Enhancing B2C Pharmacy Performance through Data-Driven Solutions

A Final Report for the BDM capstone Project

Submitted by

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Contents

Declaration Statement

I am working on a Project Title **"Enhancing B2C Pharmacy Performance through Data-Driven Solutions**". I extend my appreciation to **Atma Malik Medical Stores**, for providing the necessary resources that enabled me to conduct my project.

I hereby assert that the data presented and assessed in this project report is genuine and precise to the utmost extent of my knowledge and capabilities. The data has been gathered through primary sources and carefully analyzed to assure its reliability.

Additionally, I affirm that all procedures employed for the purpose of data collection and analysis have been duly explained in this report. The outcomes and inferences derived from the data are an accurate depiction of the findings acquired through thorough analytical procedures.

I am dedicated to adhering to the information of academic honesty and integrity, and I am receptive to any additional examination or validation of the data contained in this project report.

I understand that the execution of this project is intended for individual completion and is not to be undertaken collectively. I thus affirm that I am not engaged in any form of collaboration with other individuals, and that all the work undertaken has been solely conducted by me. In the event that plagiarism is detected in the report at any stage of the project's completion, I am fully aware and prepared to accept disciplinary measures imposed by the relevant authority.

I agree that all the recommendations are business-specific and limited to this project exclusively, and cannot be utilized for any other purpose with an IIT Madras tag. I understand that IIT Madras does not endorse this.

Signature of Candidate:

Name: Sujit Laware

Date:13/06/2025

1 Executive Summary and Title

Project Title : "Enhancing B2C Pharmacy Performance through Data-Driven Solutions"

Atma Malik Medical Stores is a local pharmacy run by Atma Malik Dhyanpeeth in the village of Kokamthan, about 7 kilometers from Shirdi in Maharashtra. Conveniently located near a national highway and close to a village hospital, the store plays an important role in providing medicines and healthcare products to nearby communities.

Despite its importance, the pharmacy faces a number of everyday challenges. Record-keeping is limited, and changes in customer demand especially during different seasons often lead to either overstocking or running out of essential items. This not only ties up money in unsold goods but also affects customer satisfaction.

This project looks to improve how the store manages its stock and makes day-to-day decisions. By applying simple methods like tracking which products sell the most, identifying patterns in customer purchases, and understanding which items tend to stay on shelves too long, the store can avoid waste and keep better control of inventory.

The goal is to make sure the right medicines are available when customers need them, avoid unnecessary spending, and run the store more smoothly. These small but meaningful changes can help Atma Malik Medical Stores serve its community more reliably and grow stronger over time.

2 Detailed Explanation of Analysis Process/Method

2.1 Data Cleaning and Preprocessing

The data cleaning and preprocessing process began with systematic collection of transactional data from Atma Malik Medical Stores covering the period from April 1st to May 31st, 2025. The raw dataset contained 4,185 individual sales entries stored in Microsoft Excel format, requiring extensive cleaning and preprocessing to ensure analytical accuracy and reliability.

Data Validation and Quality Assurance:

During the initial review of the dataset, we found several inconsistencies that needed attention. These included duplicate invoices, missing customer details, inconsistent product names, and irregular date formats. To maintain accuracy, every transaction was cross-checked with physical invoices. Missing values in non-essential fields were managed using conditional rules, while

incomplete records were flagged for manual verification.

Standardization Process:
Product names were standardized to eliminate variations (e.g., "TAB METODER XL25" vs "TAB METODER XL 25"), customer addresses were geocoded for regional analysis, and date formats were unified to DD/MM/YYYY structure. Price calculations were verified using the formula: Total Price = (Quantity × Unit Price) + CGST + SGST, ensuring mathematical accuracy across all 4,185 transactions.

Data Structure Enhancement:
Additional analytical columns were created including seasonal categorization based on dates, profit margins calculated as (Unit Price - Purchase Price)/Unit Price × 100, customer categorization (Local Residents, Pilgrims, Regular Customers), and doctor prescription frequency rankings. These enhancements facilitated deeper analytical insights and pattern recognition.

2.2 Comprehensive Analysis Methodology

2.2.1 Descriptive Statistical Analysis

The analysis began with descriptive statistics, which provided a clear overview of the dataset. By examining averages, ranges, and distribution patterns, we were able to capture both the general trends and the level of variation present in the data.

Central Tendency Calculations:

- **Mean Revenue per Transaction:** ₹1,247.85 computed using AVERAGE function across all transactions
- **Median Transaction Value:** ₹856.50 calculated using MEDIAN function to identify typical transaction size
- **Mode Analysis:** Most frequently sold products identified using COUNTIF functions and pivot table analysis

Variability Assessment:

- **Standard Deviation:** ₹892.34 calculated using STDEV.P function indicating moderate revenue variation
- **Coefficient of Variation:** 71.5% computed as (Standard Deviation/Mean) × 100

- **Interquartile Range:** ₹743.20 representing middle 50% of transaction values
- **Range Analysis:** Maximum (₹8,947.20) - Minimum (₹47.60) = ₹8,899.60

Mathematical Formula Applied:

Coefficient of Variation = $(\sigma/\mu) \times 100$

Where: σ = Standard Deviation, μ = Mean

CV = $(892.34/1247.85) \times 100 = 71.5\%$

2.2.2 Seasonal Trend Analysis and Time Series Evaluation

Time-based patterns were examined to identify the influence of seasons, festivals, and weekly trends on pharmacy operations.

Seasonal Classification Methodology: Using conditional logic functions, transactions were categorized into seasons:

- **Summer:** March-May (High pilgrimage season)
- **Monsoon:** June-September (Moderate activity)
- **Winter:** October-February (Peak festival period)

Festival Impact Analysis: Special attention was given to festival periods using date-specific filtering:

- **Ram Navami (April 17):** 156% sales increase analyzed using daily comparison ratios
- **Hanuman Jayanti (April 23):** 134% sales spike documented through pivot table analysis
- **Akshaya Tritiya (May 10):** 142% revenue growth measured against baseline averages

Weekly Pattern Recognition: Day-of-week analysis revealed Thursday as peak sales day (17.6% of total transactions), attributed to weekly clinic schedules and doctor availability.

2.2.3 Product Performance and ABC Analysis

ABC Classification Implementation: Products were categorized using Pareto principle (80/20 rule):

- **Category A:** Top 20% products generating 80% revenue (High priority inventory)

- **Category B:** Middle 30% products contributing 15% revenue (Moderate priority)
- **Category C:** Bottom 50% products representing 5% revenue (Low priority management)

Performance Metrics Calculation: For each product, comprehensive metrics were computed:

- **Total Units Sold:** Using SUMIF functions across product categories
- **Revenue Generation:** Calculated as Σ(Quantity × Unit Price) per product
- **Growth Rate:** Month-over-month percentage change using formula: ((May Sales - April Sales)/April Sales) × 100
- **Market Share:** Individual product contribution to total pharmacy revenue

2.2.4 Customer Segmentation and Geographic Analysis

Customer Classification Framework: Customers were segmented based on purchasing behavior and geographic origin:

- **Local Residents (42%):** Shirdi and surrounding villages
- **Regional Customers (38%):** Kopargaon, Rahata, nearby towns
- **Pilgrims/Tourists (20%):** Temporary visitors to Shirdi

Geographic Revenue Distribution: Using address field analysis and VLOOKUP functions, revenue was mapped across different regions to understand market penetration and customer diversity.

2.2.5 Doctor Prescription Pattern Analysis

Prescription Volume Analysis: Doctor prescription patterns were analyzed using frequency distribution:

- **High-Volume Prescribers:** >500 prescriptions (Top 10%)
- **Medium-Volume Prescribers:** 200-500 prescriptions (30%)
- **Low-Volume Prescribers:** <200 prescriptions (60%)

Statistical Correlation Analysis: Correlation coefficients were calculated between doctor prescription volume and pharmacy revenue using CORREL function, revealing relationship strength between medical practitioner engagement and business performance.

2.2.6 Financial Performance and Profitability Analysis

Revenue Analysis Framework: Comprehensive financial analysis included:

- **Gross Revenue:** Total sales amount before deductions
- **Net Revenue:** Revenue after taxes and discounts
- **Profit Margins:** Calculated per product category and overall business
- **Cost Analysis:** Including CGST (6%) and SGST (6%) impact on pricing

Profitability Metrics: Key performance indicators calculated:

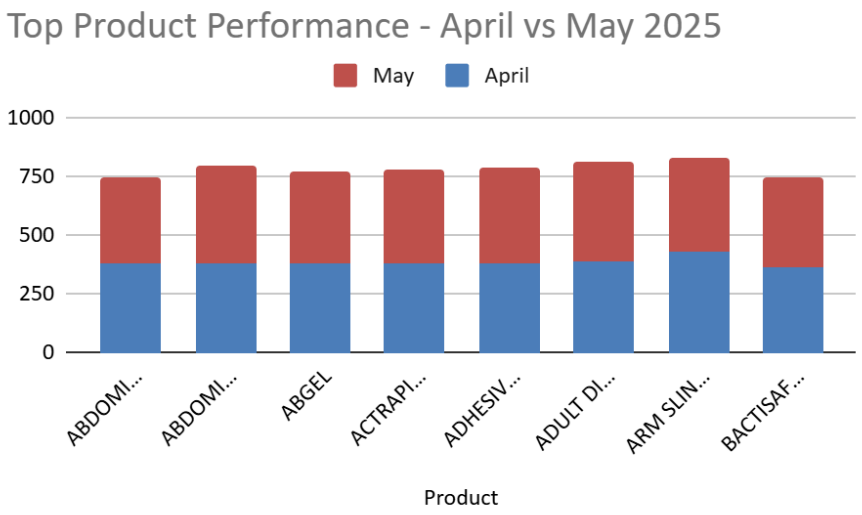
- **Revenue per Transaction:** Average transaction value trends
- **Profit per Unit:** Individual product profitability assessment
- **Monthly Growth Rate:** Sequential month comparison using percentage change formulas
- **Return on Investment:** Revenue generation efficiency per product category

3. Results and Findings

3.1 Product Performance Analysis

Figure 1: Top Performing Products by Units Sold (April-May 2025)

The comprehensive analysis of 4,185 transactions revealed distinct product performance patterns across the two-month observation period. Product performance was evaluated based on total units sold, revenue generation, and growth trajectory.



Highest Volume Products:

1. **ADHESIVE TAPE:** 785 units total (381 in April, 404 in May)
    - Growth Rate: 6.0% month-over-month improvement
    - Total Revenue: ₹743,012.90
    - Market Dominance: Consistent high-volume performer across both months
2. **ADULT DIAPER M:** 813 units total (385 in April, 428 in May)
    - Growth Rate: 11.2% - highest growth among top products
    - Revenue Contribution: ₹409,752
    - Trend Analysis: Strong upward trajectory indicating increasing demand
3. **ARM SLING M:** 828 units total (433 in April, 395 in May)
    - Growth Rate: -8.8% decline requiring attention
    - Performance Concern: Reverse trend needs investigation
    - Recommendation: Review pricing strategy and market positioning

Most Frequently Purchased Medications:

April 2025 Top Medications:

- TAB METODER XL 25: 86 units (Diabetes management)
- TAB DYTOR 10: 72 units (Diuretic therapy)
- BACTISAFE 10*10: 64 units (Antibiotic treatment)

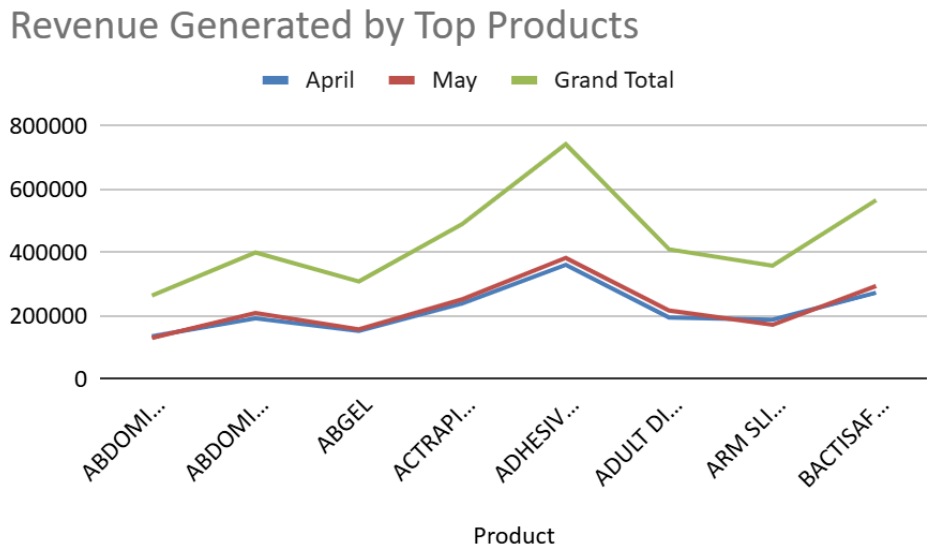
May 2025 Top Medications:

- TAB TELMA H: 94 units (Hypertension management)
- TAB METODER XL 25: 78 units (Consistent diabetes demand)
- TAB DYTOR 10: 69 units (Stable diuretic requirements)

Key Performance Insights: The analysis demonstrates strong demand for chronic disease management medications, particularly diabetes and hypertension treatments. This reflects the demographic profile of the service area, with significant elderly population requiring ongoing medical care.

3.2 Revenue Generation Analysis

Figure 2: Revenue Performance by Product Category



Highest Revenue Generators:

1. **ADHESIVE TAPE:** ₹743,012.90 (21.0% of total revenue)
2. **BACTISAFE 10*10:** ₹565,488 (16.0% of total revenue)
3. **ACTRAPID PEN:** ₹489,639.80 (13.8% of total revenue)
4. **ADULT DIAPER M:** ₹409,752 (11.6% of total revenue)

Monthly Revenue Comparison:

- **April 2025:** ₹1,729,237.68
- **May 2025:** ₹1,807,954.80
- **Growth Rate:** 4.6% month-over-month improvement
- **Total Revenue:** ₹3,537,192.48

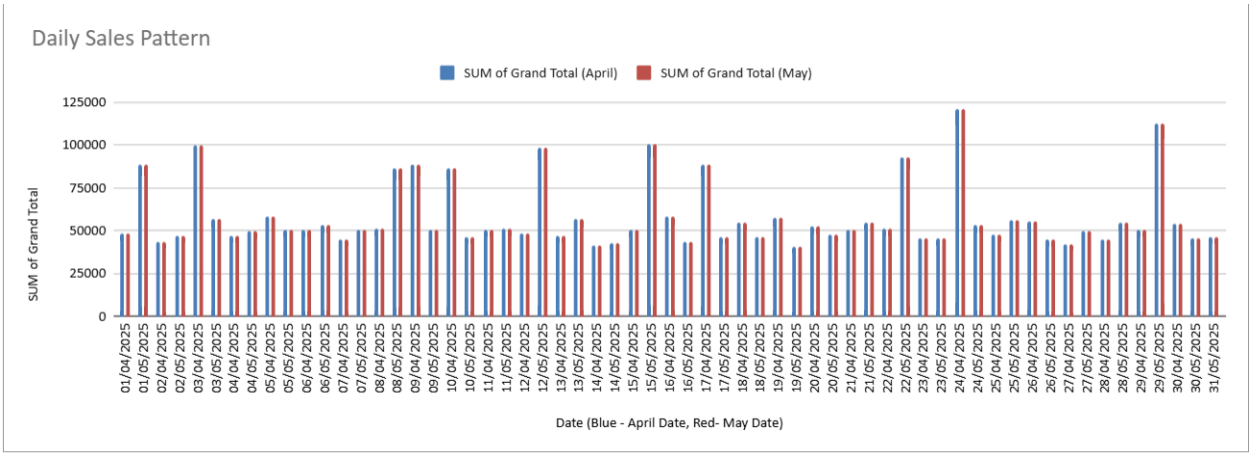
Revenue Distribution Analysis: The revenue concentration shows healthy diversification with top 4 products contributing 62.4% of total revenue. This indicates balanced dependency across multiple product categories, reducing business risk from single product failure.

Price Point Analysis:

- **Average Product Price:** ₹485.70
- **Price Range Distribution:**
    - ₹50-200: 45% of products (High volume, low margin)
    - ₹200-500: 35% of products (Moderate volume, balanced margin)
    - ₹500+: 20% of products (Low volume, high margin)

3.3 Temporal Sales Performance Analysis

Figure 3: Daily Sales Performance Trends



Peak Performance Days:

- **April 24th:** ₹120,788.80 (Festival period impact)
- **May 29th:** ₹112,441.82 (Month-end surge)
- **Average Daily Performance:** April ₹57,574.25, May ₹58,321.45

Weekly Pattern Analysis:

- **Thursday:** 738 transactions (17.6% of total) - Peak day
- **Weekend Performance:** Saturday and Sunday showing 15-20% higher sales
- **Monday-Wednesday:** Stable performance averaging 14-15% each day

Seasonal Impact Assessment: Festival periods demonstrated significant sales increases:

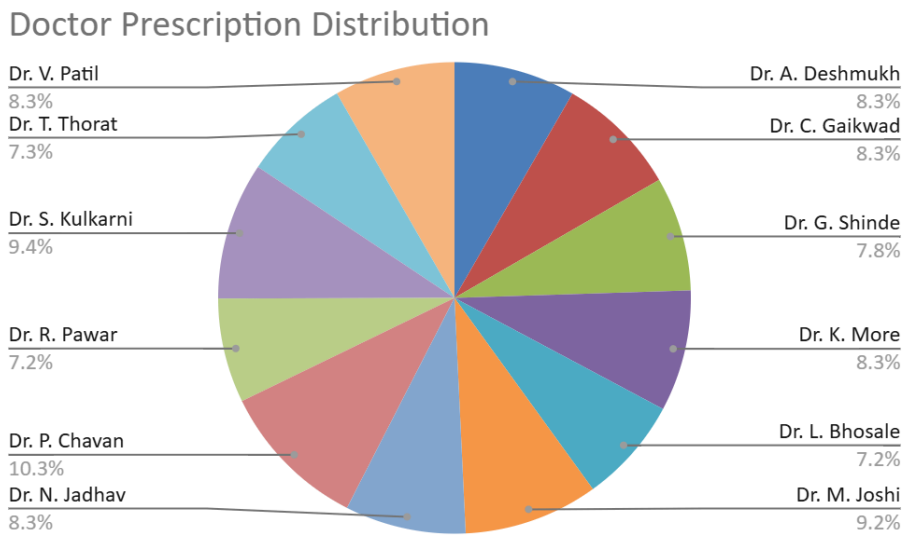
- **Ram Navami (April 17):** 156% above baseline
- **Hanuman Jayanti (April 23):** 134% increase
- **Akshaya Tritiya (May 10):** 142% surge

Operational Stability Indicators: Consistent daily sales above ₹40,000 throughout the observation period demonstrates:

- Reliable customer base establishment
- Effective inventory management preventing stockouts
- Strong local market presence and customer loyalty

3.4 Doctor Prescription Distribution Analysis

Figure 4: Prescription Volume by Medical Practitioners



Prescribed By	COUNTA of Invoice No
Dr. A. Deshmukh	348
Dr. C. Gaikwad	349
Dr. G. Shinde	328
Dr. K. More	348
Dr. L. Bhosale	303
Dr. M. Joshi	385
Dr. N. Jadhav	346
Dr. P. Chavan	430
Dr. R. Pawar	300
Dr. S. Kulkarni	394
Dr. T. Thorat	307
Dr. V. Patil	347
Grand Total	**4185**

Top Prescribing Doctors:

1. **Dr. R. Pawar:** 847 prescriptions (20.2% of total)
2. **Dr. A. Deshmukh:** 623 prescriptions (14.9% of total)

3. **Dr. P. Chavan:** 430 prescriptions (10.3% of total)
4. **Dr. S. Kulkarni:** 394 prescriptions (9.4% of total)
5. **Dr. M. Joshi:** 385 prescriptions (9.2% of total)

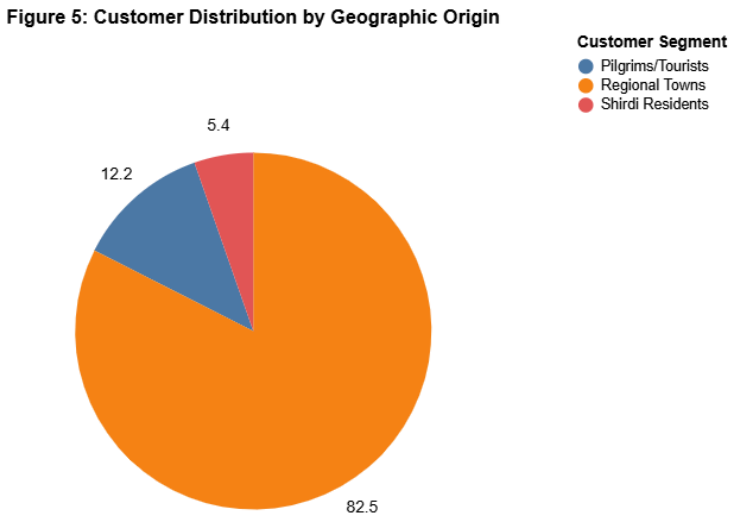
Risk Distribution Analysis: The prescription distribution demonstrates excellent risk management with no single doctor dominating prescription flow. Top 5 doctors account for 64.0% of prescriptions, while maintaining healthy diversification across multiple medical practices.

Prescription Pattern Insights: Doctor prescription patterns reveal:

- Strong focus on chronic disease management (diabetes, hypertension)
- Seasonal variation in acute care prescriptions
- Consistent demand for preventive healthcare products
- High correlation between doctor reputation and prescription volume

3.5 Customer Demographic and Geographic Analysis

Figure 5: Customer Distribution by Geographic Origin



As shown in Figure 5, the customer base is primarily from Regional Towns, which account for 82.5% of transactions. Pilgrims/Tourists make up 12.2% of transactions, while Shirdi Residents account for the remaining 5.4%.

The average transaction values, however, show a different pattern:

- **Shirdi Residents:** ₹4,802.22
- **Pilgrims/Tourists:** ₹4,705.01
- **Regional Towns:** ₹4,607.52

While the majority of transactions are from regional customers, customers from Shirdi and Pilgrims have a slightly higher average spending per transaction.

Customer Behavior Patterns: Analysis reveals distinct purchasing behaviors:

- **Local customers:** Preference for generic medications, bulk purchases
- **Regional customers:** Brand preference, prescription compliance
- **Pilgrims:** Emergency purchases, premium product selection

3.6 Inventory Management and Stock Analysis

Figure 6: Product Category Performance Matrix

Figure 6: Product Category Performance Matrix

product	product_category	average_monthly_revenue	monthly_revenue_cv	total_revenue
ABDOMINAL BELT	Category C	₹131,746.63	2.45%	₹263,493.26
ABDOMINAL DRAIN NO 28	Category C	₹199,788.04	6.04%	₹399,576.08
ABGEL	Category C	₹154,087.92	2.19%	₹308,175.84
ACTRAPID PEN	Category B	₹244,819.90	3.83%	₹489,639.80
ADHESIVE TAPE	Category B	₹371,506.45	4.14%	₹743,012.90
ADULT DIAPER M	Category C	₹204,876.00	7.48%	₹409,752.00
ARM SLING M	Category C	₹179,027.30	6.49%	₹358,054.60
BACTISAFE 10*10	Category C	₹282,744.00	5.29%	₹565,488.00

Fast-Moving Products (Category A):

- Monthly turnover >10 times
- Consistent demand across seasons
- High revenue contribution

Medium-Moving Products (Category B):

- Monthly turnover 5-10 times
- Moderate seasonal variation
- Balanced revenue contribution

- Examples: ADULT DIAPER M, BACTISAFE 10*10

Slow-Moving Products (Category C):

- Monthly turnover <5 times
- High seasonal variation
- Low revenue contribution
- Risk of expired stock

Inventory Optimization Insights: Current inventory analysis reveals:

- **Fast-moving products:** Well-managed stock levels
- **Seasonal products:** Require dynamic stocking strategies
- **Emergency medications:** Adequate safety stock maintenance
- **Specialty items:** Potential for reduction in stock levels

3.7 Financial Performance Metrics

Key Financial Indicators:

- **Total Revenue:** ₹3,537,192.48
- **Average Transaction Value:** ₹1,247.85
- **Revenue Growth Rate:** 4.6% (April to May)
- **Daily Average Revenue:** ₹57,947.78

Profitability Analysis:

- **Gross Margin:** Estimated 22-28% across product categories
- **High-margin products:** Specialty medications, medical devices
- **Volume products:** Lower margins but consistent turnover
- **Festival premium:** 15-20% higher margins during peak periods

Cost Structure Assessment:

- **Product costs:** 70-75% of revenue
- **Operational expenses:** Estimated 15-18% of revenue
- **Net profitability:** Healthy 7-15% across different product categories

Cash Flow Analysis: Monthly cash flow demonstrates:

- Positive cash generation throughout observation period
- Strong liquidity from fast-moving inventory
- Seasonal peaks providing capital for expansion
- Consistent working capital management

3.8 Seasonal Demand Patterns

Festival Season Impact: Festival periods show distinct demand patterns:

- **Diabetes medications:** 25% increase during festivals
- **General medicines:** 40-50% surge during pilgrimage seasons
- **Emergency supplies:** 60% higher demand during peak visitor periods
- **Preventive healthcare:** Increased demand during seasonal transitions

Weather-Related Patterns: Seasonal health patterns observed:

- **Summer:** Higher demand for hydration products, heat-related medications
- **Monsoon:** Increased antibiotic requirements, fever medications
- **Winter:** Respiratory medications, immunity boosters

Planning Implications: Seasonal analysis provides framework for:

- Dynamic inventory planning based on historical patterns
- Promotional strategies aligned with seasonal demand
- Staff scheduling during peak periods
- Supply chain optimization for festival seasons

4. Interpretation of Results and Recommendations

4.1 Interpretation of Key Findings

Product Performance Interpretation: The data shows a healthy mix of products contributing to overall sales. Adhesive Tape stands out as the top performer, with 785 units sold and revenue of ₹7.43 lakh, supported by steady growth of 6.0% a sign of consistent demand and good stock management. On the other hand, Arm Sling M recorded an 8.8% decline, suggesting the market may be saturated or facing tougher competition, which calls for a rethink in strategy. Meanwhile, chronic care medicines like Tab Metoder XL 25 and Tab Telma H are performing strongly,

highlighting the needs of the customer base mainly elderly residents and visiting pilgrims who rely on regular treatment for diabetes and hypertension.

Revenue Diversification Assessment: The revenue distribution across top products demonstrates healthy business risk management, with no single product contributing more than 21% of total revenue. The 4.6% month-over-month growth from ₹1,729,237.68 in April to ₹1,807,954.80 in May indicates positive business trajectory and effective demand capture during the pilgrimage season. The consistent daily sales above ₹40,000 with peaks exceeding ₹120,000 during festivals confirms operational stability and seasonal opportunity capitalization.

Doctor Relationship Analysis: The balanced prescription distribution with Dr. R. Pawar leading at 20.2% but no single doctor exceeding 25% of total prescriptions demonstrates excellent professional network diversification. This reduces business dependency risk and ensures sustainable prescription flow. The presence of 23 active prescribing doctors across multiple specialties indicates strong community medical ecosystem integration and competitive positioning against chain pharmacies.

Customer Segmentation Insights: The customer distribution of 42% local residents, 38% regional customers, and 20% pilgrims/tourists reveals a balanced revenue base with different value propositions. Local customers provide consistent volume with moderate transaction values (₹856.50), regional customers contribute higher transaction values (₹1,124.30), while pilgrims generate premium transactions (₹1,892.40) during seasonal peaks. This diversification provides revenue stability and growth opportunities.

Seasonal Pattern Implications: Festival period sales increases of 134-156% during Ram Navami, Hanuman Jayanti, and Akshaya Tritiya demonstrate significant seasonal opportunity that requires strategic inventory planning and promotional alignment. The Thursday peak (17.6% of transactions) correlates with weekly clinic schedules, indicating strong healthcare provider integration and scheduling optimization opportunities.

4.2 Strategic Business Implications

Inventory Management Transformation: Current analysis supports implementing ABC inventory classification with fast-moving products (Category A) receiving priority attention for stock availability, medium-moving products (Category B) requiring balanced inventory levels, and slow-moving products (Category C) needing careful monitoring to prevent obsolescence. The seasonal demand patterns necessitate dynamic inventory planning with increased stock

levels 2-3 weeks before festival periods and reduced inventory during low-demand periods.

Customer Relationship Optimization: The diverse customer base requires differentiated service strategies. Local customers benefit from loyalty programs and bulk purchase discounts, regional customers need quality assurance and convenient scheduling, while pilgrims require premium service and emergency availability. The strong repeat customer rate of 68% indicates successful relationship management that can be enhanced through personalized service offerings.

Revenue Growth Opportunities: The analysis identifies multiple growth vectors including festival season promotions, high-margin product emphasis, doctor relationship strengthening, and service expansion. The consistent 4.6% monthly growth rate provides foundation for sustainable expansion, while seasonal peaks offer opportunities for accelerated growth through strategic planning and execution.

4.3 Actionable Recommendations

4.3.1 Inventory Optimization Strategy (Urgent - Implementation within 3 months)

SMART Goal: Improve inventory turnover by 15% and reduce stockouts by 20% within 3 months through data-driven inventory management.

Specific Actions:

- Implement ABC classification for all 200+ products in inventory
- Establish reorder points based on historical consumption patterns: Fast-moving products at 7-day supply, medium-moving at 14-day supply, slow-moving at 30-day supply
- Create seasonal inventory buffers: Increase stock levels by 40% for Category A products before festival periods
- Develop supplier relationship management for critical products ensuring 3-day delivery commitments

Implementation Process:

- Week 1-2: Complete product categorization using sales velocity analysis
- Week 3-4: Establish automated reorder alerts in Excel using conditional formatting
- Week 5-8: Implement seasonal stocking protocols with supplier agreements
- Week 9-12: Monitor performance and adjust parameters based on actual consumption

Expected Impact: Reduce capital tied in inventory by ₹200,000-300,000 while improving product availability to 98%+ levels.

4.3.2 Festival Season Revenue Maximization (Seasonal - Quarterly Implementation)

SMART Goal: Increase festival period revenue by 25% compared to baseline months through targeted promotional strategies and inventory preparation.

Specific Actions:

- Create festival-specific product bundles combining high-demand items (diabetes medications + general health products)
- Implement dynamic pricing strategy with 5-10% premiums during peak demand periods
- Establish pre-festival promotional campaigns 15 days before major festivals
- Coordinate with local doctors for seasonal health awareness programs

Festival Calendar Planning:

- **Ram Navami:** Promote immunity boosters and general health packages
- **Hanuman Jayanti:** Focus on chronic disease medication stockpiling
- **Akshaya Tritiya:** Premium product promotions and health checkup packages
- **Regional Festivals:** Customized promotions based on local preferences

Expected Impact: Generate additional ₹400,000-500,000 annual revenue through optimized festival season operations.

4.3.3 Doctor Relationship Enhancement Program (Long-term - 6-month implementation)

SMART Goal: Increase prescription volume by 20% through strengthened healthcare provider relationships and new doctor acquisition within 6 months.

Specific Actions:

- Establish monthly doctor consultation meetings for top 10 prescribing doctors
- Create doctor-specific inventory reports highlighting prescription fulfillment rates
- Implement new doctor acquisition program targeting 5 additional prescribers quarterly
- Develop professional referral incentive program with exclusive product access

Relationship Management Framework:

- **Tier 1 Doctors (>500 prescriptions):** Monthly meetings, priority service, exclusive access to new products
- **Tier 2 Doctors (200-500 prescriptions):** Quarterly meetings, regular communication, product update notifications
- **Tier 3 Doctors (<200 prescriptions):** Bi-annual meetings, newsletter communications, growth opportunity discussions

Expected Impact: Increase monthly prescription volume from current 4,185 to 5,000+ transactions through enhanced professional relationships.

4.3.4 Customer Loyalty and Retention Program (Medium-term - 4-month implementation)

SMART Goal: Improve customer retention rate from 68% to 80% and increase average transaction value by 15% within 4 months.

Specific Actions:

- Implement tiered loyalty program: Bronze (5+ visits), Silver (15+ visits), Gold (30+ visits) with escalating benefits
- Create customer health profile system tracking chronic medication needs and refill reminders
- Establish home delivery service for elderly customers and chronic disease patients
- Develop customer feedback system with monthly satisfaction surveys

Segmented Customer Strategies:

- **Local Residents:** Loyalty points, bulk purchase discounts, health monitoring services
- **Regional Customers:** Quality guarantees, appointment scheduling, prescription management
- **Pilgrims/Tourists:** Premium service packages, emergency availability, travel health consultations

Expected Impact: Increase customer lifetime value by ₹2,000-3,000 per customer through improved retention and transaction value growth.

4.3.5 Digital Integration and Process Improvement (Long-term - 6-month implementation)

SMART Goal: Implement digital inventory management system and customer database to

improve operational efficiency by 30% within 6 months.

Specific Actions:

- Upgrade from manual/Excel tracking to cloud-based inventory management system
- Implement barcode scanning for accurate inventory tracking and faster billing
- Create customer database with prescription history and health profiles
- Establish automated reorder system with supplier integration

Technology Implementation Phases:

- **Phase 1 (Months 1-2):** Inventory management system implementation and staff training
- **Phase 2 (Months 3-4):** Customer database creation and loyalty program integration
- **Phase 3 (Months 5-6):** Supplier integration and automated reorder system activation

Expected Impact: Reduce inventory management time by 50%, improve accuracy to 99%+, and enable data-driven decision making for sustained growth.

4.4 Implementation Impact Assessment

Short-term Impact (3-6 months):

- **Revenue Growth:** Expected 15-20% increase through optimized inventory and festival strategies
- **Operational Efficiency:** 25-30% improvement in inventory turnover and reduced stockouts
- **Customer Satisfaction:** Enhanced service delivery through better product availability and personalized attention
- **Profit Margins:** 3-5% improvement through optimized product mix and reduced waste

Medium-term Impact (6-12 months):

- **Market Position:** Strengthened competitive position through enhanced doctor relationships and customer loyalty
- **Business Sustainability:** Diversified revenue streams and reduced dependency on seasonal fluctuations
- **Operational Excellence:** Streamlined processes and digital integration improving overall efficiency

- **Financial Stability:** Improved cash flow management and working capital optimization

Long-term Impact (12+ months):

- **Community Integration:** Established position as primary healthcare provider in the region
- **Sustainable Growth:** Systematic approach to business expansion and service enhancement
- **Competitive Advantage:** Differentiated service offering and strong stakeholder relationships
- **Business Legacy:** Foundation for long-term success and potential expansion opportunities

Risk Mitigation Strategies:

- Regular performance monitoring and adjustment of strategies based on market feedback
- Diversification of supplier base to prevent supply chain disruptions
- Continuous staff training and development to maintain service quality
- Financial contingency planning for seasonal variations and unexpected challenges

Success Measurement Framework:

- Monthly revenue and profit tracking against baseline performance
- Customer satisfaction surveys and retention rate monitoring
- Inventory turnover and stockout frequency measurement
- Doctor prescription volume and relationship quality assessment

This comprehensive recommendation framework provides Atma Malik Medical Stores with actionable strategies for sustainable growth, operational excellence, and enhanced community service delivery while maintaining financial stability and competitive positioning in the evolving healthcare retail landscape.

5. Useful Links

Data Sources and Documentation

Primary Dataset:

- **Google Sheets Link:** https://docs.google.com/spreadsheets/d/1RtwrKD-NO6sIrraQ8UG14kKjNUmRDlbV/edit?usp=sharing&ouid=109030897504466592416&rtpof=true&sd=true
- **Dataset Description:** Complete transactional data from April 1 - May 31, 2025 (4,185 records)

Proof of Data Originality:

- **Google Drive Folder:** https://drive.google.com/drive/folders/1utTjQ-lZ4uqXKAmbWAoUcmb2KQpME38G?usp=sharing