

Outbound Sales and Inventory Management for an Office Furniture dealer

Mid Term Report for the BDM capstone Project

Submitted By:

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Executive Summary

Ukan Furn, is an office furniture dealer of Featherlite Furniture based out of Coimbatore, Tamil Nadu. The company currently generates an annual revenue of approximately Rs. 10 Cr. Currently sales happen based on orders generated through customer walk-ins, enquiries placed through phone calls and existing customer references. The discussions with the dealer revealed that Ukan Furn does not have an Outbound Sales team but intends to form one to acquire customers and pitch the relevant products. Presently, the dealer does not maintain inventory of the products sold. Ukan Furn wants to streamline the inventory management process also to enable timely delivery of products to prevent loss of business.

Keeping in mind the intention of the dealer, sales data for a period of 10 months i.e. from March to December 2023 is being analyzed to draw some insights that would help address the above said issues. Ukan Furn deals with nearly eighteen (18) product categories of furniture; majority of them include Chairs, Tables, Workstations, Storage cabinets, etc. In each category, there are different models; a total of 80 models are dealt with by the dealer. The business caters to the needs of customers spread across 18 segments.

Goal for the mid-term

- Calculate the Revenue generated by Product Category.
- Determine the product categories that are fast moving. Also, within the various product categories of chairs, tables, workstations, etc. there are multiple models; arrive at the fast-moving models among the different models.
- Find out which customer segment(s) are contributing to maximum revenue; customer segments contributing revenue greater than Rs.10 lakhs have been shortlisted for this exercise.
- Analyze if the revenue chart by Product Category and Model follows the Pareto principle.
- Do trend analysis of the Monthly Revenue for the March to December 2023 period.

Data Collection

Mr. Kandavel agreed to share the needed data and expressed a keen interest to understand the key insights data analysis would throw up. Having run the business for a long time, he believes that to scale it up, his intuition and a broad understanding needs to be supported with a data backed structured decision-making approach. Data collection included the following in Excel format.

1. Datasets of front office Enquiries/ Walkins that got converted to sales orders.
2. Details of purchase orders placed on the factory (as per confirmed sales orders).
3. Details of product installation in the customer site.
4. Model Catalogs for various categories and
5. Details of Customer Segments.

Multiple video meetings were held via Google meet to understand the nuances of the business and the process followed from Enquiry generation to Installation.

Proof of Originality: No Objection Certificate in UKAN Furn's letter head and Showroom Picture

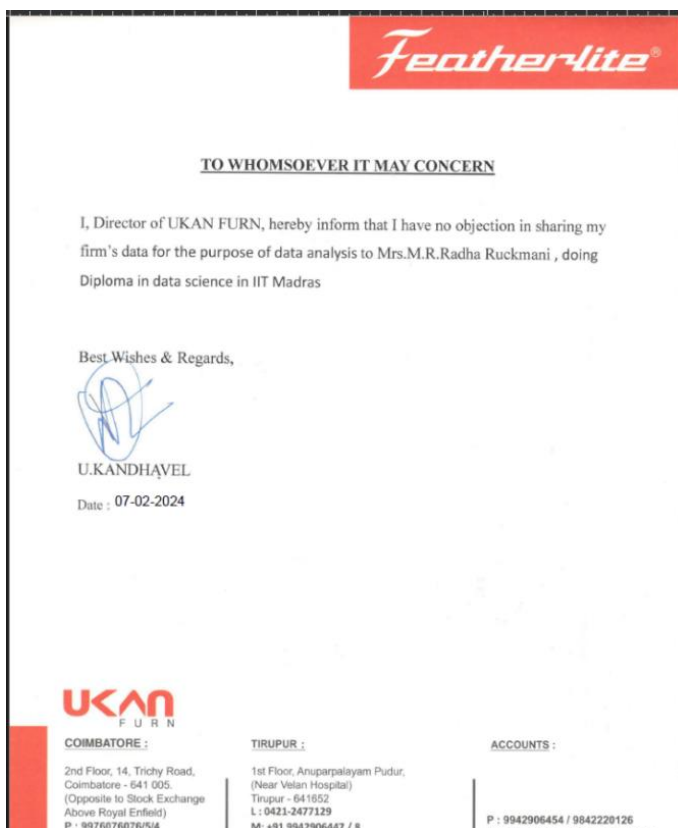


Figure 1: No Objection Certificate



Figure 2: Showroom Sample Pic

Online Video Interaction:

Please click the link to access the video interaction with the owner and his team and a small clip of the dealer's office cum showroom [Video Interaction](#).

Meta Data and Descriptive Statistics

I. Enquiry (Sales) Data:

This Excel workbook has enquiries placed by customers through phone calls or Walk ins. There are five (5) Sales Executives who receive calls in the front office. The workbook has one sheet for each of the five sales executives. Individual sheets have been consolidated into a single sheet. Following are the columns that were present in each of the Excel sheet.

Column Name	Data type	Description
S. No.	Numerical	Serial Number assigned in sequential order for each enquiry.
Date	Categorical	Date of enquiry (this column was not present initially when the datasheet was given). The team was asked to provide the date.
Month	Categorical	Month column has been created from the above (date data); this would help generate month wise revenue details.
Quarter	Categorical	This column too has been created from the date column.
Client/ Company Name	Categorical	Name of the customer.
Segment	Categorical	Customer segment.
Item Description	String (Text)	Gives the details of the product enquired.
Model	Categorical	Model of the product (referred from another excel sheet containing the details of different models).
Category	Categorical	Products are classified under different categories.
Quantity	Numerical	No. of units ordered.
Order Value (Without GST)	Numerical	Total order value without GST.
Order Value (with GST)	Numerical	Auto calculated by adding GST component.
Executive name	Text	Name of the sales executive.
Status	Categorical	Tells if Enquiry is fruitful or not.
Remarks	Categorical	Reason if the Enquiry did not convert into Sales.

Other datasheets provided are given below.

II. Models Catalog in the form Excel Sheets:

There are 2 workbooks with many sheets giving details about the various models of the products with pictures and specifications. This sheet was used to get the model's name based on the item description given in the Enquiry Sheet.

III. Purchase Register: The purchase details for the 3 quarters from March – December 2023 is shared.

	S.No.	IPO.No.	IPO Date	PO No.	Client Name	Item Description	Total Qty.	Sales Person	ORDER VALUE	Order Value without GST	GST %	Advance received from customer	Balance amt to be received from
41	16	30	29-03-2023	FOS-1039	Orane Healthcare India Private Limited	EDGE 4 SEATER SHARING - E4 S 10560	1	Prakash	23779	20152.00	0.847470457	23779	0
48	17	30	29-03-2023	FOS-1039	Orane Healthcare India Private Limited	EDGE 2 SEATER SHARING - E2 L 10560	1	Prakash	16199	13728.00	0.84745972	16199	0
49	18	30	29-03-2023	FP-141	Orane Healthcare India Private Limited	Astro MB Nylon Base	8	Prakash	68119	57728.00	0.847458125	68119	0
50	60	37	30-03-2023	MPO-001	GREENTREE ASSOCIATES	Amaze Grey MB Metal Base	10	Prakash	100371	85060.00	0.847455938	100371	0
52	27	39	12-04-2023	FP-005	FRISKE KNITS	Alpha MB	6	Prakash	34550	29280.00	0.847467438	34550	0

Figure 3: Purchase sheet

The new columns that this sheet has other than the columns found in the Sales Sheet are:

Column Name	Data type	Description
IPO Number	Numerical	Internal Purchase order number.
IPO Date	Date	Order confirmed date.
PO Number	Categorical	Purchase order number before sending the request to the factory.
Total Qty	Numerical	Quantity Ordered.
Sales Person	Categorical	Name of the Sales person who closed the sales order.
Order Value	Numerical	Order value with GST.
Order Value without GST	Numerical	Order Value without GST.
Advance amount	Numerical	Advance given by customer.
Balance amount	Numerical	Balance amount to be received.

IV. Installation Register: This sheet has the details of the product installation at the customer's place. The date of delivery will be captured in this sheet.

The Purchase and Installation Registers are not used at this stage of analysis since data cleaning is pending and few details that are relevant to the analysis are yet to be provided by the dealer.

V. Descriptive Statistics

- Monthly overall revenue is calculated for the period March to December 2023.
- The total revenue for the above period is approximately Rs. 6.21 Crores. It is observed that the maximum revenue of over Rs. 1.03 Crores has been generated in the month of March 2023 and about 1.01 Crore was recorded in Jun 2023.
- Minimum revenue of around Rs. 14.51 lakhs recorded in the month of November 2023.
- The average sales for the said period are about Rs. 62 lakhs.
- There are four (4) product categories [out of the 18 categories sold] that contribute 80-85% of the total revenue; this is around 22% of the product categories. These are Chairs (47%), Workstations (27%), Storage Cabinets (7%) and Tables (5%).
- The different product models also follow Pareto principle wherein 16 out of the 77 models (which is about 20%) generate 80% of the Revenue.
- Top 6 models generate a Revenue of nearly over Rs.15 lakhs to Rs.2 Crores. The models are **Edge Perform, Contact Project, Astro, Amaze, Alpha and Enrich.**
- **Manufacturing, IT, Architect, Textiles** are the top 4 out of the 18 customer segments that contribute about 80% of the overall revenue.
- The Maximum revenue generating category is **Chairs.**
- The model preferred by many is **Edge Perform.**
- The Segment contributing maximum revenue is **Manufacturing.**

Detailed Explanation of Analysis Process

The raw datasheets that are received by the company are uploaded in the google drive. It can be accessed through this link [Datasets](#).

Data Cleaning

The Sales Dataset is mainly used for the Analysis at this stage. Sales (Enquiry) sheet has columns that is explained in the Meta data section.

- The enquiry date was entered in mm.dd.yyyy format. All the dates were changed to dd-mm-yyyy by splitting using text-to-columns option in Excel. Interchanged the columns and using

concat() function joined the values in the 3 columns to a single string separated by '-' and formatted the entire column to short date.

- Introduced 2 new columns Month and Quarter. Using Text() with "mmm" format, extracted the month from the date column. Using IFS() and OR() function on date column, filled the Quarter column with Q1, Q2, Q3 and Q4.
- A new column "Segment" was introduced in the Enquiry Sheet and the values were taken from "Customer segment" sheet using VLOOKUP() function.
- Model and Category columns are created and the values are manually entered depending on the item description and referring the Model catalog sheet.

Analysis

- **Monthly Revenue Trend:** Overall revenue generated month on month is calculated using pivot table to group monthly sales and summed up the order value (without GST). A Combo Chart with Bar - line graph with monthly total revenue represented by bars and average monthly revenue shown by line is plotted.
- **Category wise Revenue:** A Pivot table is created to group the sales transactions as per the Category and found out that Chairs is the highest revenue generating category. A 3D pie chart is plotted with top 7 categories generating revenue above Rs.15 lakhs.
- **Revenue, Segment wise:** Total Revenue generated by different customer segments is calculated using a pivot table by grouping the sales data based on customer segment. It is found that the maximum orders are given by the manufacturing segment. A doughnut chart indicating the customer segments generating revenue of over Rs.10 lakhs is plotted with percentage of Revenue displayed as Labels.
- **Model Revenue Pareto:** Total revenue calculated by segregating the models of the furniture using pivot table. It was found that 20% of the models generated 80% of the revenue. The high revenue generating model is **Edge Perform**. A total of 16 different models out of the 77 generate 80% of the revenue. Nearly 18 models are either not contributing to the overall revenue or generating very less revenue.

Results and Findings

- The trendline in Figure 4 shows that the overall monthly revenue has significantly decreased in the months of October, November and December 2023 when compared to the first 5 months. Probable reasons to investigate would be seasonality, customer spending pattern, their budgets, etc.

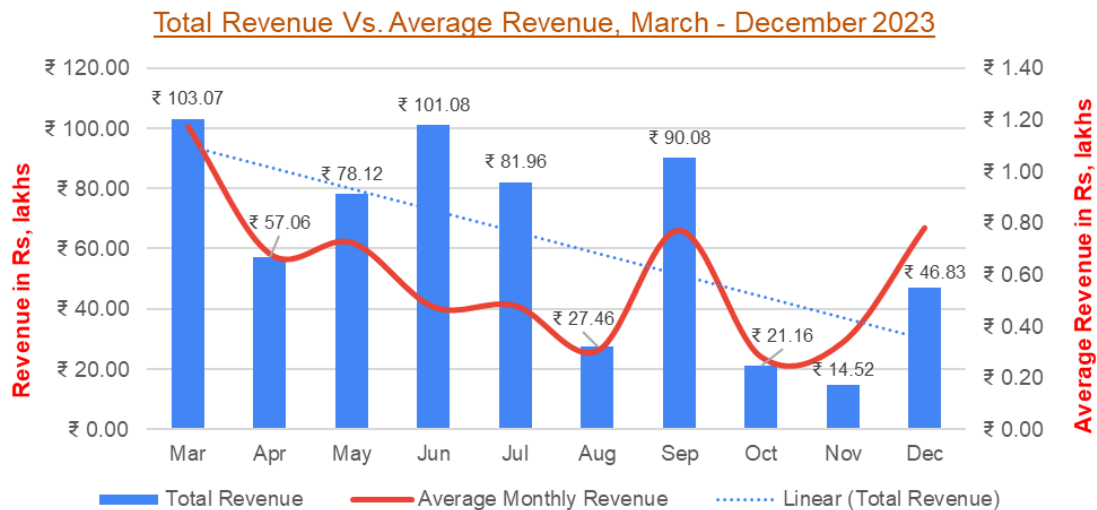


Figure 4: Monthly Revenue Vs. Average Revenue

- The Figure 5 below indicates that the top 2 product categories contributing to the overall revenue of the business are Chairs and Workstations. Percentage contribution from other product categories to the overall revenue is very less.

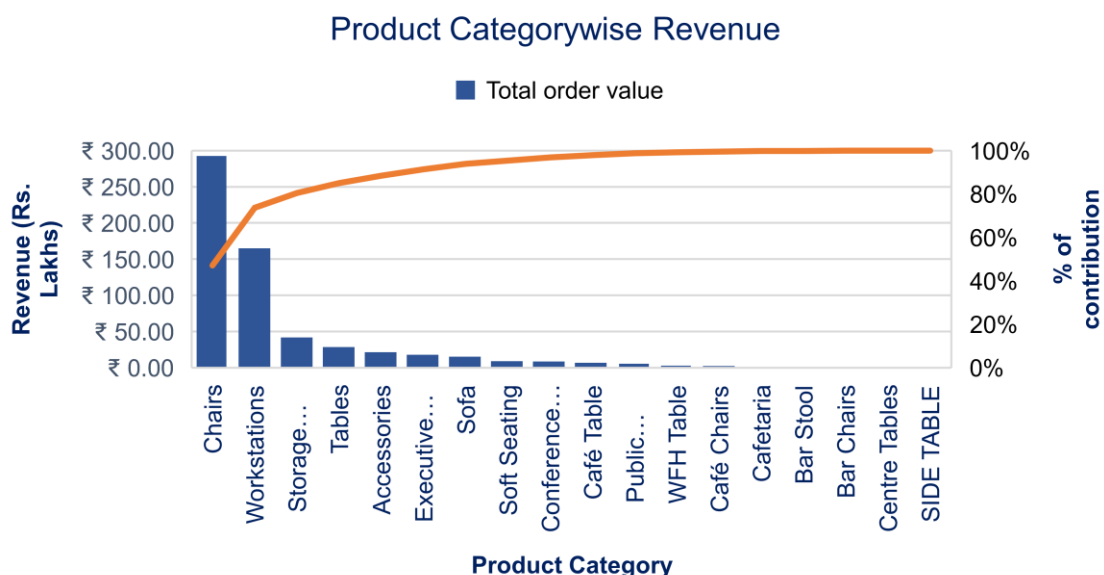


Figure 5: Category wise Revenue

- Figure 6 displays the product categories that individually contribute a revenue of over Rs. 15 lakhs. Chairs alone contribute 47% of the total revenue i.e. approx. Rs. 2.92 Cr. Out of the 18 product categories that are sold, only 7 of them generate revenue greater than Rs. 15 lakhs. The remaining 11 categories do not contribute much to the business.

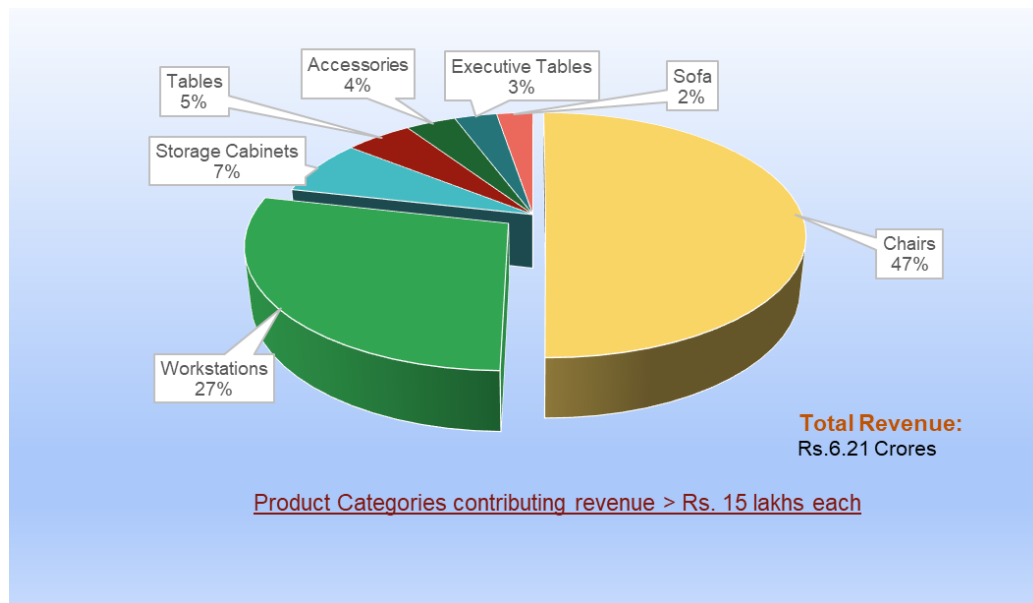


Figure 6: Categories and their revenue share

Revenue contribution by Customer segment; > Rs. 10 lakhs each

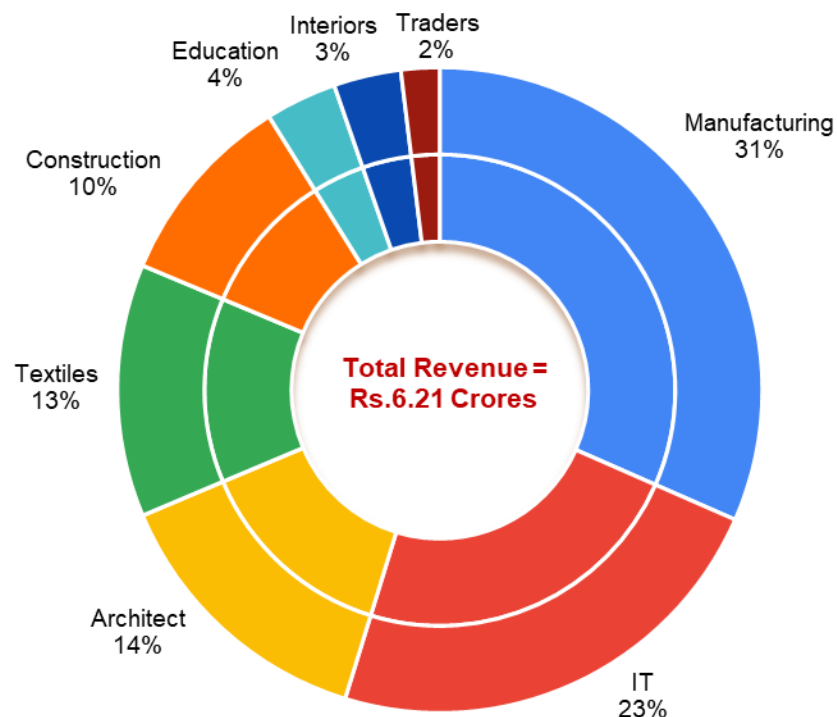


Figure 7: Customer segment wise Revenue Share

- Figure 7 above shows a Doughnut chart displaying the contribution of customer segments generating revenue of over Rs. 10 lakhs each. The Customers were grouped based on the segment they belong to and the order value summed up using Pivot Table. It can be seen from the chart that the Manufacturing segment is contributing the maximum revenue of a whopping Rs. 1.89 Crores which is 31% of the total revenue.
- The final chart below in Figure 8 indicates that 16 out of the 77 models (under various product categories) contribute around 80% of the total revenue. Of the 16 models, the top 6 models generate over Rs.15 lakhs each. 27 models generate very less revenue; less than even Rs. 1 lakh. A discussion with the dealer needs to highlight this aspect and probably divert the sales attention to those models that contribute healthily to the overall revenue.

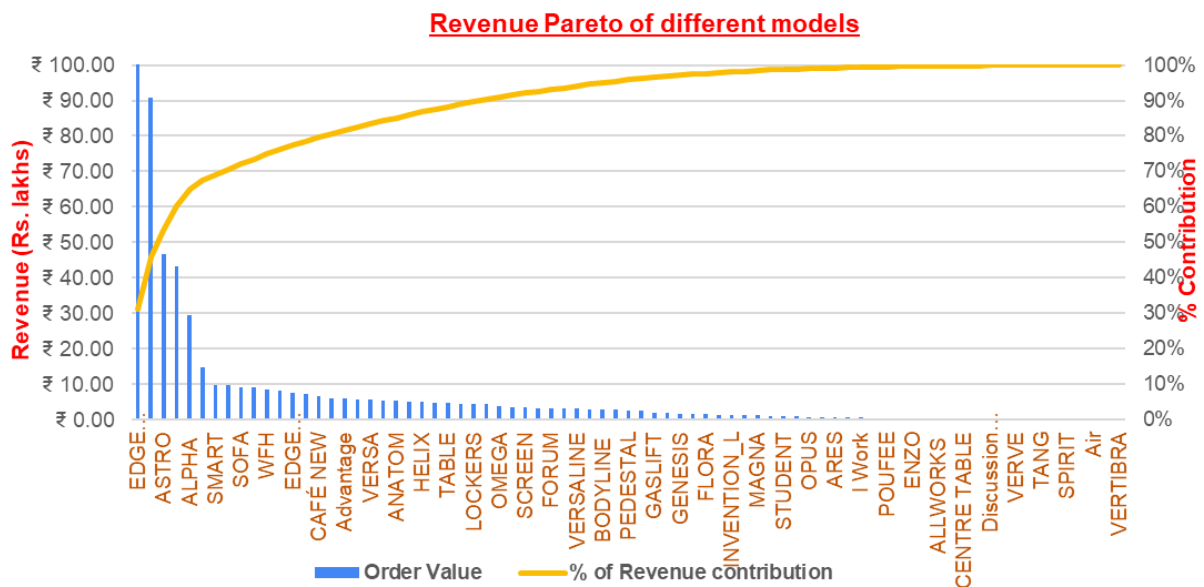


Figure 8: Revenue Pareto Based on Model

Next Steps

- To check which are the models that are preferred by the customers among the high performing categories.
- Capture the Quantity of the items sold from the purchase Report and conduct a volume-based analysis.
- Also get the Date of delivery of the product from the Installation Dataset and calculate the time taken from the date of order to date of delivery. This will give an insight as to how long it takes for the order to be delivered at the customer's place.
- Based on this analysis, the dealer can plan for the inventory of the items for prompt delivery.