BDM Capstone Project

Fruits and Vegetables Sector

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Introduction

❖ For the purpose of this project, I have chosen a local fruits and vegetables vendor in my locality, who is in the business of perishable goods

❖ He purchases and sells fruits and vegetables across multiple adjacent localities, however the primary market presently is in my locality, Punjabi Bagh, New Delhi.

❖ Currently, he sells to apartment/bungalow owner families, slum area families and restaurants in the locality

❖ Key problems faced by the business are:
  ➢ Niche customer base which is facing competition from online suppliers. This has created a barrier to generate more revenues
  ➢ Potential stock wastages and monetary mismanagement, due to unorganized way of bookkeeping

Analysis Methodology & Tools Used

❖ Pivot Tables, VLookup, Filters, and the sorting function have been essential tools for my study since they have made it much easier to grasp the data in a categorical way.

❖ Use of pictorial charts such as Clustered Column Chart and Pie Chart has helped me to see how well the Pareto Analysis is being followed by the business

❖ Python Libraries such as Pandas, MatPlotLib and Seaborn have been used in the Heatmap Analysis

❖ Using AVERAGEIF() has helped me to collate opening, closing stock along with sales and purchase to calculate the average days of inventory

❖ Also, Line Chart and Bubble Chart have been used to understand the patterns of stock usage

Is Pareto Analysis being followed for Revenue?

Revenue Pareto Analysis

Revenue Analysis
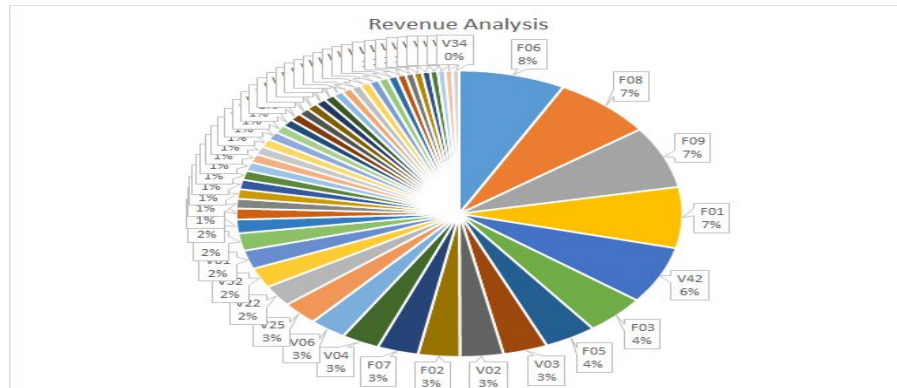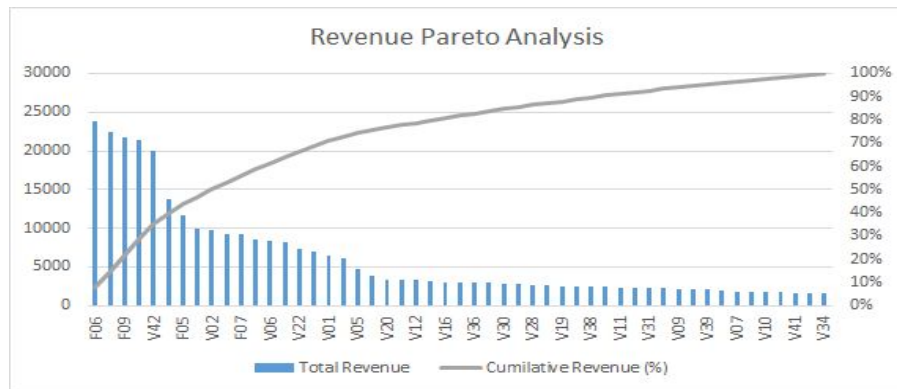
As we can see in the graphs besides us:

I. 9 items (roughly 18%) of the items contribute to more than 50% of the revenue, which might seem like a good start (As the line increases at an increasing rate)

II. However, as we move ahead in the graph, it takes over another 15 items to reach 80% revenue (The line grows at a diminishing rate)

III. This clearly shows that how the Pareto Principle is not being followed in the case of revenue as over 47% of the items contribute to 80% of the revenues
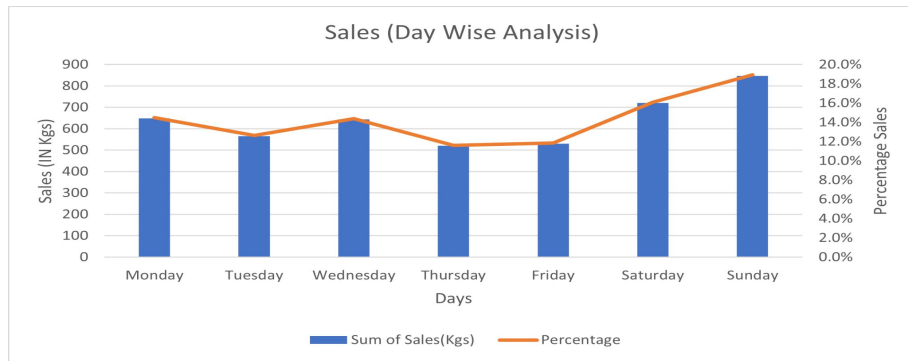
Is Pareto Analysis being followed for Volume?
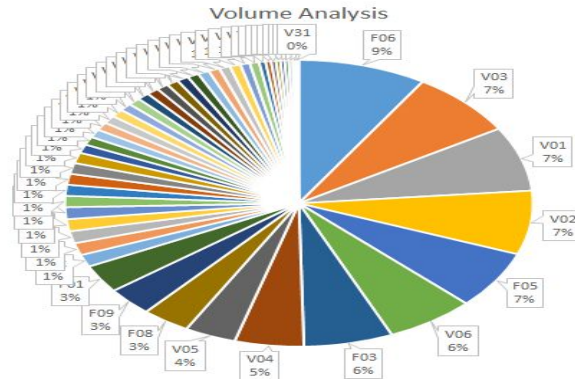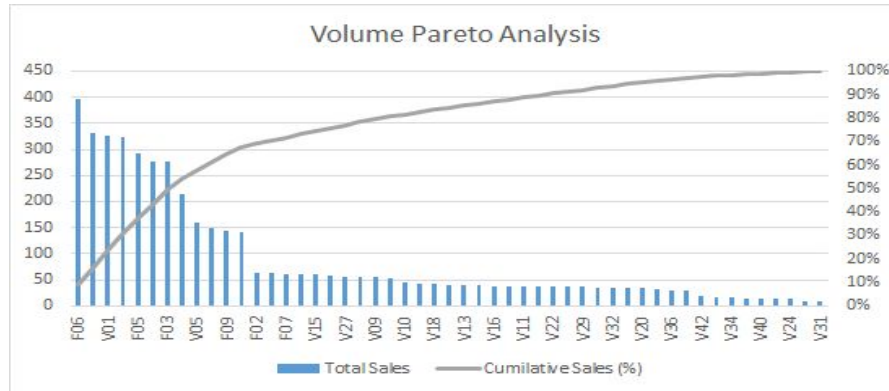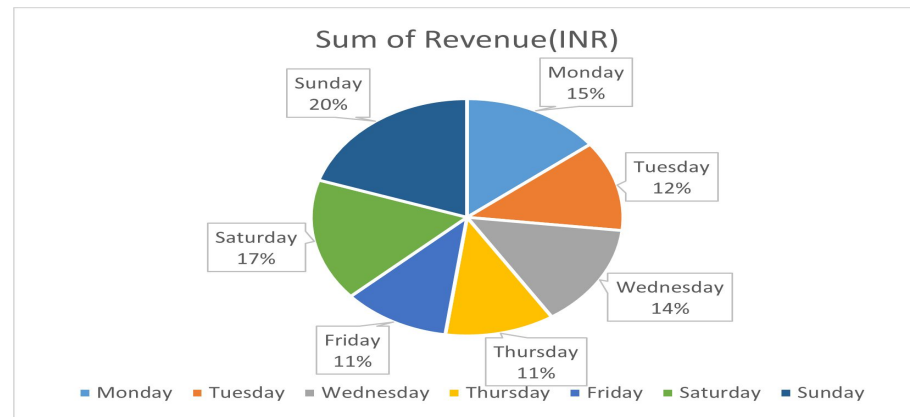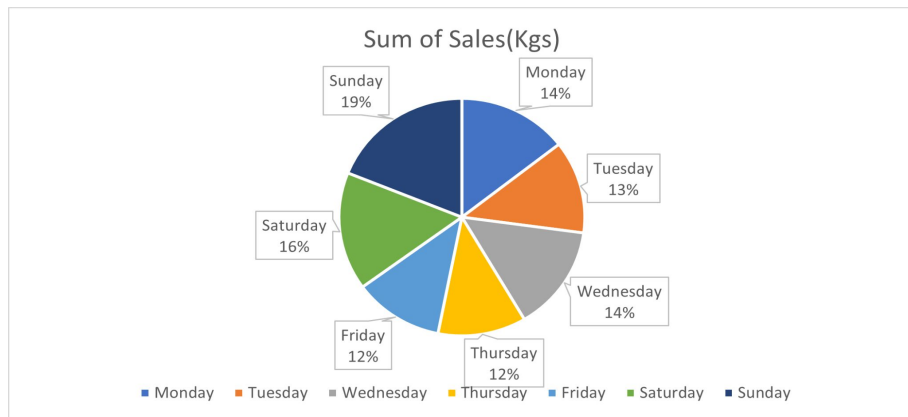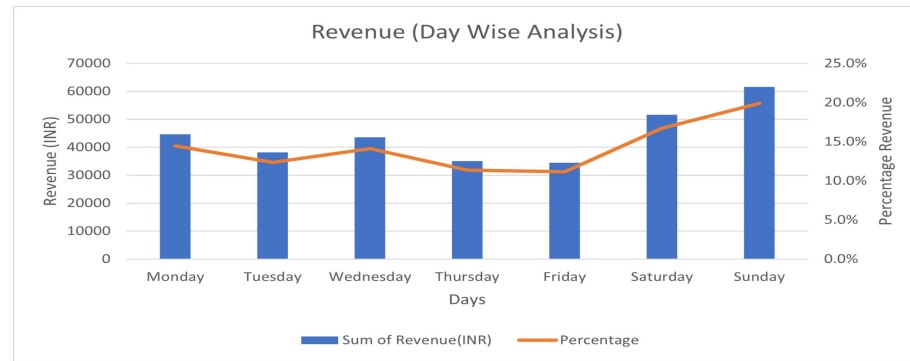

As we can see in the graphs besides us:

I. 7 items (roughly 14%) of the items contribute to more than 50% of the volume (Again, the line increases at an increasing rate)

II. However, as we move ahead in the graph, it takes over another 14 items to reach 80% volume (The line grows at a diminishing rate)

III. This clearly shows that how the Pareto Principle is not being followed in the case of volume as well, as over 41% of the items contribute to 80% of the volume (sales)

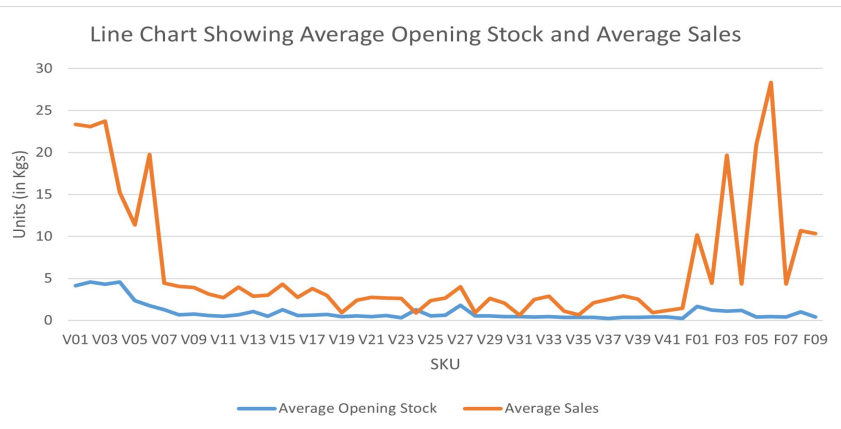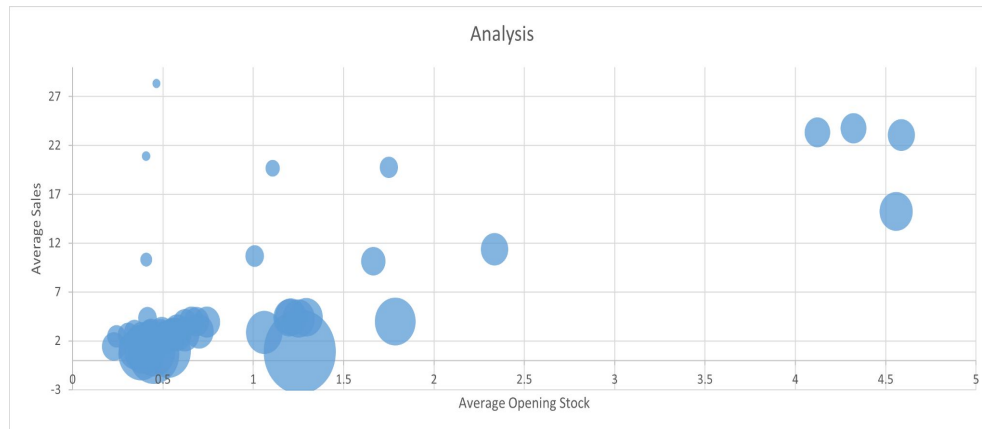# Day Wise Patterns

Volume Perspective

Revenue Perspective

HeatMap Analysis - Correlation between Days

Volume Perspective

Sales Day Wise Inter Correlation Heat Map

Revenue Perspective

Revenue Day Wise Inter Correlation Heat Map
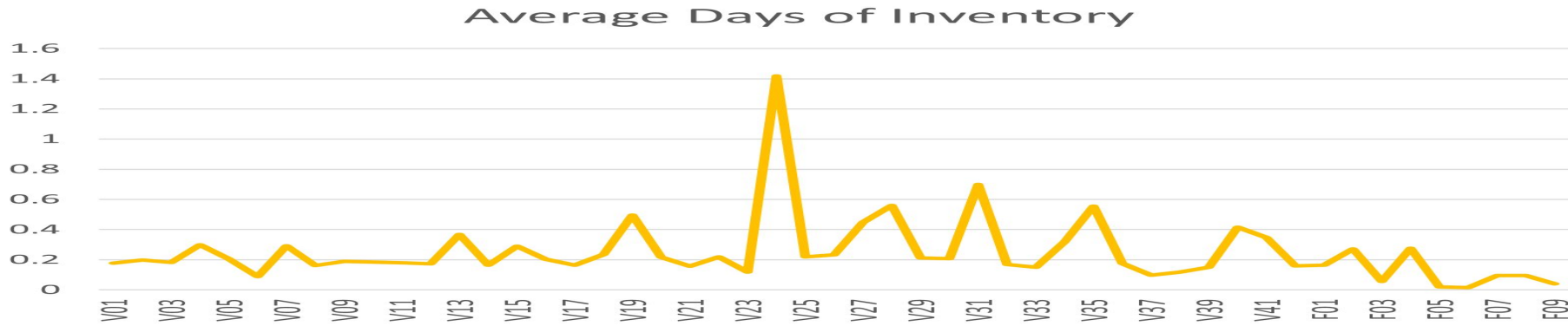
Inventory Analysis

Average Opening Stock and Average Sales

Average Days of Inventory – Bubble Chart

Average Days of Inventory – Line Chart

Conclusion and Findings

❖ Clearly, expansion of customer base (volume of sales) is crucial to survive in this business given the variables involved, and increase revenues

❖ Should also go and sometimes personally deliver items if possible, so as to build the connection and familiarity with the customer. One place where he can make up for price is high level customer service

❖ Must incorporate asking door to door recommendations from his customers, as that can help immensely in creating a personalised relationship with the customer

❖ Inaccurately predicting revenues and buying more items might result in significant losses that harm the business, so make sure to avoid those

❖ After these processes are implemented, he can surely make investments in fixed assets such as a delivery scooter/mini truck and a refrigerator for cold storage.

Thank You