Discovery Results

Automated cross-dataset discovery report with executive summary, query coverage, and detailed insights.

Agenda

Executive Summary & Query Result

Executive Summary

Customer demand shifts distinctly by time of day: Americano with Milk dominates mornings with 336 orders, whereas Latte leads both the afternoon (272 orders) and evening (276 orders), supported by rising evening demand for Cappuccino (206 orders) and Hot Chocolate (150 orders). Aligning promotions, prep routines, and digital boards to these dayparts optimizes counter throughput during peak revenue windows at 10:00 (10,994.52 in revenue) and 16:00 (9,221.60 in revenue). Furthermore, core menu availability is critical for retention, as 169 repeat cardholders account for 61,023.80 in revenue and concentrate their purchases in Americano with Milk and Latte. Menu displays and inventory should feature Americano variants before 12:00, pivoting to Lattes, Cappuccinos, and sweet beverages from 16:00 onward.

ANALYSIS STATUS

Complete

15 analyses completed.

Query Coverage

Answered Confidence high

Query

Are there specific coffee variants we should sell on specific times of the day?

Conclusion

Yes. Americano with Milk should be featured during morning hours (leading with 336 orders), whereas Latte should be emphasized in the afternoon (272 orders) and evening (276 orders). In the evening from 17:00 onward, promotions should also highlight Cappuccino (206 orders) and Hot Chocolate (150 orders) as straight coffee demand drops.

The transaction data breaks down beverage order volumes and revenues across morning, afternoon, and evening dayparts, showing clear product leadership shifts.

Evidence Index

The entries below are direct links to the supporting analyses in Detailed Insights.

Ref	Analysis
A-5	Coffee Variant Demand Across Day Parts
A-2	Morning Drink Composition Led by Americano With Milk
A-3	Afternoon Surge in Latte and Milk Based Coffees
A-7	Evening Rise in Sweet Drinks As Straight Coffee Declines

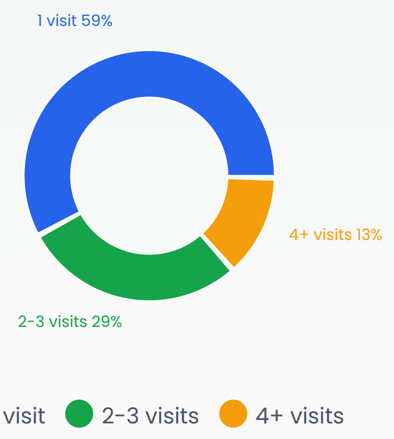
Detailed Insights

Repeat Customers Generate Majority of Card Revenue

OPPORTUNITY

Analysis 1

EVIDENCE PIE CHART



High-frequency customers with 4 or more visits represent 169 cardholders but generated 61,023.80 in revenue. In contrast, 771 single-visit customers contributed 24,496.70, and 376 customers with 2 to 3 visits contributed 26,725.08.

STRATEGIC IMPLICATION

A small core of loyal customers drives the majority of card revenue. Targeted retention strategies and loyalty perks can protect this critical customer base and encourage single-visit patrons to become repeat buyers.

HOW THIS WAS CALCULATED

Filtered card transactions to non-null card identifiers, grouped by card to calculate total order count and lifetime spend per customer, categorized each customer into frequency tiers (1 visit, 2-3 visits, or 4+ visits), and aggregated total customer count and revenue for each tier.

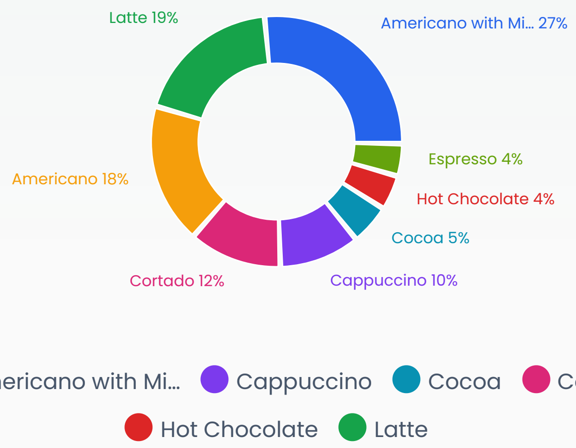
OPPORTUNITY

Morning Drink Composition Led by Americano With Milk

Analysis 2

EVIDENCE

PIE CHART



During the morning rush between 07:00 and 11:00, Americano with Milk is the top-selling item with 334 orders generating 10137.80, outpacing Latte (234 orders, 8403.18) and standard Americano (223 orders, 5768.18). Sweet and specialty options like Cocoa (59 orders) and Hot Chocolate (50 orders) represent a minor fraction of morning volume.

STRATEGIC IMPLICATION

Prioritize milk and batch-brewed Americano prep early in the day, and feature quick-grab breakfast pairings around Americano variants to speed up morning queue throughput.

HOW THIS WAS CALCULATED

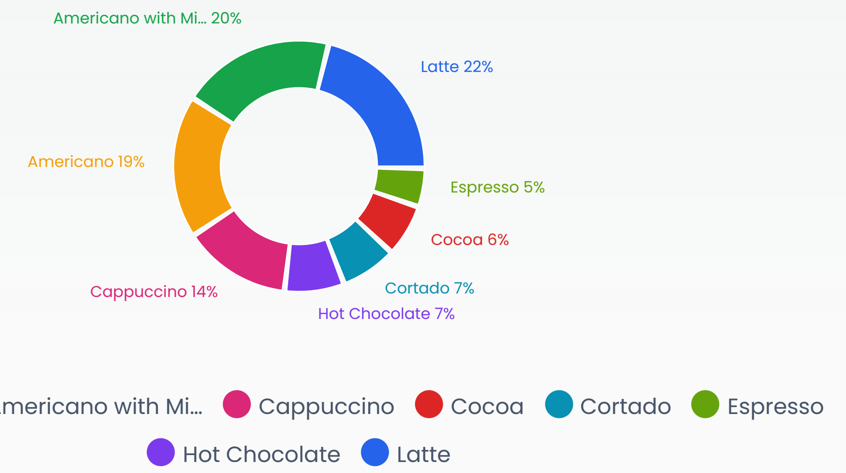
Transactions occurring between 07:00 and 11:00 were grouped by beverage type to sum total order counts and sales revenue across the dataset period.

Afternoon Surge in Latte and Milk Based Coffees

OPPORTUNITY

Analysis 3

EVIDENCE PIE CHART



In the afternoon period between 12:00 and 17:00, Latte overtakes other drinks to lead with 323 orders and 11512.22 in sales, followed by Americano with Milk with 296 orders (9158.38) and Americano with 275 orders (7257.34).

Latte contributes 21.9% of the total above, and makes up 24.5% of the coffee name base — a close match, so this reflects its size rather than it performing better per customer.

STRATEGIC IMPLICATION

Promote afternoon Latte specials or larger sizes between 12:00 and 17:00 to maximize ticket value when espresso-and-steamed-milk demand peaks.

HOW THIS WAS CALCULATED

Orders with timestamps between 12:00 and 17:00 were filtered and aggregated by beverage name to compute total transaction counts and gross revenue.

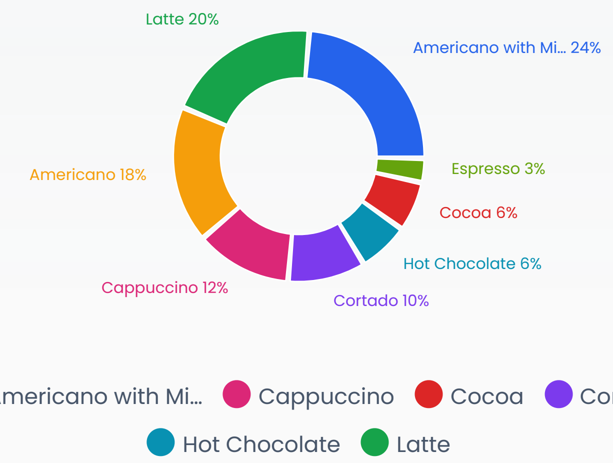
Loyal Customer Preferences Lead With Americano With Milk and Latte

OBSERVATION

Analysis 4

EVIDENCE

PIE CHART



Among high-frequency cardholders with 4 or more visits, Americano with Milk was the most ordered item at 475 orders (14,576.18 spend), followed by Latte with 395 orders (14,053.66 spend) and Americano with 347 orders (9,076.72 spend). Espresso recorded the lowest demand with 52 orders (1,065.72 spend).

STRATEGIC IMPLICATION

Core repeat customer demand is concentrated in milk-based and standard Americano options. Ensuring continuous ingredient availability for these core beverages is essential to maintaining high satisfaction among top patrons.

HOW THIS WAS CALCULATED

Filtered transactions to cardholders with at least 4 lifetime orders, grouped their purchases by coffee name, and aggregated total orders and total spend for each beverage.

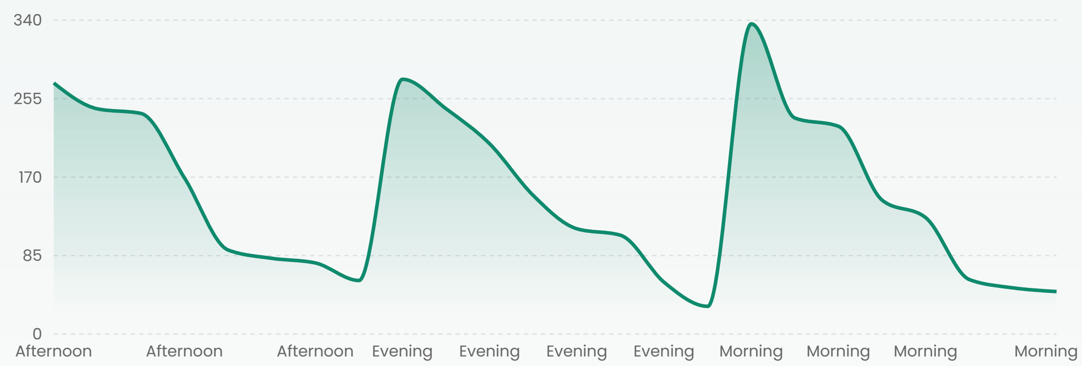
Coffee Variant Demand Across Day Parts

OPPORTUNITY

Analysis 5

EVIDENCE

LINE CHART



Product demand shifts across the day: Morning (before 12:00) is led by Americano with Milk at 336 orders (10,199.52 in revenue), followed by Latte at 234 orders and Americano at 225 orders. In the Afternoon (12:00 to 16:59), Latte takes the lead with 272 orders (9,691.10 in revenue) over Americano with Milk at 244 orders. In the Evening (17:00 onwards), Latte remains top with 276 orders (9,772.02 in revenue), while Cappuccino rises to 206 orders (7,437.00 in revenue) and Hot Chocolate reaches 150 orders (5,409.04 in revenue).

Hot Chocolate makes up 4.1% of Morning's mix — below the 7.8% it averages across all day part groups.

STRATEGIC IMPLICATION

Adjust digital menu boards, prep stations, and barista staffing to match time-of-day preferences: highlight Americanos and Americano with Milk during the morning rush, and feature Latte, Cappuccino, and Hot Chocolate in afternoon and evening displays.

HOW THIS WAS CALCULATED

Evaluate relative product mix across Morning (before 12), Afternoon (12-16), and Evening (17+) day parts.

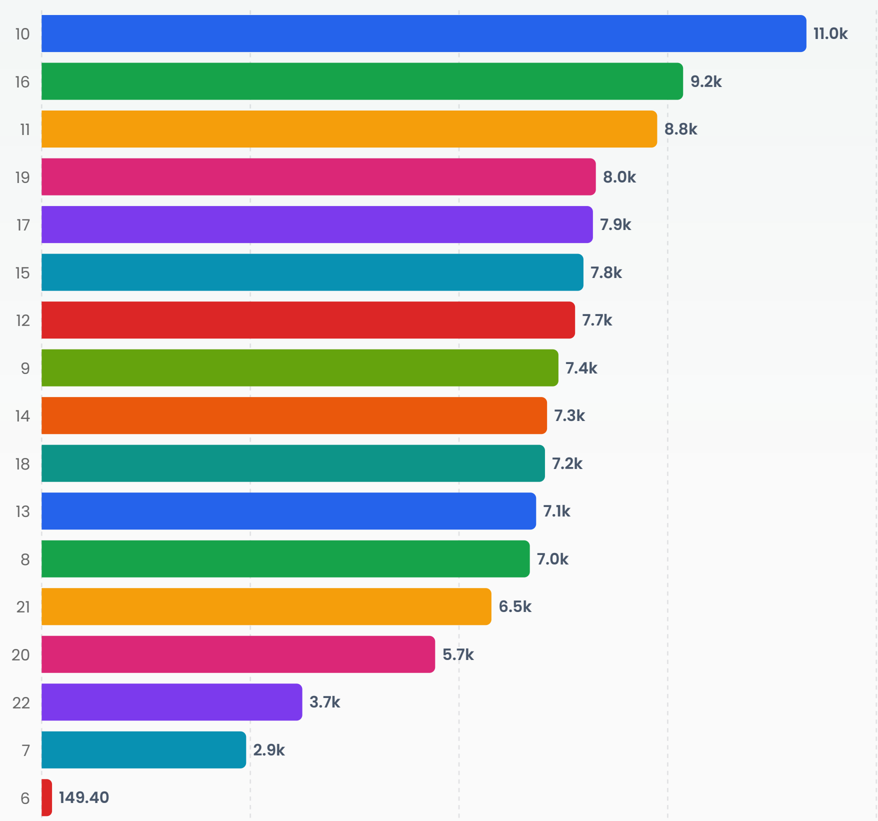
Peak Revenue Concentration in Mid Morning and Late Afternoon

OPPORTUNITY

Analysis 6

EVIDENCE

BAR CHART



Total sales revenue by hour of the day.

Revenue peaks at 10:00 with 10,994.52 across 349 transactions, followed by 16:00 generating 9,221.60 (283 transactions) and 11:00 generating 8,849.10 (294 transactions). The lowest operating window is 06:00, generating 149.40 across 5 transactions.

STRATEGIC IMPLICATION

Focus staffing schedules, counter throughput, and promotional display maintenance on the 10:00–11:00 and 16:00 rushes where daily foot traffic and sales volume are highest.

HOW THIS WAS CALCULATED

Transactions were grouped by the hour extracted from the timestamp column, summing total money spent and counting total transaction volume per hour.

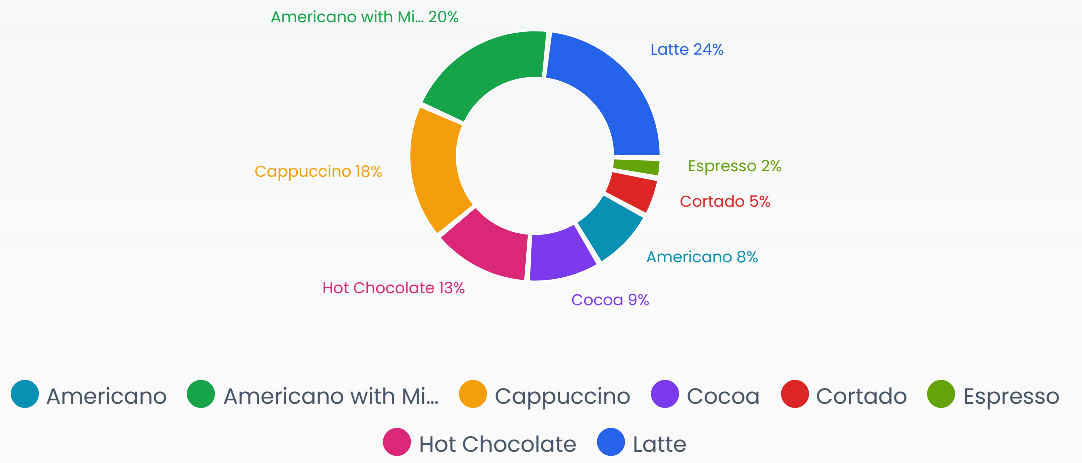
Evening Rise in Sweet Drinks As Straight Coffee Declines

OPPORTUNITY

Analysis 7

EVIDENCE

PIE CHART



From 18:00 onward, standard Americano drops to 78 orders, Cortado to 44, and Espresso to 20, while Hot Chocolate (122 orders, 4387.84) and Cocoa (89 orders, 3166.28) combine for 211 orders. Latte remains the single highest individual item at 225 orders (7950.90), with Cappuccino second in revenue at 6098.26 across 169 orders.

STRATEGIC IMPLICATION

Adjust evening inventory and display boards after 18:00 to highlight Hot Chocolate, Cocoa, and comforting milk beverages rather than straight high-caffeine shots.

HOW THIS WAS CALCULATED

Orders recorded at or after 18:00 were grouped by beverage category to evaluate evening volume and revenue distribution across drink types.

Hourly Transaction Volume and Revenue Peaks

OPPORTUNITY

Analysis 8

EVIDENCE

TABLE

HOUR	ORDER VOLUME	HOURLY REVENUE
6	5	149.40
7	91	2940.02
8	235	7017.88
9	247	7429.28
10	349	10994.52
11	294	8849.10
12	249	7668.62
13	227	7108.76
14	[illegible]	[illegible]

Store traffic reaches its peak at 10:00 with 349 orders generating 10,994.52 in revenue, supported by a strong mid-morning run at 11:00 with 294 orders (8,849.10 in revenue). A secondary afternoon surge occurs at 16:00 with 283 orders (9,221.60 in revenue), while opening hours at 06:00 generate only 5 orders (149.40 in revenue) and late evening at 22:00 slows to 116 orders (3,747.16 in revenue).

STRATEGIC IMPLICATION

Schedule peak barista staffing and prep routines to cover the major 09:00 to 11:00 morning rush and the 15:00 to 17:00 afternoon pickup window, scheduling equipment maintenance and restocking before 08:00 or after 21:00.

HOW THIS WAS CALCULATED

Determine peak operational hours by transaction volume and gross revenue to plan staffing and barista scheduling.

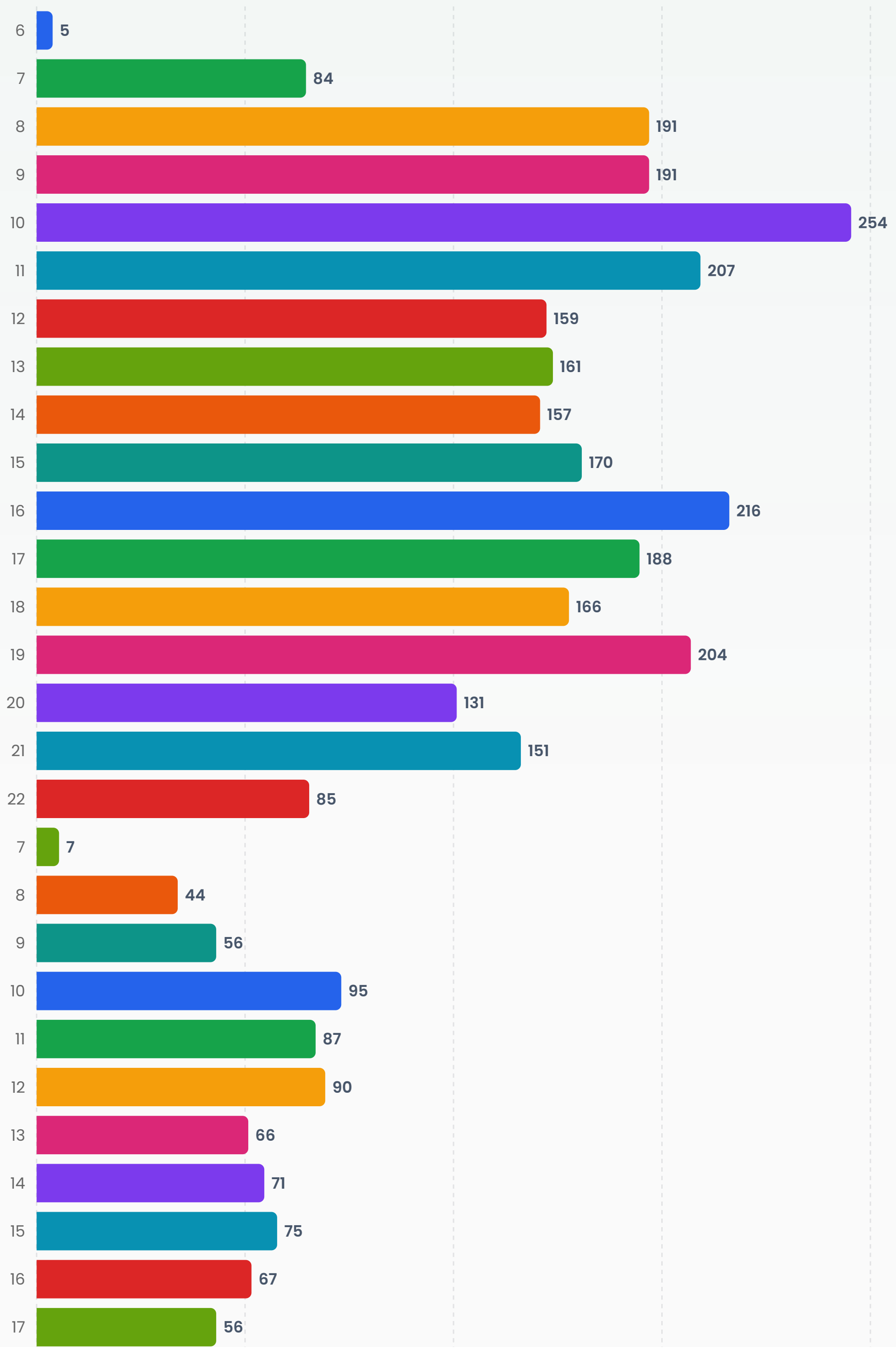
Hourly Transaction Volume by Weekday and Weekend

OPPORTUNITY

Analysis 9

EVIDENCE

BAR CHART



Hourly transaction counts for weekdays versus weekends.

Weekday transactions show sustained elevated activity across the day, peaking at 10:00 (254 transactions) with secondary spikes at 16:00 (216 transactions) and 19:00 (204 transactions). On weekends, volume is lower overall and concentrated in the late morning, peaking at 10:00 (95 transactions) and 12:00 (90 transactions) before tapering off into the evening.

STRATEGIC IMPLICATION

Schedule restocking and machine cleaning before the 10:00 morning rush on weekdays and ensure evening capacity remains available Monday through Friday.

HOW THIS WAS CALCULATED

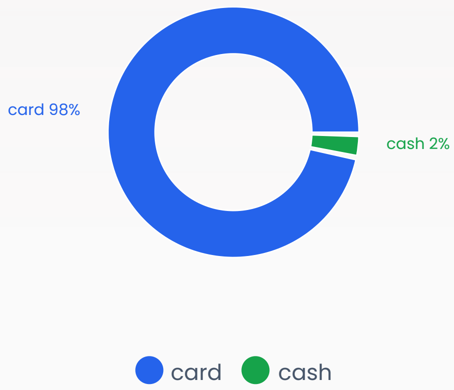
Calculated by extracting the hour from the transaction timestamp and classifying dates into weekdays (Monday through Friday) versus weekends (Saturday and Sunday), then summing transaction counts for each hour bucket.

Payment Method Distribution

RISK

Analysis 10

EVIDENCE PIE CHART



Total transaction count by payment method.

Card payments account for 3547 out of 3636 transactions (97.6% of orders) and 112245.58 in revenue with an average ticket of 31.65. Cash transactions represent just 89 orders (3186.00 total revenue) with a somewhat higher average ticket of 35.80.

STRATEGIC IMPLICATION

Ensure card reader uptime and payment connectivity are prioritized, as card processing downtime puts nearly all revenue at risk.

HOW THIS WAS CALCULATED

Calculated by grouping transactions by cash type to aggregate total transaction counts, sum money for total revenue, and compute average ticket size.

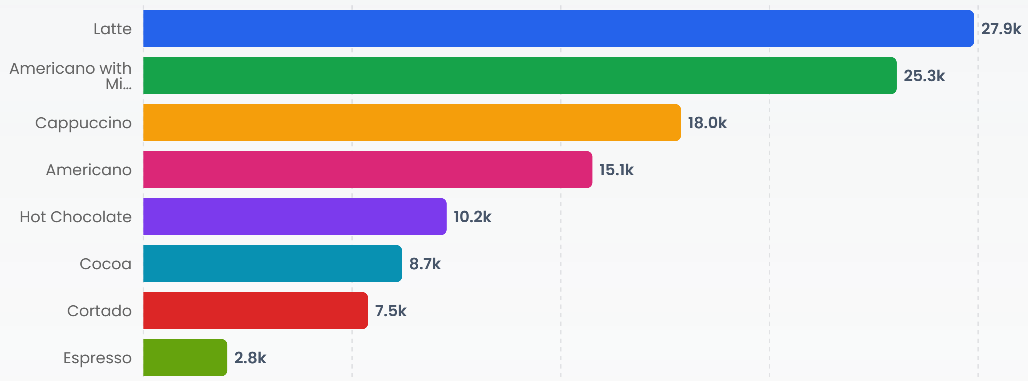
Product Sales and Revenue Contribution

OBSERVATION

Analysis 11

EVIDENCE

BAR CHART



Total sales revenue by coffee variant.

Latte leads total sales at 27866.30 across 782 units (average price 35.63), closely followed by Americano with Milk at 25269.12 across 824 units (average price 30.67). Together with Cappuccino (18034.14 across 501 units) and Americano (15062.26 across 578 units), these top four products generate the bulk of overall demand, whereas Espresso contributes the lowest sales volume at 2814.28 across 134 units.

Latte contributes 24.1% of the total above, and makes up 24.5% of the coffee name base — a close match, so this reflects its size rather than it performing better per customer.

STRATEGIC IMPLICATION

Prioritize ingredient inventory and machine maintenance for milk-based and Americano variants to avoid stockouts on core revenue drivers.

HOW THIS WAS CALCULATED

Calculated by grouping all 3636 order records by coffee variant, counting total units sold, summing money for total sales, and calculating average selling price.

Product Preference Stability Across Days of The Week

OBSERVATION

Analysis 12

Coffee variant preferences remain steady throughout the week. Americano with Milk and Latte consistently lead demand every day, ranging between 87 and 146 orders per day each, while specialty drinks like Hot Chocolate (27 to 50 orders) and Espresso (12 to 27 orders, with low sample sizes) maintain minor but stable daily shares.

STRATEGIC IMPLICATION

Avoid complex day-of-week menu rotations, as daily demand proportions are consistent across all seven days.

HOW THIS WAS CALCULATED

Calculated by extracting the day of the week from the transaction date and grouping by day number and coffee variant to determine unit counts.

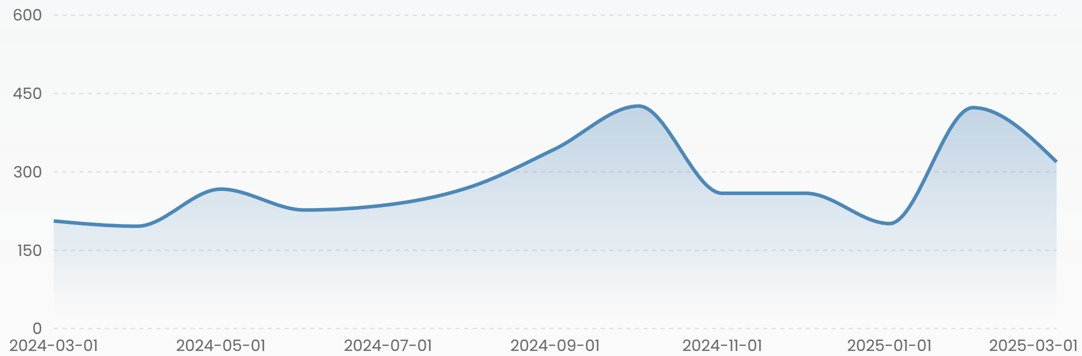
Monthly Order Volume and Revenue Trajectory

OBSERVATION

Analysis 13

EVIDENCE

LINE CHART



Monthly order counts across the 13 recorded monthly periods ranged from 196 to 426 orders, with monthly revenue spanning from 6,398.86 to 13,891.16. The highest monthly revenue occurred in period 2024-10-01 at 13,891.16 across 426 orders, followed closely by period 2025-02-01 at 13,215.48 across 423 orders.

STRATEGIC IMPLICATION

Monthly turnover exhibits cyclical peaks while maintaining a consistent baseline above 190 orders per month. Staffing and procurement should align with these recurring volume surges.

HOW THIS WAS CALCULATED

Truncated transaction dates into monthly intervals, grouped the dataset by month, and calculated total order counts and total revenue per month.

Consistent Average Spend Per Item Across Operating Hours

OBSERVATION

Analysis 14

EVIDENCE

LINE CHART

Average item price across hourly operating windows.

Average item spend remains stable across the entire operating schedule, varying only between 29.86 at 08:00 and 33.90 at 19:00. During the peak 10:00 transaction window (349 orders), average price per item stands at 31.50.

STRATEGIC IMPLICATION

Revenue patterns throughout the day are driven by customer transaction volume rather than customers trading up to higher-priced items at specific hours.

HOW THIS WAS CALCULATED

Sales were grouped by hour of the day based on the timestamp column, calculating the arithmetic mean of item prices across all transactions in each hourly bucket.

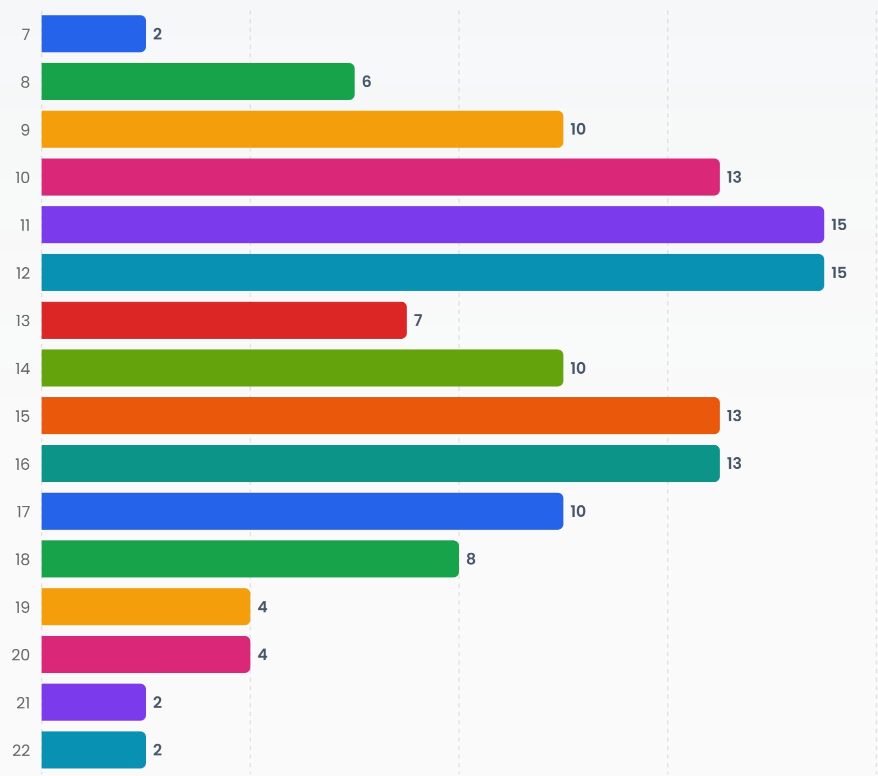
Evenly Distributed Daytime Demand for Espresso

OBSERVATION

Analysis 15

EVIDENCE

BAR CHART



Total Espresso beverage orders by hour of the day.

Espresso orders total 134 transactions and display a steady distribution across business hours, reaching modest peaks at 11:00 and 12:00 with 15 orders each, and 13 orders each at 10:00, 15:00, and 16:00.

STRATEGIC IMPLICATION

Espresso demand is spread across the workday rather than concentrated exclusively in the early morning, requiring equipment readiness through the late afternoon.

HOW THIS WAS CALCULATED

Data was filtered strictly for Espresso items and grouped by the hour extracted from the timestamp to compute total order counts per hourly window.

Data securely processed.