



FERN & PETALS SALES ANALYSIS

Excel Dashboard

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Ferns and Petals Sales Analysis

Overview

This project provides a comprehensive analysis of sales data for FNP (Ferns N Petals), leveraging visualizations to uncover key insights into revenue, customer behavior, and product performance. The dashboard integrates data from various sources, including orders, products, and customer details, to present actionable trends and recommendations for strategic decision-making.

Introduction to Business Problem

Ferns N Petals (FNP) operates in a highly competitive market for gifting and special occasion services. With diverse product offerings like cakes, flowers, and personalized gifts, the business faces challenges in optimizing its product portfolio, identifying seasonal and regional demand patterns, and enhancing operational efficiency. The primary business problem revolves around maximizing revenue while improving customer satisfaction and streamlining delivery processes. This requires:

1. Identifying high-performing products and categories to focus marketing and inventory efforts.
2. Understanding seasonal and occasion-based demand to align promotional strategies.
3. Reducing operational bottlenecks, such as delivery delays, to enhance the customer experience.
4. Leveraging customer and regional data to drive personalized marketing and expansion efforts.

By addressing these challenges, FNP aims to strengthen its market position, increase revenue, and build long-term customer loyalty.

Business Requirements

To address the business challenges effectively, the following requirements are identified for the project:

1. Data Integration
 - Consolidate sales, customer, product, and delivery data from various sources into a unified database for analysis.
 - Ensure data accuracy, completeness, and consistency across all datasets.

2. Dashboard Development

- Create an intuitive and interactive dashboard that visualizes key metrics such as revenue, orders, customer behavior, and product performance.
- Include filtering options for occasions, categories, time periods, and geographical locations.

3. Performance Metrics

- Define and track key performance indicators (KPIs) like total revenue, average order value, delivery time, and customer acquisition costs.
- Provide insights into peak performance periods (e.g., specific months, days, or hours).

4. Product and Category Analysis

- Identify high-performing products and categories to prioritize inventory and marketing efforts.
- Highlight underperforming areas for potential improvement.

5. Customer Insights

- Analyze customer spending patterns and preferences to design personalized marketing campaigns.
- Identify trends in regional demand to optimize offerings and expand into high-potential markets.

6. Operational Efficiency

- Assess order-delivery times and identify bottlenecks to improve logistics and customer satisfaction.
- Provide recommendations to streamline operations and reduce delivery delays.

7. Actionable Recommendations

- Generate insights to support strategic decisions, such as pricing strategies, promotional planning, and product development.
- Present opportunities for revenue growth during off-peak months and in underperforming regions.

8. Scalability and Maintenance

- Ensure the dashboard and analytics framework can accommodate future data growth and evolving business needs.
- Provide documentation and training for stakeholders to use the dashboard effectively.

Key Performance Indicators (KPIs)

1. Overall Business Performance:

- Total Revenue: ₹3,520,984
- Total Orders: 1,000
- Average Customer Spend: ₹3,520.98
- Average Order-Delivery Time: 5.53 days

2. Revenue Metrics:

- Revenue by Occasion: Track revenue generated from key occasions like Valentine's Day, Anniversary, and others.
- Revenue by Category: Analyze performance of product categories such as Colors, Cakes, Mugs, etc.
- Monthly Revenue: Measure seasonal trends, highlighting high-performing months (e.g., February) and low-performing months (e.g., April).
- Hourly Revenue: Peak revenue hours (late morning and early evening).

3. Product Performance:

- Top 5 Products by Revenue: Identify the highest-earning products like Magmam Set and Dolores Gift.
- Revenue Contribution by Category: E.g., Colors contributing the highest revenue.

4. Geographical Performance:

- Top Cities by Orders: Sales volume in regions like Imphal and North Dumdum.
- Regional Performance: Identifying potential for growth in underperforming cities.

5. Customer Behavior:

- Average Order Value: Assess how much customers typically spend per order.
- Order Trends by Day: High order volumes on specific days like Sundays and Tuesdays.

6. Operational Efficiency:

- Delivery Times: Track the average time taken to deliver orders and identify bottlenecks.
- Order Fulfillment Rates: Measure on-time deliveries and customer satisfaction.

7. Marketing Effectiveness

- Occasion-Specific Sales: Analyze sales tied to promotional campaigns for specific occasions.
- Discount and Offer Success: Evaluate the impact of seasonal discounts and promotions.

Data Source

Here's the detailed information for the three tables: Customers, Orders, and Products, along with their respective columns and descriptions.

1. Customer Table

- Customer ID: Unique identifier for each customer.
- Customer Name: Full name of the customer.
- Location: Geographical location (city, state) of the customer.
- Total Spent: Total revenue generated from this customer across all their orders.
- Orders Placed: Number of orders placed by the customer.

2. Orders Table

- Order ID: Unique identifier for each order.
- Order Date: Date when the order was placed.
- Delivery Date: Date when the order was delivered.
- Customer ID: Links the order to the respective customer in the Customers table.
- Product ID: Links the order to the respective product in the Products table.
- Quantity: Number of units of the product ordered.
- Price: Price of the product at the time of the order.
- Revenue: Total revenue generated from the order ($\text{Price} \times \text{Quantity}$).
- Occasion: Occasion linked to the order (e.g., Birthday, Anniversary, etc.).

3. Products Table

- Product ID: Unique identifier for each product.
- Product Name: Name of the product.
- Category: Product category (e.g., Cakes, Flowers, Gifts).
- Price: Price of the product listed in the catalog.

Relationships Between Tables

- Customer ID links the Customers table to the Orders table.
- Product ID links the Orders table to the Products table.
- These relationships enable cross-table analysis to uncover trends and generate actionable insights.

Goal and Outcome for FNP Sales Analysis Project

The primary goal of this project is to leverage data analysis to drive decision-making, improve operational efficiency, and enhance customer experience for Ferns N Petals (FNP). The detailed goals are as follows:

1. Increase Revenue and Profitability

- Identify high-performing products, categories, and customer segments to prioritize marketing and inventory strategies.
- Maximize revenue by focusing on occasions and periods that yield the highest returns.

2. Understand Customer Behavior

- Gain insights into customer preferences and spending patterns to personalize marketing efforts and improve customer retention.

- Segment customers by geography, purchase history, and occasion-based trends.

3. Enhance Operational Efficiency

- Reduce delivery times and streamline logistics to improve customer satisfaction.
- Identify bottlenecks in the order-delivery process and optimize resource allocation.

4. Optimize Marketing Strategies

- Align promotional activities with high-demand occasions and time periods.
- Use insights on peak order times and geographical trends to deploy targeted campaigns.

5. Improve Product Portfolio

- Analyze underperforming products to either improve or phase them out.
- Innovate new offerings based on customer demand and trends.

6. Enable Strategic Decision-Making

- Provide actionable insights to stakeholders to support data-driven decisions.
- Build a scalable dashboard to monitor ongoing performance and adapt to evolving business needs.

Outcome

The successful execution of the project will deliver the following outcomes:

1. Revenue Growth

- Improved revenue through targeted marketing on high-performing products, categories, and occasions.
- Identification of opportunities for growth during off-peak months.

2. Improved Customer Satisfaction

- Enhanced delivery experience by reducing the average delivery time (currently 5.53 days).
- Personalized customer engagement strategies leading to higher retention rates.

3. Operational Excellence

- Streamlined order processing and delivery operations to reduce costs and improve efficiency.
- Identification of inefficiencies in logistics for future improvements.

4. Strategic Insights

- Clear identification of top-performing cities, products, and time periods for sales.
- Comprehensive dashboard enabling continuous monitoring of KPIs and performance trends.

5. Better Marketing ROI

- Higher return on investment (ROI) in marketing by focusing on the right occasions, regions, and customer segments.
- Successful alignment of promotions with customer demands and peak sales periods.

6. Data-Driven Decision-Making

- Empower stakeholders with actionable data insights for pricing strategies, inventory management, and regional expansion.
- Scalability of analysis for future data integration and evolving business scenarios.

By achieving these goals and outcomes, the project will position FNP to capitalize on market opportunities, increase customer loyalty, and maintain a competitive edge in the gifting and special occasions industry.

Key Insights

1. Overall Performance:

- Total Orders: 1,000
- Total Revenue: ₹3,520,984
- Average Customer Spend: ₹3,520.98
- Average Order-Delivery Time: 5.53 days

2. Revenue Analysis:

- By Occasion: Revenue is highest for “Anniversary” and “Valentine’s Day,” indicating the importance of targeting these events.
- By Category: The "Colors" category (e.g., flowers, decorations) generated the most revenue (₹1,005,645), followed by "Cakes" (₹329,862).
- By Month: February leads in revenue (₹704,509), aligning with Valentine’s Day, while April shows a significant dip (₹140,393).
- By Hour: Revenue peaks during late morning and early evening hours, suggesting optimal marketing times.

3. Product Performance:

- Top 5 Products:
 - Magnam Set: ₹121,905
 - Dolores Gift: ₹106,624
 - Harum Pack: ₹101,556
 - Deserunt Box: ₹97,665
 - Quia Gift: ₹114,476

4. Geographical Trends:

- Top Cities by Orders: Imphal, North Dumdum, and Bhatar lead in sales volume, suggesting regional preferences for promotional targeting.

5. Customer Behavior:

- Customers spend an average of ₹3,520.98 per order.
- Higher order volumes on Sundays and Tuesdays indicate potential days for focused campaigns.



Sales Analysis

1000
Total Orders

₹3,520,984.00
Total Revenue

5.53
Order-Delivery Time

₹3,520.98
Avg. Customers Spent

Order_Date

All Periods MONTHS

2023

JAN FEB MAR APR

Delivery_Date

All Periods MONTHS

2023

JAN FEB MAR APR

Occasion

All Occasions

Anniversary

Birthday

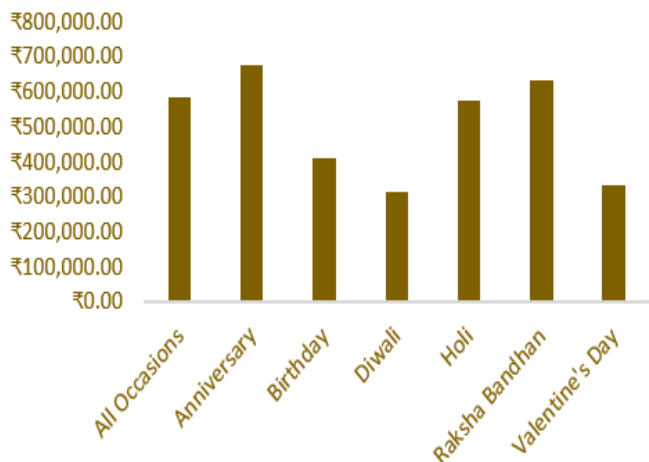
Diwali

Holi

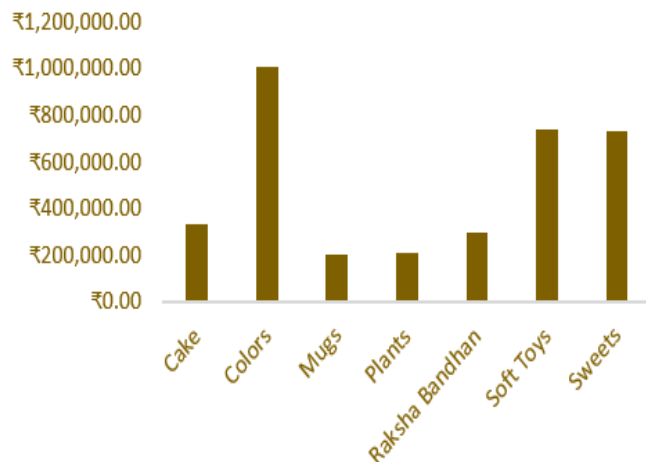
Raksha Bandhan

Valentine's Day

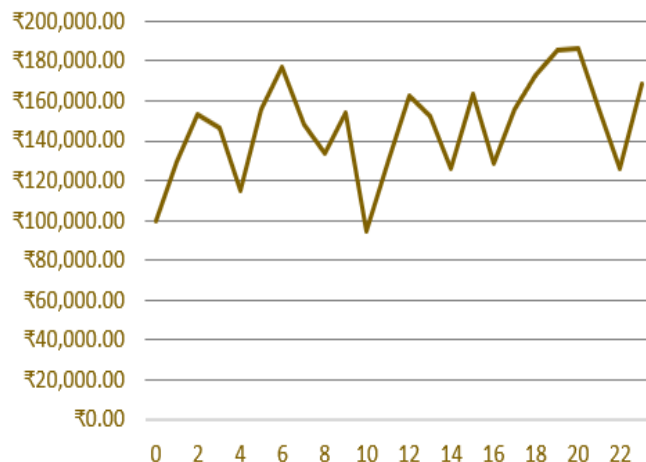
Revenue by Occasions



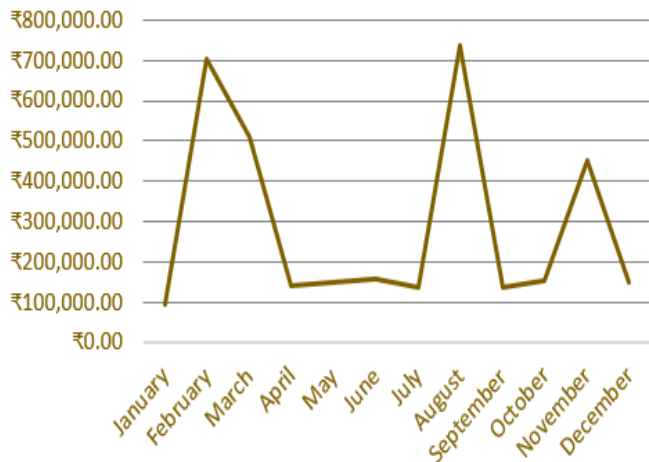
Revenue by Category



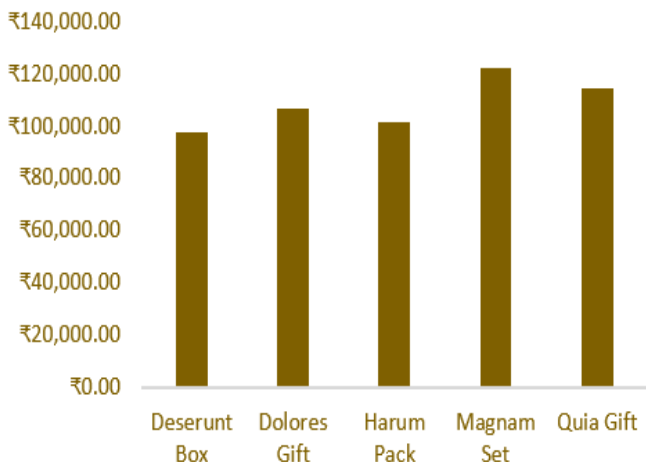
Revenue by Hour (Order Time)



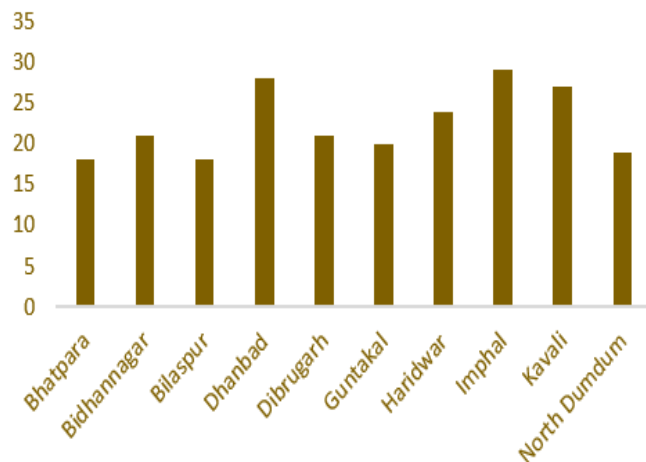
Revenue by Month



Top 5 Products by Revenue



Top 10 Cities by Orders



Conclusion

This analysis highlights the critical drivers of FNP's revenue and provides actionable insights to enhance sales, streamline operations, and improve customer experience. By focusing on high-performing categories, optimizing regional strategies, and addressing operational inefficiencies, FNP can sustain growth and expand its market presence effectively.

The End