



Bakery Sales Dashboard – Power BI Project

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Tool Used: Power BI, Excel

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Overview

This Power BI project analyzes a bakery's sales performance using transactional data. The goal was to uncover key business insights and present them in a visually engaging, interactive dashboard to support better decision-making.

Business Objective

The objective of this project is to leverage data visualization to identify trends, customer behavior, and sales performance. The insights will help improve product placement, staffing, and promotional strategies to increase profitability.

Data Description

The dataset includes transaction-level records from a bakery. It contains fields such as:

- Date and Time of Sale
- Item Name
- Transaction ID
- Sales Channel
- Category/Type of Item

Key Features

- - Top 10 Items Sold: A bar chart displays the most popular items like coffee, bread, tea, and cake based on transaction volume.
- - Weekend vs Weekday Sales: A donut chart highlights that 62.64% of sales occur on weekends, indicating peak customer activity.
- - Transaction Volume by Month and Day: Trends in daily and monthly sales help identify high and low-performing periods.
- - Average Items per Transaction: A line chart showing daily averages (around 2 items per transaction) offers insights into customer purchasing habits.
- - Sales by Item and Hour: A detailed matrix breaks down item sales by hour, helping identify peak selling times for each product.
- - Sales by Daypart: Bar charts visualize total sales during Morning, Afternoon, Evening, and Night — with Afternoon being the most profitable.
- - Interactive Slicers: Filters allow users to view data by time of day or item category for deeper insights.
- - Total Transactions: 18,900 total transactions analyzed.
- - Unique Items Sold: 94 different bakery items were tracked and analyzed.

Tools Used

- - Power BI Desktop
- - Excel (for initial data cleaning)
- - DAX (for measures and calculated columns)
- - Custom Visual Formatting

Data Cleaning Process

The dataset was cleaned using Excel before importing into Power BI:

- Removed duplicates
- Filled missing values
- Standardized item names
- Formatted datetime fields
- Removed outliers (e.g., unusually large transactions)

DAX Measures Used

Total Transactions:

Total Transactions = COUNTROWS(Sales)

Average Items Per Transaction:

Avg Items/Txn = AVERAGEX(VALUES(Sales[TransactionID]), COUNTROWS(Sales))

Weekend Sales %:

Weekend Sales % = DIVIDE([Weekend Sales], [Total Sales], 0)

Visual Design Choices

The dashboard uses a dark background with contrasting color charts to make key metrics pop. Custom bar charts, donut visuals, and a matrix table ensure clarity and highlight comparisons easily. Tooltips and slicers were added for interactivity.

Key Insights

- - Afternoon is the most active sales period.
- - Weekend sales are significantly higher than weekdays.
- - Toast, Tea, Truffles, and Tiffin are among the highest-selling items.
- - On average, each customer purchases 2 items per transaction.
- - Stocking, staffing, and promotional strategies should focus on weekend afternoons for maximum profitability.

Future Enhancements

- - Include customer-level data for loyalty analysis
- - Add forecasting using Power BI AI visuals
- - Integrate online and offline sales channels
- - Build mobile-friendly version of the dashboard