MARKET EXPANSION ANALYSIS

SQL Case Study | Business Recommendation | India

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Role Target: Data Analyst / Business Analyst / Risk Analyst

Tools: SQL Server, CTEs, Window Functions

Executive Summary

Monday Coffee aims to expand its physical presence by opening three new coffee shops in major Indian cities. This case study evaluates historical sales data using SQL to identify expansion locations that maximize revenue potential while maintaining cost efficiency.

The analysis integrates city demographics, customer purchasing behavior, rental cost impact, and estimated coffee-consuming population. Key performance indicators such as total revenue, average sales per customer, and rent efficiency were used to compare cities on both profitability and scalability.

The results indicate that revenue performance is driven more by customer spending behavior than by market size alone. Cities with higher average sales per customer consistently outperform larger markets with weaker monetization. While some cities offer low rental costs or large populations, these factors alone do not guarantee sustainable returns.

Based on a comprehensive evaluation, **Pune, Chennai, and Bangalore** are recommended for Phase-1 expansion. Pune demonstrates the strongest overall performance with the highest revenue and superior rent efficiency. Chennai offers balanced growth supported by strong customer spending and a scalable consumer base. Bangalore provides access to a premium urban market where higher rent costs are offset by high customer willingness to pay.

Cities such as Delhi and Jaipur are identified as suitable for future phased expansion. Delhi presents significant long-term potential but requires improved monetization strategies, while Jaipur offers cost efficiency with limited scalability for flagship expansion.

This data-driven approach enables Monday Coffee to expand strategically, minimizing operational risk while maximizing long-term growth potential.

1. Business Objective

Monday Coffee aims to expand its physical presence by opening **three new coffee shops** in India's major cities. Since launching in **January 2023**, the company has seen strong online sales traction across multiple cities.

Objective of This Analysis

To **identify the top three cities** for expansion by analyzing:

- Revenue performance

- Customer base and spending behavior

- Rental cost impact

- Estimated coffee-consuming population

The final recommendation is driven purely by **data-backed insights** using SQL.

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2. Dataset Overview

The analysis is based on four relational tables:

- **City** – Demographic and cost data

- **Customers** – Customer-to-city mapping

- **Products** – Coffee product catalog and pricing

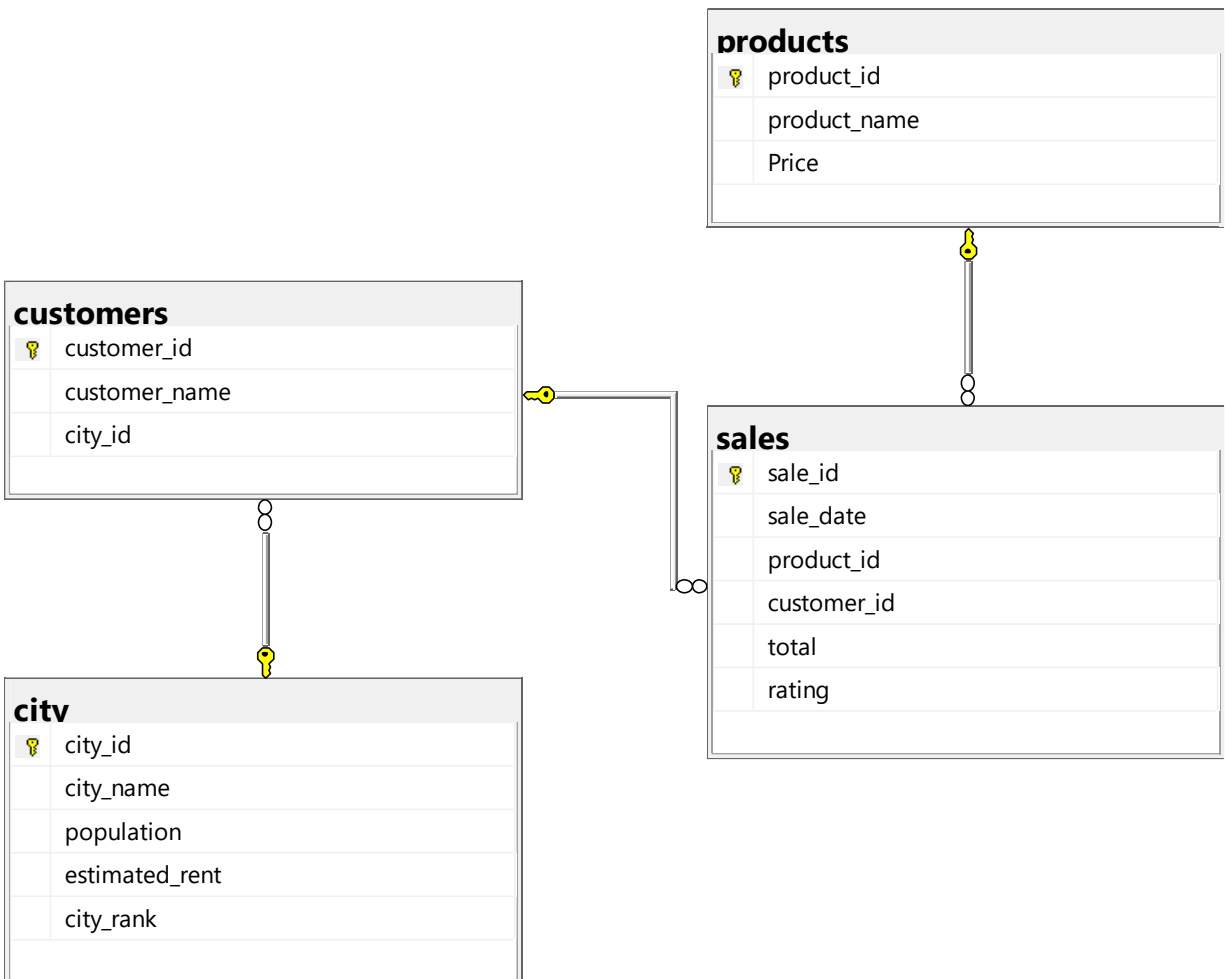- **Sales** – Transactional sales data

This structure allows granular sales analysis while supporting city-level aggregation for strategic decision-making.

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3. Database Design & Schema

Database Model

The database follows a **normalized relational design** with a clear separation of dimensions and fact tables.

products
- product_id
- product_name
- Price

customers
- customer_id
- customer_name
- city_id

sales
- sale_id
- sale_date
- product_id
- customer_id
- total
- rating

city
- city_id
- city_name
- population
- estimated_rent
- city_rank

Figure 1: Monday Coffee – Entity Relationship Diagram

Table Descriptions

city

- Stores city demographics and cost indicators

- Key fields:

  - population

  - estimated_rent

  - city_rank

customers

- Represents individual customers

- Each customer belongs to a single city

products

- Contains coffee product names and prices

sales

- Fact table capturing every transaction

- Includes:

  - sale_date

  - total (revenue)

  - rating

Relationships

- One city → Many customers

- One customer → Many sales

- One product → Many sales

This schema ensures **accurate revenue aggregation** without duplication and enables scalable analysis.

4. Key Metrics & Assumptions

Assumptions

- **25% of the city population** is estimated to be potential coffee consumers

- Rental cost is treated as a fixed city-level operational factor

Metrics Used

- Total Revenue

- Total Customers

- Average Sales per Customer

- Estimated Coffee Consumers

- Average Rent per Customer

These metrics balance **market size, profitability, and cost efficiency**.

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5. Analytical Approach

The analysis was performed using SQL with:

- **CTEs** for readability and modular logic

- **Window functions** for ranking and trend analysis

- **Aggregations** at the city level

Multiple exploratory queries were executed, including:

- Revenue by city

- Customer distribution

- Product performance

- Monthly sales trends

- Rent vs revenue comparison

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6. Market Potential Analysis (Final Query Output)

	City	Total_revenue	Total_rent	Total_customers	Estimated_coffee_consumers_In_Millions	Avg_Sales_per_Customer	Avg_Rent_per_Customer
1	Pune	1258290	15300	52	1.88	24197.88	294.23
2	Chennai	944120	17100	42	2.78	22479.05	407.14
3	Bangalore	860110	29700	39	3.08	22054.1	761.54
4	Jaipur	803450	10800	69	1.00	11644.2	156.52
5	Delhi	750420	22500	68	7.75	11035.59	330.88
6	Mumbai	235000	31500	27	5.10	8703.7	1166.67
7	Kanpur	213550	8100	35	0.78	6101.43	231.43
8	Surat	176540	13500	27	1.80	6538.52	500.00
9	Kolkata	171460	16200	28	3.73	6123.57	578.57
10	Nagpur	140050	7200	24	0.73	5835.42	300.00
11	Indore	138590	6300	21	0.83	6599.52	300.00
12	Ahmedabad	137690	14400	23	2.08	5986.52	626.09
13	Hyderabad	131520	22500	21	2.50	6262.86	1071.43
14	Lucknow	109400	9000	21	0.95	5209.52	428.57

Figure 2: Aggregated City-Level Performance Metrics

This final query combines:

- Total revenue

- Total customers

- Estimated rent

- Estimated coffee consumers

- Average sales per customer

to provide a **holistic comparison of all cities**.

7. Key Insights from Market Potential Analysis

This section summarizes the key patterns observed across revenue performance, customer behavior, cost structure, and market potential across cities.
The market potential analysis evaluated cities across multiple business-critical dimensions, including total revenue, customer base, average sales per customer, rental cost impact, and estimated coffee-consuming population.

Insight 1: Revenue Performance Is Driven by Customer Spending, Not Just Market Size

Cities with higher average sales per customer consistently generate stronger revenue outcomes, even with a smaller customer base. Pune, Chennai, and Bangalore outperform larger cities by monetizing customers more effectively.

Insight 2: Average Sales per Customer Is the Primary Profitability Indicator

A higher average sale per customer reflects stronger purchasing power and premium product adoption.
- Pune, Chennai, and Bangalore show significantly higher average sales per customer.
- Cities like Delhi and Jaipur lag in monetization despite larger or cheaper markets.

Insight 3: Rent Efficiency Outweighs Absolute Rent Values

While absolute rent varies significantly across cities, profitability is better assessed through rent efficiency.
- Pune demonstrates exceptional rent efficiency due to high revenue per customer and moderate rent.
- Chennai maintains a healthy revenue-to-rent balance.
- Bangalore offsets higher rent through premium customer spending.

Insight 4: Large Market Size Requires Strong Monetization to Be Viable

Delhi has the largest estimated coffee-consuming population; however, its lower average sales per customer suggest that market size alone does not guarantee profitable expansion without targeted monetization strategies.

Insight 5: Low-Cost Cities Have Limited Expansion Scalability

Jaipur benefits from very low rent per customer but has a smaller estimated consumer base and moderate revenue. This limits its suitability for flagship expansion in major metropolitan markets.

8. Final Recommendations & Business Justification

Recommended Cities for Phase-1 Expansion

Based on a comprehensive evaluation of profitability, scalability, and cost efficiency, the following cities are recommended for initial expansion:

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1. Pune – Performance-Led Expansion City

Pune is the strongest candidate for expansion due to:

- The highest total revenue among all analyzed cities
- The highest average sales per customer, indicating strong purchasing behavior
- Moderate rental costs resulting in excellent rent efficiency

Pune offers a low-risk, high-return opportunity and is ideally suited for immediate store launch.

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2. Chennai – Balanced Growth Market

Chennai presents a stable and scalable growth opportunity:

- Strong revenue performance supported by a sizable coffee-consuming population
- High average sales per customer, reflecting premium consumption patterns
- Rental costs that remain justified relative to revenue potential

Chennai provides a balance between profitability and long-term expansion potential.

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3. Bangalore – Premium Urban Expansion City

Bangalore is selected as a strategic urban market due to:

- High average sales per customer, demonstrating strong willingness to pay
- A mature coffee culture that supports premium offerings
- Higher rent costs that are offset by strong customer spending

Bangalore is well suited for premium store formats and long-term brand positioning.

Deferred Cities for Future Expansion

- **Delhi** is identified as a high-potential but lower-efficiency market. Despite its large consumer base, lower average sales per customer suggest that improved monetization strategies are required before large-scale expansion.
- **Jaipur** is best positioned as a cost-efficient pilot or Tier-2 expansion city due to its low rent structure but limited scalability.

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9. Business Impact

Implementing the recommended expansion strategy is expected to:
- Maximize revenue per store by prioritizing cities with proven customer monetization
- Optimize operational costs through efficient rent-to-revenue balance
- Reduce expansion risk by avoiding low-monetization markets in Phase-1
- Strengthen brand presence in premium and high-growth urban locations

This approach supports sustainable and scalable growth for Monday Coffee.

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10. Skills Demonstrated

- Advanced SQL (CTEs, Window Functions, Aggregations)
- Market Expansion & Profitability Analysis
- Business KPI Design
- Cost vs Revenue Trade-off Analysis
- Data-Driven Strategic Decision Making

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11. Limitations & Assumptions

- Estimated coffee consumers are calculated using a fixed 25% population assumption.
- Rental values are treated as standardized city-level estimates and may vary by specific location.
- The analysis is based on historical sales data and does not account for future competitive or macroeconomic changes.

These limitations can be addressed through pilot testing and localized market research.

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12. Conclusion

This case study demonstrates how structured SQL analysis can support real-world business expansion decisions. By integrating revenue performance, customer behavior, and cost considerations, Monday Coffee can confidently expand into cities that offer the highest return potential while minimizing operational risk.