Chain Intelligence Report

Exploratory Data Analysis | 25 Branches | 300+ Products | Full Year 2025

1. PROBLEM STATEMENT

Stories Coffee operates **25 branches** across Lebanon with a diverse menu spanning coffee, frozen yoghurt, baked goods, and food. Despite strong operational growth, including several new branch openings in 2025, management lacked a systematic, data-driven view of three core business questions:

- **Where is profit actually coming from?** Which branches, product groups, and months are the true drivers, and which are quietly eroding margin?
- **What structural patterns exist in the data?** Are there predictable seasonal swings, cost inefficiencies, or product mix imbalances that can be acted on?
- **How healthy is the chain's growth trajectory?** Are new branches ramping at a healthy pace, and how concentrated is the chain's revenue risk?

This analysis answers all three using four POS export files covering ~38,000 rows of transaction data.

2. KEY FINDINGS

1 Frozen Yogurt Outperforms Every Coffee Category

Frozen Yogurt is the **single largest revenue group at ∼21% of chain revenue** , ahead of Mixed Cold Beverages (15%), Mixed Hot Beverages (15%), and Black Coffee (6%). For a brand called "Stories Coffee," this is the most strategically significant finding in the dataset.

2 A Structural 14-Point Margin Gap: Beverages vs. Food

Beverages earn **∼77% profit margin**; food earns **∼63%**. This gap holds at every single branch without exception, it is a cost-structure truth, not a local pricing anomaly. Every beverage upsell generates substantially more profit than any food upsell.

3 A Predictable 3× Seasonal Swing That Goes Unplanned

Revenue peaks in **July–August and October** and troughs in **May and September** , a consistent pattern across 2025 months with a 3× peak-to-trough ratio. Faqra is uniquely inverse (ski resort seasonality) and requires a completely separate operating model.

4 Silent Profit Leakage from POS Pricing Errors

Decaf shot modifiers are priced at **£0 with positive ingredient cost** across multiple branches , thousands of transactions generating negative profit. This is a configuration error, not policy. It is the **highest-ROI fix in this entire analysis**: a 5-minute POS change with immediate P&L impact.

5 50% of Chain Profit Concentrated in Just 5 Branches

Ain El Mreisseh alone generates ∼15% of chain profit; the top 5 branches account for ∼45–50% combined. New 2025 branches show healthy ramp trajectories (reaching ∼65% of steady-state revenue within 3 months) and represent the clearest path to reducing this concentration risk.

3. RECOMMENDATIONS

IMMEDIATE — This Week **Fix POS pricing errors** on all zero-price, positive-cost items across all 25 branches. Then implement a **monthly automated report** flagging any product with negative total profit, so future errors are caught within weeks rather than discovered a year later.

THIS QUARTER **Launch a beverage-first upsell protocol.** Train all branch staff to pair a drink with every food order, a 10% increase in combo rate would measurably lift chain-wide margin. **Build a seasonal operating calendar:** reduced staffing and inventory for May and September; maximum capacity for July–August and October. **Investigate Frozen Yogurt margins** , if below 65%, reprice; if healthy, feature more prominently in marketing.

STRATEGIC — Next 12 Months **Accelerate mid-tier branch growth** with targeted local marketing for Ramlet El Bayda, Mansourieh, Sour 2, and Alay, all showing strong ramp trajectories. **Introduce a new-branch ramp scorecard:** define expected revenue at months 1, 2, and 3 post-opening; any branch >20% below benchmark triggers an intervention (local campaign, manager visit, or promotional event).

4. EXPECTED IMPACT

Fix POS errors	Immediate margin recovery at zero cost. Stops ongoing daily profit leakage from thousands of misconfigured transactions chain-wide.
Beverage upsell training	Sustained margin lift across all 25 branches. Given the 14-point bev/food gap, even a modest shift in mix has outsized P&L impact.
Seasonal planning	Reduced cost waste in trough months (May, September) through optimised staffing and inventory, without sacrificing peak-month capacity.
Mid-tier branch investment	Lower revenue concentration risk over 12–24 months. Reduces the chain's vulnerability to disruption at any single flagship location.
Ramp scorecard	Faster intervention on underperforming new branches before patterns solidify, accelerating time-to-steady-state for future openings.

5. METHODOLOGY

Data sources: 4 cleaned POS CSV exports , product-level profitability (~13,000 rows), sales by group (~11,000 rows), category profit by branch (53 rows), and monthly revenue by branch (105 rows covering 2025–2026).

Tools: Python (pandas, numpy, matplotlib, seaborn) in Google Colab. Interactive dashboard built with Streamlit, publicly deployed on Streamlit Community Cloud. This report typeset in LaTeX.

Analysis layers:

- Data quality audit (missing values, descriptive stats)
- Core visualisations: top products, category split, monthly trends, margin scatter
- Extended BI: branch rankings, seasonality heatmap, product group Pareto, take-away vs. dine-in split, margin outliers (loss leaders + stars), new-branch ramp-up curves, revenue concentration analysis

Reproducibility: All analysis contained in a single Jupyter notebook. Running cells top-to-bottom reproduces every chart and table. Dashboard accepts any new CSV export without code changes.