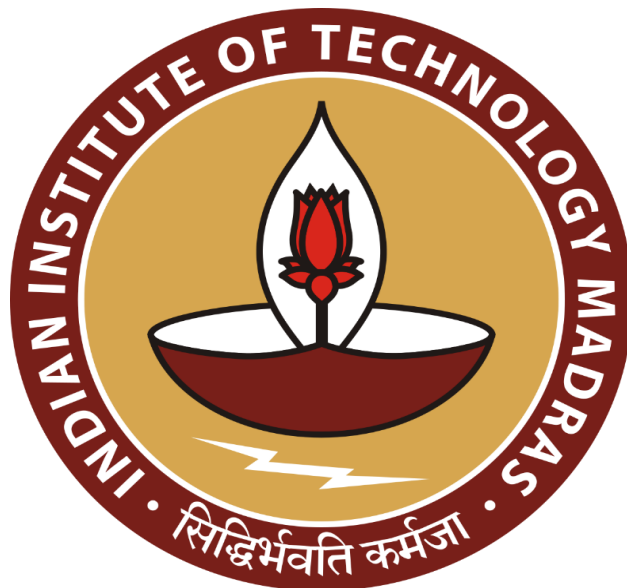


Harmony in Hospitality: A Data-Driven Exploration of Prajapati Caterers and Decorators

Submitted by

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Declaration Statement

I am working on a Project titled “**Harmony in Hospitality: A Data-Driven Exploration of Prajapati Caterers and Decorators**”. I extend my appreciation to **Prajapati Caterers and Decorators**, for providing the necessary resources that enabled me to conduct my project.

I hereby assert that the data presented and assessed in this project report is genuine and precise to the utmost extent of my knowledge and capabilities. The data has been gathered from primary sources and carefully analyzed to assure its reliability.

Additionally, I affirm that all procedures employed for the purpose of data collection and analysis have been duly explained in this report. The outcomes and inferences derived from the data are an accurate depiction of the findings acquired through thorough analytical procedures.

I am dedicated to adhering to the principles of academic honesty and integrity, and I am receptive to any additional examination or validation of the data contained in this project report.

I understand that the execution of this project is intended for individual completion and is not to be undertaken collectively. I thus affirm that I am not engaged in any form of collaboration with other individuals, and that all the work undertaken has been solely conducted by me. In the event that plagiarism is detected in the report at any stage of the project's completion, I am fully aware and prepared to accept disciplinary measures imposed by the relevant authority.

I understand that all recommendations made in this project report are within the context of the academic project taken up towards course fulfillment in the BS Degree Program offered by IIT Madras. The institution does not endorse any of the claims or comments.

Signature of Candidate: **Kaushal Prajapati**

Name: **Kaushal Prajapati**

Date: **10/03/2024**

1 Executive Summary and Title:

Prajapati Caterers and Decorators, led by **Mr. Bhavy Prajapati**, is located at **Vadodara, Gujarat**. The business is B2C and deals in the segment of catering and decorations for all type of events.

The major business problems that the organization is facing are stagnant growth in revenue and having operational challenges for running it and manpower handling problems. They are also having low margins on their catering business with shrinking profits and by addressing these issues, this project can contribute in overall expansion and growth in business.

The problems will be addressed via analyzing the current operations data using different analytical approaches like root cause analysis, segmentation and targeting, exploratory data analysis focusing on inventory management and manpower utilization to improve in sales, margins and profits in both catering and decorations business. This will also involve customer feedback and preferences for enhancing the overall quality of service.

the project seeks to integrate operational streamlining, data analytics, and strategic marketing using digital marketing as key to help Prajapati Caterers and Decorators. By addressing these aspects comprehensively, the goal is to position the business for sustainable growth, enhanced customer satisfaction, and increased profitability.

2 Proof of originality of data:

1. Letter from organization in letter head with stamp and sign.

https://drive.google.com/drive/folders/1RaBbYlaPUynBeVn0ACORqwmncQ2Fdl36?usp=drive_link

2. Images related to organization along with your images with founder:

https://drive.google.com/drive/folders/1gupQWC4qnAg4wYXcKybbww5BDS0wQ1Lp?usp=drive_link

3. Recorded video with the founder in the organization:

https://drive.google.com/file/d/12-S30B1MOfHAmIJ97Rcpd6qSVQN3Cd6t/view?usp=drive_link

3 Metadata:

1. Project Title: Harmony in Hospitality: A Data-Driven Exploration of Prajapati Caterers and Decorators
2. Business Name: Prajapati Caterers and Decorators
3. Business Owner: Bhavy Prajapati
4. Industry: Catering and Décor
5. Location: Vadodara, Gujarat
6. Purpose: Analysis of catering and decoration services, focusing on order details, revenue, and expenditure and manpower management.
7. Data Source(s): Internal records, Monthly order details, Meetings with owner, Observation at locations, Meetings with peers, Meetings with customers.

8. Analysis Methods: Descriptive statistics, percentage calculations, cost analysis, margin calculations, SWOT analysis, 5Whys analysis, Machine Learning algorithms(probably).

9. Key Findings:

1. In the catering segment, Prajapati Caterers and Decorators offer a diverse range of services tailored to accommodate varying event sizes, ranging from intimate gatherings catering to around 100 persons, up to large-scale events catering serving 2000-2500 individuals. Additionally, their expertise extends to event decoration services, providing clients with a choice of distinctive décor options, including balloon décor, arrangements with natural flowers, and artistic setups with artificial flowers.
2. The conversion of orders from inquiries in catering is 1: 6.24 and in décor is 1:3.86.
3. On average, for every 1.6 orders received by Prajapati Caterers and Decorators in decoration services, 1 order is successfully completed or fulfilled.
4. On average, the distribution of completed orders for catering services reveals a diversified source, with approximately 50.5% originating from customer references, 22.70% through the business's Instagram profile, 16.50% attributed to social media and offline marketing efforts, and the remaining 10.30% facilitated by collaboration with event managers. In the decoration segment, the completed orders exhibit a distinct pattern, with 33.60% sourced from customer references, 15% generated through commission-based referrals, 27% via social media channels, and 14.50% established through contracts with hotels.
5. On average, the catering business has 21.5% gross profit margins and décor business has 45% gross profit margins.

10. Recommendation:

1. While the catering business maintains a healthy 21.5% gross profit margin, there is potential for improvement. Exploring cost-effective sourcing, negotiating bulk purchase discounts, and efficient resource utilization can contribute to margin optimization.
2. Given the significant contribution of customer references, there is an opportunity to further capitalize on this by implementing referral programs or incentives to encourage satisfied clients to recommend their services.
3. Since the décor business has healthy 45% gross profit margins and conversion from order received to order completion is significantly low, there is substantial growth possible if this conversion can be increased via deploying extra manpower, or utilizing existing manpower to its full potential.
4. Embracing technology, such as an online ordering system or website, can streamline processes, enhance customer experience, and contribute to operational efficiency.
5. Establishing a systematic approach to collecting and analyzing customer feedback can provide valuable insights for continuous improvement. Understanding customer preferences and addressing concerns can enhance overall service quality.

11. Target Audience: Prajapati Caterers and Decorators management, stakeholders.

12. Keywords or Tags: Catering, Decorations, Monthly Analysis, Revenue, Expenditure, Margins, Inquiries, Food Menus, etc.

13. Conclusion: The data exploration for Prajapati Caterers and Decorators unveils insights that can shape their future endeavors. From the nuances of customer references to the dynamics of online presence, each data point suggests pathways for growth. The recommendations derived from this journey aim to fine-tune their strategies, fostering a more robust and adaptive business landscape. As the final note resonates, Prajapati Caterers and Decorators are poised to orchestrate success in the catering and decoration domain.

4 Descriptive Statistics:

- Measures of Central Tendency:**

Measures of Central Tendency			
	Mean	Median	Mode
Catering Inquiries	50.42	50.00	No Mode
Catering Orders	8.08	8.00	No Mode
Décor Inquiries	79.50	82.50	No Mode
décor Orders	20.58	21.00	No Mode

- Measures of Variability:**

Measures of Variability			
	Range	Variance	Standard Deviation
Catering Inquiries	51.00	259.17	16.10
Catering Orders	14.00	20.08	4.48
Décor Inquiries	59.00	280.64	16.75
décor Orders	13.00	15.36	3.92

- Measures of Shape and Distribution:**

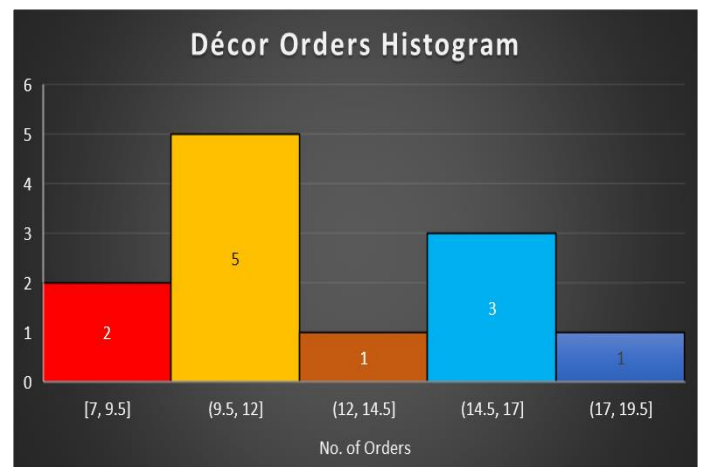
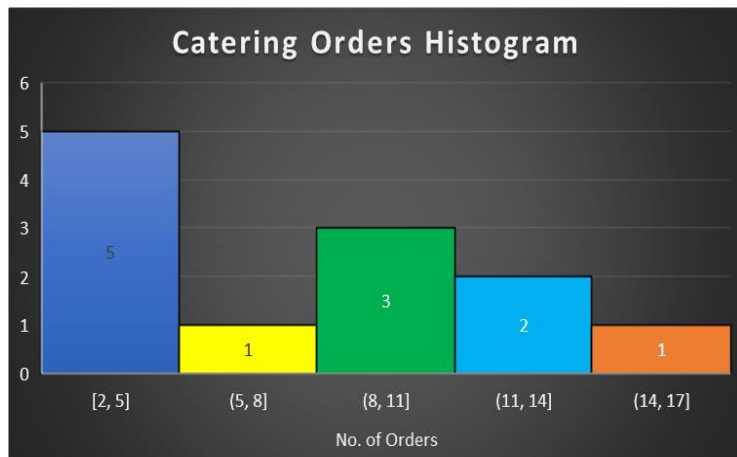
Measures of Shape and Distribution		
	Skewness	Kurtosis
Catering Inquiries	0.1234	-1.1290
Catering Orders	0.2688	-1.1572
Décor Inquiries	-1.1389	1.1033
décor Orders	0.0381	-0.6376

- Quartiles:**

Quartiles			
	Q1	Q2 (Median)	Q3
Catering Inquiries	39.00	50.00	61.25
Catering Orders	4.75	8.00	11.25

Décor Inquiries	76.75	82.50	90.50
décor Orders	18.00	21.00	23.00

- **Histograms of Orders:**



5 Detailed Explanation of Analysis Process/Method:

a. Data Collection & Cleaning:

- The first step involves gathering relevant data Internal records, Monthly order details, Meetings with owner, Observation at locations, Meetings with peers, Meetings with customers.
- Data includes information on monthly inquiries, orders received, order completion, pricing details, monthly expenditure, and more.
- Data cleaning involves creating a formatted data all the raw data, handling missing values, duplicate removal, outlier detection, normalization etc. procedures.
- Data integration from all the different sources to one place is the crucial step for the analysis.
- Effective data collection and cleaning processes have been crucial in ensuring the accuracy, reliability, and usability of the dataset for subsequent analysis and decision-making.

b. Descriptive Statistics:

1. Measures of Central Tendency:

- Mean Calculation: Computation of the average values for key metrics such as Total orders Total inquiries, and Profit Margins to understand central tendencies.
- Median Calculation: Determination of the median for relevant variables, providing insights into the distribution of data.

2. Measures of Dispersion:

- Standard Deviation and Variance: Calculation of the standard deviation and variance to assess the spread and variability of data points, aiding risk assessment.
- Interquartile Range (IQR): Exploration of IQR to identify the range within which the middle 50% of data falls, detecting potential outliers.

3. Frequency Distributions:

- Categorical Variable Analysis: Generation of frequency distributions for categorical variables like sources of orders, enabling a clear understanding of the data distribution.
- Histograms: Utilization of histograms for visual representation of the distribution of numerical variables.

4. Correlation Analysis:

- Correlation Coefficients: Computation of correlation coefficients to understand the relationships between variables, highlighting potential dependencies.

5. Time-Series Analysis:

- Monthly Trends: Investigation of monthly trends in inquiries, orders, and revenue to identify seasonality or patterns.
- Conclusion: Descriptive statistics provides a comprehensive overview of the dataset, offering insights into central tendencies, data distribution, relationships between variables, and trends over time. These analyses serve as a foundation for subsequent in-depth examinations and decision-making processes.

c. Cost & Margin Analysis based on Order Details:

- Cost analysis involves cost breakdown such as fixed cost, manpower cost, monthly expenditure etc. for evaluation of the financial efficiency of operations.

1. Percentages and Ratios:

- Percentage Share Analysis: Calculation of the percentage share of completed orders from different sources (e.g., references, social media, event managers) to identify dominant channels.

2. Margin Analysis:

- Profit Margin Calculation: Examination of profit margins for both catering and decoration segments, identifying profitability and areas for improvement.

d. SWOT Analysis:

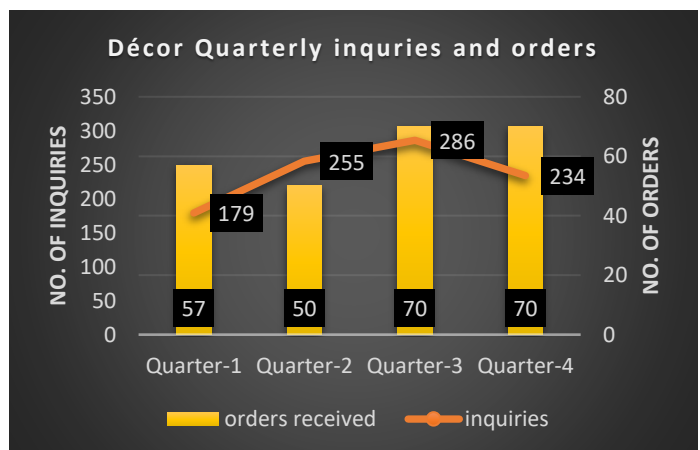
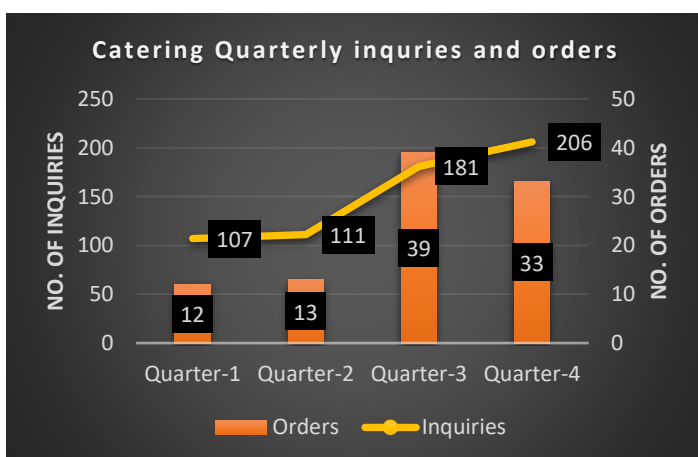
- Objective: The objective of this SWOT analysis is to assess the internal and external factors impacting Prajapati Caterers and Decorators in order to inform strategic planning and decision-making processes.
- Information Gathering: Data collection on internal (strengths, weaknesses) and external (opportunities, threats) factors affecting the organization.
- Identifying internal factors (strengths, weaknesses):
 - Evaluation of what the organization does well or in which area have the advantages and examination of where the organization falls short or what needs to be improved in the organization.
- Identifying external factors (opportunities, threats):
 - Assessment of the external factors which can be advantageous for the business or can possibly be an opportunity to grab and evaluation of external factors that may pose challenge or risks to the business.
- Prioritization & Analysis of the factors and development of strategies:

- Evaluation of the significance of each identified strength, weakness, opportunity, and threat. Prioritization of them based on their potential impact on the business.
- Based on the analysis, development of strategies that leverage strengths, address weaknesses, capitalize on opportunities, and mitigate threats.

e. 5 Whys Analysis:

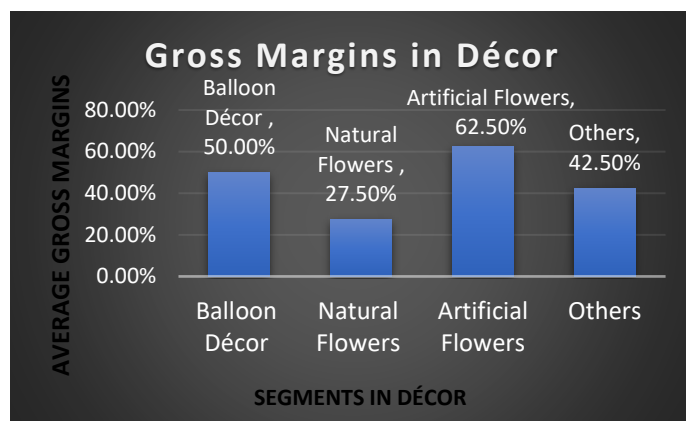
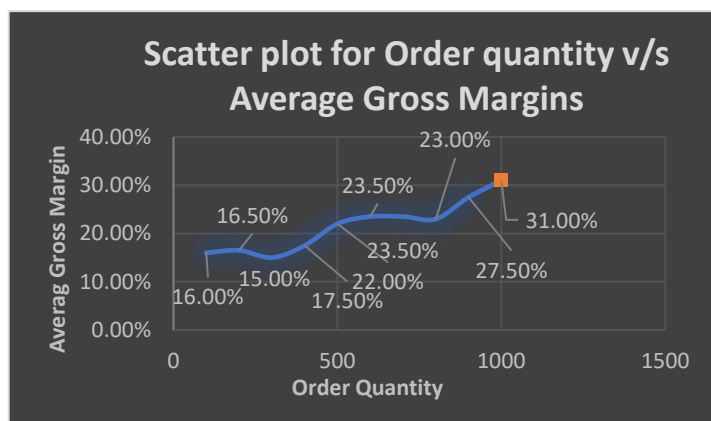
- Identifying Root Causes:
 - In order to comprehend and address the operational challenges and owner dependency within Prajapati Caterers and Decorators, a comprehensive 5 Whys Analysis was conducted.
 - By consistently asking "why," we delved into the core of the issues, unraveling the layers to pinpoint the fundamental causes of challenges. This iterative questioning technique facilitated a profound understanding of the underlying problems, laying the groundwork for precise and effective solutions.
- First Principle Thinking:
 - The application of First Principle Thinking served as a pivotal strategy in our analytical approach. By questioning assumptions and revisiting the foundational aspects of our operations, we sought to innovate and bring about fundamental improvements.
 - This involved a critical reassessment of existing processes and practices, aiming for a fresh perspective that aligns with the core principles of efficiency and excellence. The insights gained from this approach were instrumental in identifying novel solutions to the identified challenges, fostering a culture of continuous improvement within the organization.

6 Results and Findings:

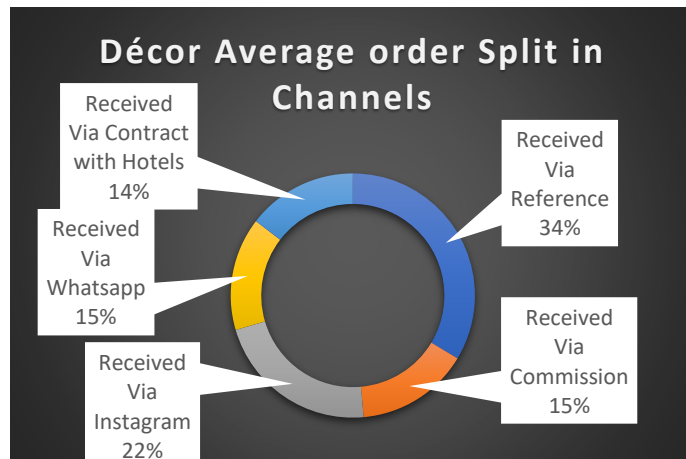
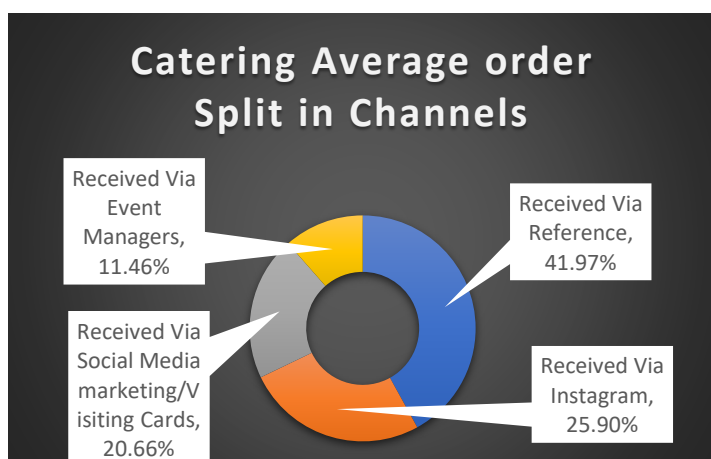


- **Quarter-1** consistently reflects a dip in both catering and decoration orders, indicating an **off-season** trend. Catering orders correlate directly with inquiries, while decoration orders display a more nuanced relationship, suggesting varied decision factors.
- In **catering**, **gross margins** show a steady increase with order quantities, reaching up to **30-31%**. **Décor services**, especially in **balloon décor (50%)** and **artificial flowers décor (62%)**, exhibit robust and lucrative gross margins. This highlights potential opportunities for Prajapati Caterers and

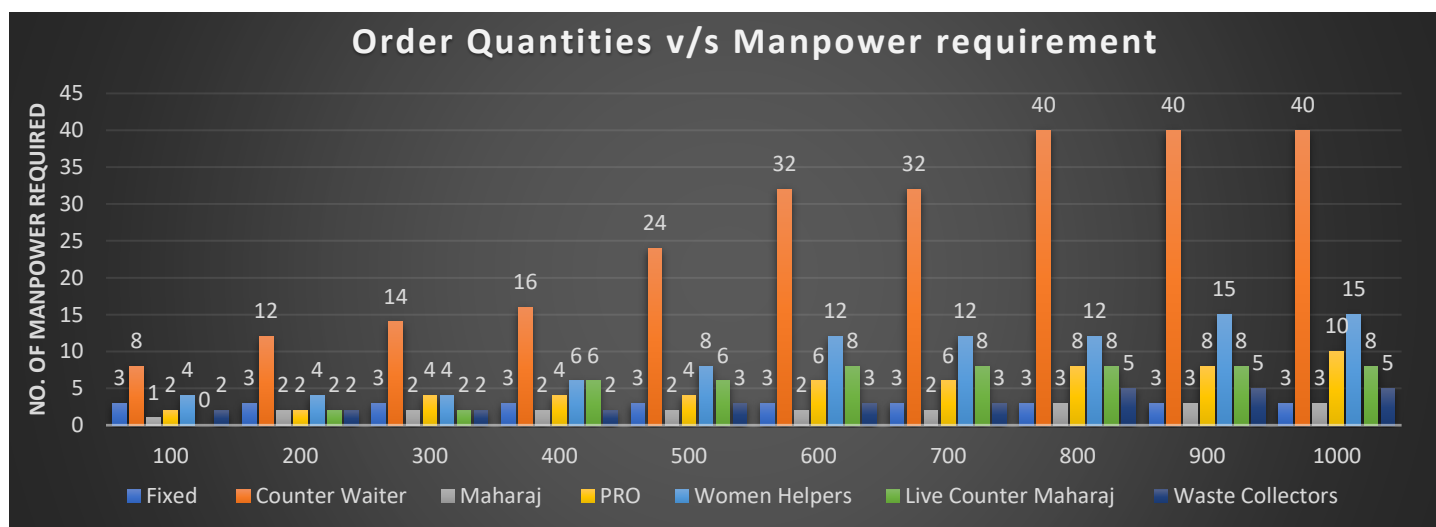
Decorators to target larger events and optimize marketing for high-margin décor services, enhancing overall profitability.



- **Customer referrals** constitute a substantial portion of the order acquisition strategy for both catering and décor services offered by Prajapati Caterers and Decorators. Approximately **42% of catering orders** and **34% of décor orders** are generated through customer referrals, reflecting a strong word-of-mouth presence in their clientele.

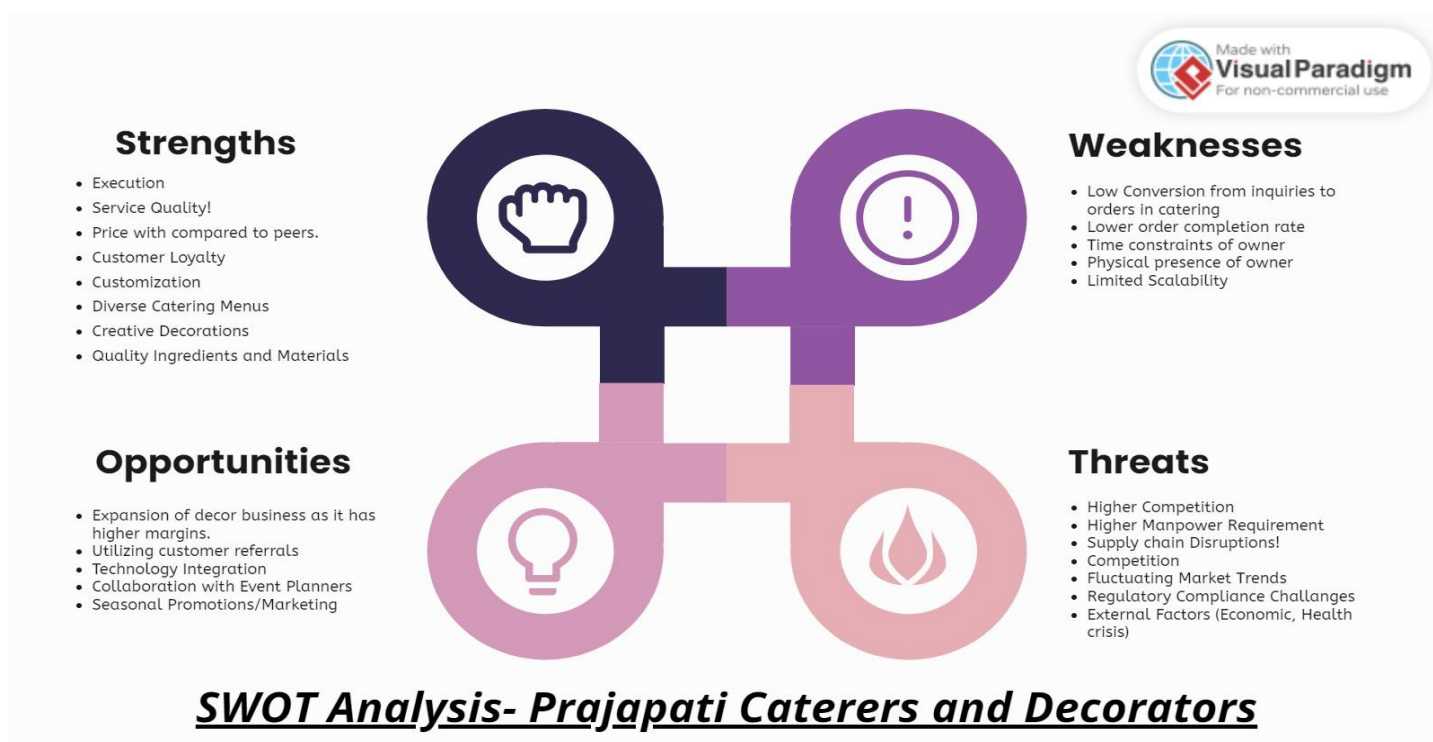


- However, despite the potential for partnerships and collaborations, the **contribution from hotels in the décor segment remains comparatively modest, accounting for only 14% of orders**. Similarly, **engagement with event managers in catering services is limited, comprising a modest 11.5% of the total orders**. Recognizing these areas for enhancement can lead to strategic collaborations and partnerships to further augment the order acquisition channels and broaden the

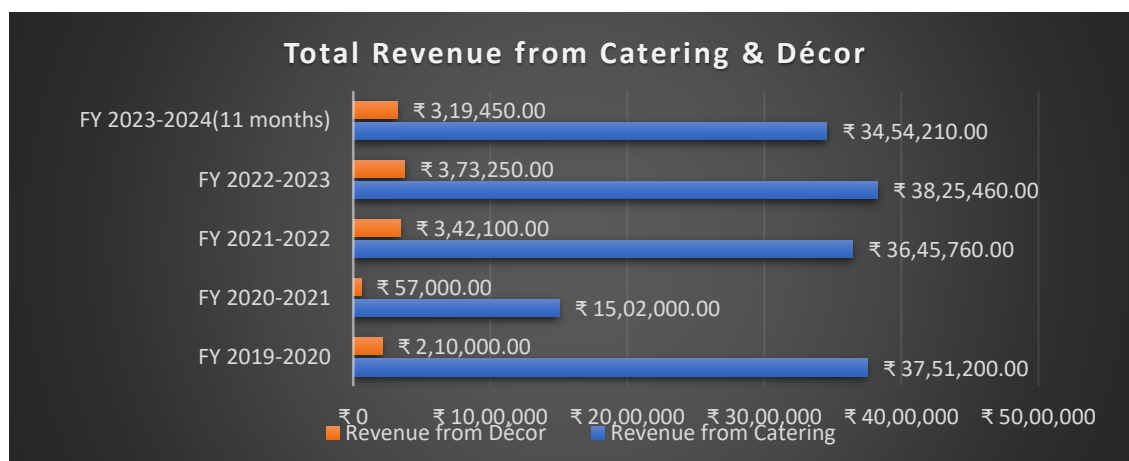


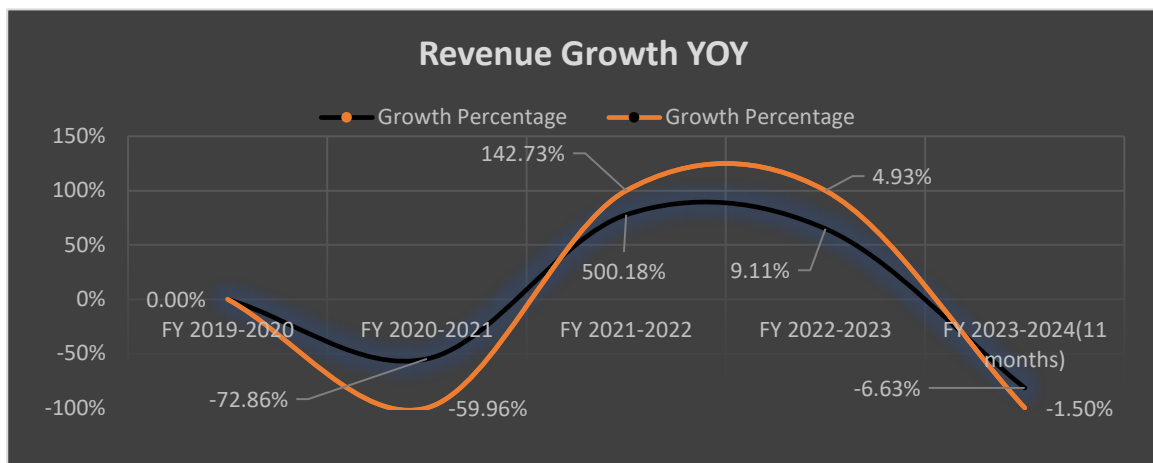
customer base.

- The correlation analysis between order quantity and required manpower reveals crucial insights. Notably, there exists a **clear relationship where an increase in order quantity corresponds to a higher demand for manpower**. This trend underscores the importance of scaling manpower resources in tandem with the business's operational requirements.
- However, a noteworthy observation is the significant involvement of the owner in back-office tasks and planning, supported by a fixed team of 3 skilled individuals. These tasks encompass critical aspects such as inventory procurement, transportation coordination, and overseeing the movement of necessary inventory to catering locations.
- Given this scenario, there arises an opportunity for growth by strategically expanding the fixed skilled manpower team. By augmenting skilled personnel, especially in back-office and planning functions, Prajapati Caterers and Decorators can enhance operational efficiency, accommodate a higher volume of orders, and facilitate overall business growth.



- Prajapati Caterers and Decorators exhibit **strengths in customization, quality, customer loyalty, diverse menus, and creative décor**. However, **challenges include low inquiry conversion, time constraints on the owner, and limited scalability**. **Opportunities** lie in **expansion, referral utilization, tech integration, and strategic marketing**. **External threats** involve **high**





competition, a cluttered market, and potential supply chain disruptions. Strategic actions should leverage strengths, address weaknesses, capitalize on opportunities, and mitigate threats for sustained growth.

- **Revenue Analysis and Insights:**

- Business Revenue Composition:

1. **Over 90% of the total revenue is attributed to the catering business.**
2. **The revenue from catering and décor both have remained relatively constant from FY 2019-20 to the present.**

- Impact of COVID-19:

1. The dip in revenue during the COVID-19 period (i.e. FY2020-2021) is evident, reflecting the widespread impact on the hospitality industry.

- Recommendation for Growth:

1. Addressing the negative impact of COVID-19 aside, the analysis suggests that opportunities for revenue growth lie in strategic areas.
2. Consideration should be given to **diversification, potentially expanding service offerings or exploring new markets.**

- Operational Dependency on Owner:

1. The analysis highlights a potential **bottleneck in the form of operational dependency on the owner.**
2. Employing skilled fixed employees who can handle back-office operations and manage events independently could alleviate this constraint.

- In conclusion, while the revenue analysis underscores the dominant role of the catering business, it also reveals the need for strategic initiatives to foster growth and mitigate operational challenges.