1800 BCE around the north-western part of South Asia.

Although the present world has advanced quite a lot in terms of technology and machinery, yet the significance of handwoven sarees is increasing as the time is moving forward and this results in their increased demands and high rates.

This project addresses a business problem of a B2C Saree shop "Shraddha Fashion" located in the holy city of Varanasi (popularly known as Banaras), famous for its "Banarasi Sarees", which was established on November 20, 2017 in Varanasi on the most important street of Varanasi called the "Kashi Vishwanath Dham street". The shop deals in various types of sarees like "Banarasi Silk", "Lucknawi Chinkari", "Gujarati Bandhani" etc.

The main aim of this project is to provide them with some important measures which when applied can bring a significant amount of change in the sales of the business irrespective of the seasonality and other relevant factors that may affect the sales of the business.

#Problem Statement:

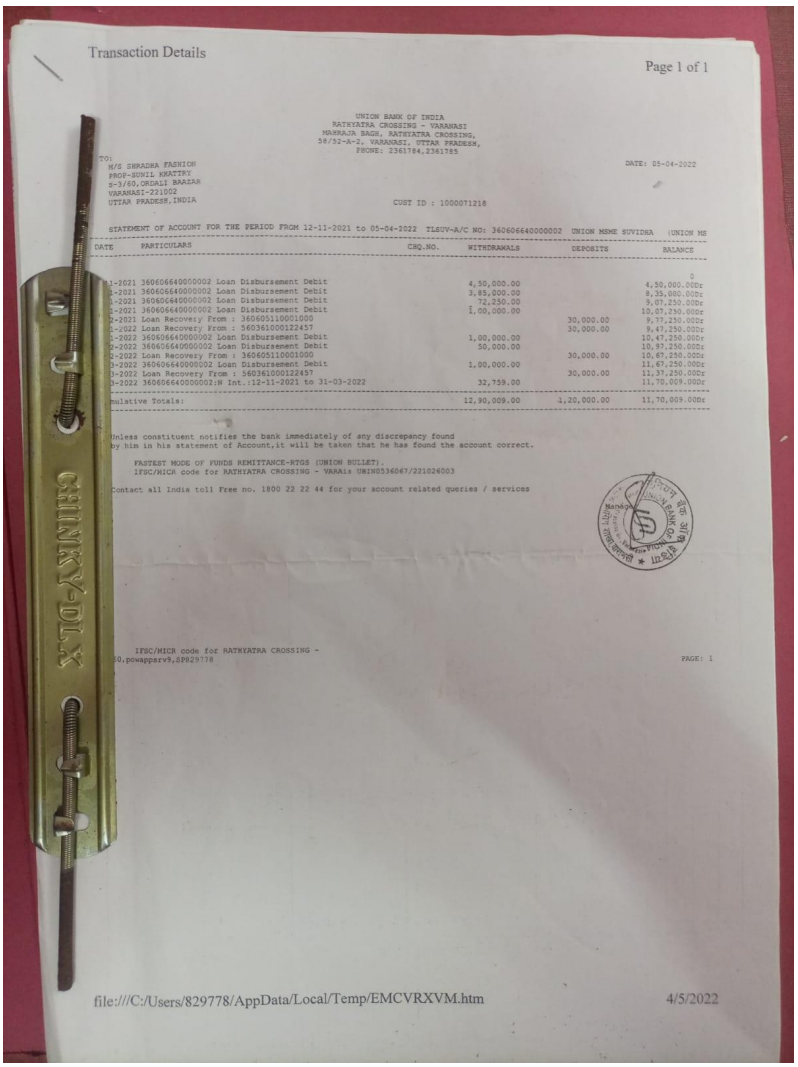
After having a few rounds of discussions with the owner of the shop Mr. Manoj, his concern was that although his shop is very new into this saree business, it has gained a lot of popularity but still its sales are not up to the mark which it had been a few years before.

Hence our main objectives are:

- The owner wants to make his sales consistent throughout the year.
- He wants to increase his reach to more customers in the city as well as other cities of the state and the country.
- To provide significant measures that are very effective as the owner is not willing to make heavy investments into his business.

#Associated Proof of the Dataset:

Shop



Transaction Details

Page 1 of 1

UNION BANK OF INDIA
RATHYATRA CROSSING - VARANASI
MAHARAJA BAGH, RATHYATRA CROSSING,
58/52-A-2, VARANASI, UTTAR PRADESH,
PHONE: 2361784,2361785

TO:
M/S SHRADHA FASHION
PROP-SUNIL KHATRY
S-3/60,ORDALI BAAZAR
VARANASI-221002
UTTAR PRADESH,INDIA

DATE: 05-04-2022

CUST ID : 1000071218

STATEMENT OF ACCOUNT FOR THE PERIOD FROM 12-11-2021 to 05-04-2022 TLSUV-A/C NO: 360606640000002 UNION MSME SUVIDHA (UNION MS

DATE	PARTICULARS	CHQ.NO.	WITHDRAWALS	DEPOSITS	BALANCE
					0
1-2021	360606640000002 Loan Disbursement Debit		4,50,000.00		4,50,000.00Dr
1-2021	360606640000002 Loan Disbursement Debit		3,85,000.00		8,35,000.00Dr
1-2021	360606640000002 Loan Disbursement Debit		72,250.00		9,07,250.00Dr
1-2021	360606640000002 Loan Disbursement Debit		1,00,000.00		10,07,250.00Dr
2-2021	Loan Recovery From : 360605110001000			30,000.00	9,77,250.00Dr
1-2022	Loan Recovery From : 560361000122457			30,000.00	9,47,250.00Dr
1-2022	360606640000002 Loan Disbursement Debit		1,00,000.00		10,47,250.00Dr
2-2022	360606640000002 Loan Disbursement Debit		50,000.00		10,97,250.00Dr
2-2022	Loan Recovery From : 360605110001000			30,000.00	10,67,250.00Dr
3-2022	360606640000002 Loan Disbursement Debit		1,00,000.00		11,67,250.00Dr
3-2022	Loan Recovery From : 560361000122457			30,000.00	11,37,250.00Dr
3-2022	360606640000002:N Int.:12-11-2021 to 31-03-2022		32,759.00		11,70,009.00Dr
ulative Totals:			12,90,009.00	1,20,000.00	11,70,009.00Dr

Unless constituent notifies the bank immediately of any discrepancy found
by him in his statement of Account,it will be taken that he has found the account correct.

FASTEST MODE OF FUNDS REMITTANCE-RTGS (UNION BULLET).
IFSC/MICR code for RATHYATRA CROSSING - VARAIs UBIN0534067/221024003

Contact all India toll Free no. 1800 22 22 44 for your account related queries / services

IFSC/MICR code for RATHYATRA CROSSING -
50,powapprv9,SP829778

PAGE: 1

file:///C:/Users/829778/AppData/Local/Temp/EMCVRXVM.htm 4/5/2022

Transaction Records of Purchase

#Meta Data and Descriptive Statistics:

We have collected the data of the business for the last three Financial years : FY 2019-2020, FY 2020-2021, FY 2021-2022. The dataset is mainly focused on the purchases and sales of the business of the last three FY's.

This dataset will be analysed over different time intervals like monthly, quarterly and yearly basis in order to look for any seasonality effect if present any.

In the process of Data collection, its cleaning and analysis Microsoft Excel has been used.

* Information regarding the Excel Master Sheet of Dataset:

The columns in the Excel sheet are as follows:

Index	Column names	Description	Type of Variables	Datatype of Variable
1.	**Purchase Amount**	It contains the information about the purchases made(in INR) over the months in 1-FY.	Numerical Data	Float
2.	**Sales Amount**	It consists of the information of sales made in INR over the months in 1-FY.	Numerical Data	Float
3.	**SKU's**	Units according to saree fabric type.	Categorical Data	String
4.	**Volume of Sales**	No. of units sold over the months in particular year.	Numerical Data	Integer

Table 1: Column Information of Data recorded in Master sheet

All the data has been sorted into month-wise format for a given financial year. There are different sheets maintained for each financial year.

*Data Statistics Description:

- We calculated the total amount of the purchase as well as sales data using the SUM(range) function.
- We calculated the Mean and Median of the data provided by using the AVERAGE(range) and MEDIAN(range) function provided by excel.
- We calculated the maximum and minimum values using the MAX(range) and MIN(range) functions.

The calculated sum, mean and median of the sales and purchase data are shown in the following table:

Table 2.1: Purchase Data Table

Index	Quantities Calculated	FY-2021-22(INR)	FY 2020-21(INR)	FY 2019-20(INR)
1.	**Sum**	10642707.16	6533407.72	11918086.78
2.	**Average**	967518.83	593946.16	1019840.19
3.	**Median**	1036740.41	471782.31	954073.38
4.	**Maximum**	1526476.69	1801810.95	2242249.43
5.	**Minimum**	395956.93	21028.50	159997.75

Table 2.2: Sales Data Table

Index	Quantities Calculated	FY-2021-22(INR)	FY 2020-21(INR)	FY 2019-20(INR)

1.	**Sum**	10519399.48	9425582.76	14539058.28
2.	**Average**	956309.04	856871.16	1211588.19
3.	**Median**	988768.60	764991.18	981587.75
4.	**Maximum**	1368529.36	1713347.00	2066075.16
5.	**Minimum**	561057.92	195947.48	513628.36

*Data Cleaning:

The data cleaning process involves several steps like whether the data is consistent or not, checking for outliers and treatment of missing values if any present in the dataset.

a.) Consistency of Data:

In this process, the main aim is to identify whether the data is not logically inconsistent and it follows the rubrics.

To execute this process in Excel, we have several metrics like Sum, average, median etc. which serve our purpose of checking data consistency.

'Ctrl+\' and 'Ctrl+shift+\' is used to check data for the range of columns and rows in

excel, respectively. We found the formulae used consistent. No errors found.

b.) Outlier's Detection:

A datapoint is said to be an outlier if it falls far outside the average value of its respective group of statistics.

To check whether a datapoint is an outlier we have several steps to perform and those are mentioned below:

- First we calculate the upper quartile(Q3) and lower quartile(Q1). In excel, we calculate it by: =QUARTILE(array,3); where 3-denotes upper quartile, and for lower quartile = QUARTILE(array,1).
- Next step involves calculation of the InterQuartileRange(IQR). IQR = Q3-Q1, where Q3=upper quartile, Q1= lower quartile.
- Now, we will calculate the lower and upper bound values and it is calculated using the following formula:
    - Lower bound = Q1 - (1.5*IQR)
    - Upper bound = Q3 + (1.5*IQR)
- In the final step, a value is said to be an outlier if it is < Lower bound value OR > Upper bound value.

Q1	INR 598302.3
Q3	INR 1162266
IQR	INR 563964
Lower Bound	INR 0 (price can't be -ve)
Upper Bound	INR 2008212

Table 3: Interquartile Range for FY 2019-20 Purchase

c.) Treating the Missing Values:

Missing values in a dataset also known as Null values of a variable are either unknown i.e they have not been recorded or recorded but it does not follow the suitable metric of that variable.

In Excel we can check the missing values using = COUNTIF() function for the present Null values. In our case, fortunately the dataset was well maintained already, hence there were no missing values found.

d.) Scaling:

It is a process which involves manipulation of the values in order to make them comparable with other data variables present in the dataset for analysis purposes. We can use the standardisation method to reduce the data to the same scale by subtracting the mean value of the variable and then dividing it by the standard deviation of the variable.

#Analysis Process:

In the analysis of the dataset like data collection, data cleaning, sorting and analysis of data, Microsoft Excel tools are preferred.

The problem statements are majorly solved using Trend analysis of sales. Sales Trends analysis basically refers to the collection of sales data over a period of time from multiple sources and comparing it with previous timeframes to identify patterns and project future trends. In other words, sales trend analysis allows us to use what already has happened in the past to predict what will possibly happen in the future.

Through this process, we find which time of the year the business made max profits and which fabric of saree made max sales over a period of time which inturn enables our progress in marketing objectives.

1. **Pareto Analysis:**

   The problem statement requires us to do detailed revenue analysis of the past few years of his business. Hence we plan to plot a Pareto chart to figure out which time of year the sales were most. In order to plot a pareto chart, we create a pivot table which includes revenues as values and months as rows.

2. **Revenue and Volume forecast:**

   Revenue forecasting basically refers to the process of predicting how much revenue a company can expect to generate over a set duration of time in order to make data-driven business decisions.

   We'll be using Bar charts on an annual basis to understand any patterns if present in order to improve sales.

3. **Quarterly sales performance:**

   For evaluating quarterly sales performance, we'll be using frequency distribution to organise the data to study generated revenue. Stacked bar charts will be used for comparison among different fiscal years on a quarterly basis.

4. **Monthly Sales performance:**

   A Gantt chart is the most popular and useful way of showing activities/tasks against time. Although Excel doesn't have a Gantt chart type, it enables us to plot using the Gantt project planner.

   We plan to plot a Gantt chart to study the time-series of sales data plotted for the Monthly time intervals to understand the seasonality effects on the sales.