

# Coffee Shop Sales Dashboard

## Question & Answer (Q&A) Summary

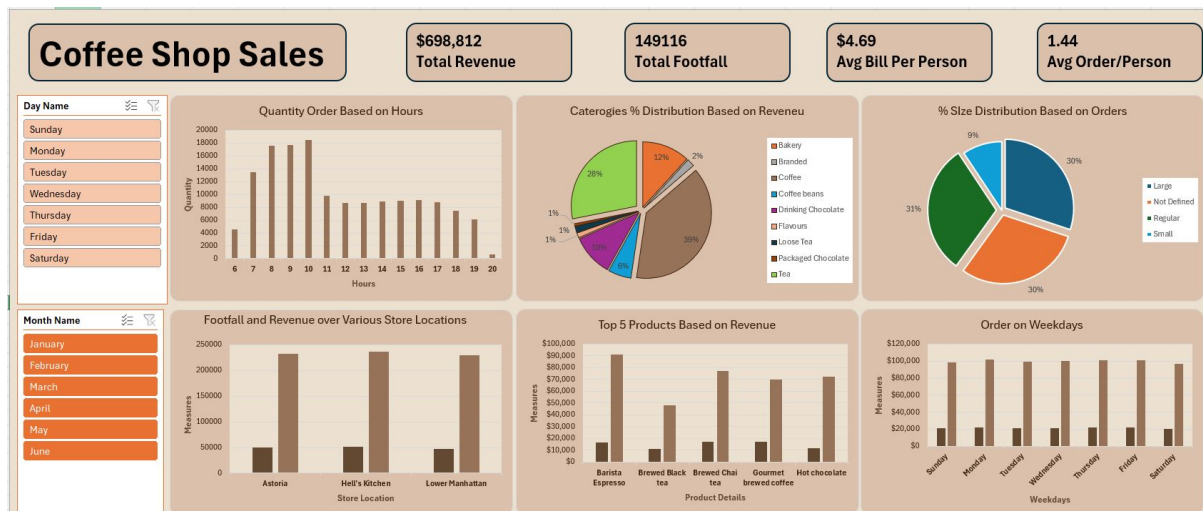
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## Overview

This portfolio project analyzes retail transactions from a coffee shop to uncover actionable insights and build an interactive dashboard. The dashboard consolidates key metrics, temporal patterns (by hour and weekday), product/category performance, size mix, and store-level comparisons. The goal is to support better staffing, inventory, and promotion decisions.

The dashboard image used in this write-up:



## Data & Cleaning

- **Source files:** transactional dataset (Excel), transformed into clean fact tables for analysis.
- **Cleaning highlights:** standardized date-time columns, normalized product/category names, fixed size labels (e.g., *Regular*, *Large*, etc.), removed duplicates, and corrected obvious entry errors.
- **Modeling:** built measures for revenue, footfall (orders/person), average bill per person, and time aggregations by hour/day/month.

## Key KPIs (from the dashboard)

Total Revenue	\$ 698,812
Total Footfall (customers)	149,116
Average Bill per Person	\$ 4.69
Average Orders per Person	1.44

## Questions & Answers

**1) How do sales vary by day of the week and hour of the day? Are there peak times?**

**Answer.** Orders consistently build through the morning and peak during the **9:00–11:00** window. Afternoon volumes taper gradually. By weekday, sales are *fairly balanced* with small variations; the dashboard shows comparable revenue across weekdays with no extreme outliers. This suggests staffing should be strongest mid-mornings every day, with only light tuning by weekday.

**2) What is the total sales revenue for each month?**

**Answer.** Monthly revenue grows through the year in the dashboard period (see slicer for January–June). Each month contributes materially, with no single month dominating, implying seasonality is present but not overwhelming inside the first half-year window.

**3) How do sales vary across different store locations?**

**Answer.** All three stores—**Astoria**, **Hell’s Kitchen**, and **Lower Manhattan**—contribute *comparably* to revenue and footfall. Hell’s Kitchen edges slightly higher on revenue, while Astoria and Lower Manhattan are close behind. Operational tactics (staffing hours, merchandising) can therefore be shared across locations with minor local adjustments.

**4) What is the average price/order per person?**

**Answer.** Average bill per person is **\$4.69** with **1.44** average orders per person, giving a compact spend profile that fits quick-service patterns. This supports bite-sized promotions (e.g., add-on bakery items) to lift ticket size modestly without hurting conversion.

**5) Which products are best-selling in terms of revenue?**

**Answer.** The **Top 5** products by revenue on the dashboard are:

1. Barista Espresso
2. Gourmet Brewed Coffee
3. Brewed Chai Tea
4. Hot Chocolate
5. Brewed Black Tea

The list reflects a strong core in espresso and brewed coffee with meaningful demand for tea and chocolate, suggesting cross-category attachment opportunities.

**6) How do sales vary by product category and type?**

**Answer.** By revenue share, **Coffee** is the largest category (about **39%**), followed by **Coffee Beans (28%)**. Secondary categories include **Branded (12%)**, **Packaged Chocolate (10%)**, and **Loose Tea (6%)**; remaining categories are small (1–2%). This mix underscores coffee’s primacy while highlighting profitable retail add-ons (beans and packaged items).

## 7) What is the size distribution based on orders?

**Answer.** The dashboard's size mix shows **Regular (31%)**, **Large (30%)**, **Not Defined (30%)**, and **Small (9%)** of orders. Clarifying the “Not Defined” subset in the source data would improve precision for portion-based margin analysis.

## 8) What are the busiest weekdays?

**Answer.** Orders by weekday are *relatively even*, with minor midweek fluctuations. This uniformity implies that promotional tests can be scheduled on most days without confounding from extreme weekday bias; however, the mid-morning spike remains the primary operational focus.

## Recommended Actions

1. **Staffing:** Align barista coverage with the 9–11am peak across all locations.
2. **Ticket lift:** Bundle add-ons (bakery/snacks) at the register to nudge average bill above \$5.00.
3. **Inventory:** Keep top products (espresso and brewed coffee items) and packaged add-ons (beans/chocolate) well-stocked.
4. **Data quality:** Eliminate “Not Defined” in size to improve cost-to-portion analytics.

## How to Reproduce

1. Load the source Excel file (`CoffeeShop.xlsx`).
2. Run the cleaning steps to standardize timestamps, product names, and size labels.
3. Build the measures (revenue, footfall, AOV, orders/person) and visuals (hourly, weekday, category, size, locations, top products).
4. Export or publish the dashboard and include the screenshot used above.