

# Addressing Modern Challenges in the Electronics Retail Business (B2C)

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# Organization Background

## Franchisee Details

- **Name:** Sanchar Zone
- **Location:** Pirpainti, Bhagalpur District, Bihar
- **Founded:** 2005 as a recharge and mobile shop; expanded to multi-category electronics.
- **Owner:** Mr. Pankaj Choudhary

## Business Model

- B2C electronics retail format.
- Offers mobile phones, accessories, printing, and computer peripherals.
- Sells 40–50 SKUs monthly to regional customers.



Sanchar Zone Store

# Problem Statement



## Inventory Management

Sanchar Zone lacks an inventory management system. This leads to both overstocking and stockouts. Fast-moving and new products are not tracked effectively.



## Dynamic Pricing

The shop uses fixed pricing, which fails to compete with online platforms like Flipkart and Amazon that use dynamic discounts — impacting sales and margins.



## Warranty Disputes

60% of warranty claims are rejected due to unclear terms and poor documentation — resulting in customer dissatisfaction and trust issues.

# Data Collection & Methodology

- **Data Sources (Jan–Mar 2025):**

- **Sales Dataset:** Daily product sales (units sold, prices etc.)
- **Dynamic Pricing Dataset:** In-shop vs. e-commerce prices (Flipkart, Amazon)
- **Warranty Dataset:** Issue reported, claim date and status etc.

- **Data Pre-processing:**

- Handled missing values using imputation or row removal
- Removed duplicate entries and standardized date/price formats
- Cleaned and merged data for unified analysis

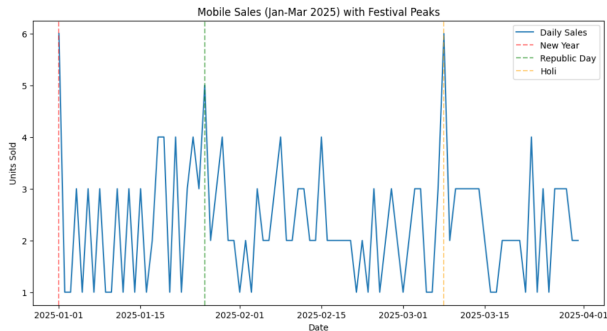
- **Tools Used:**

- **Python (pandas, matplotlib, seaborn, statsmodels)**
- **Excel** for manual inspection and validation

- **Methods Applied:**

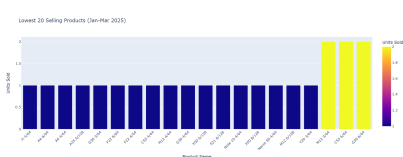
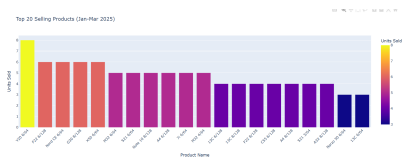
- Descriptive statistics (mean, median, std dev) for sales and pricing
- Visualizations: Bar, Line, Pie, Box plots for patterns and anomalies
- Forecasting: ARIMA for festive demand prediction

# Festive Season Sales Trend



- **20–30% sales surge** observed during New Year, Republic Day and Holi.
- Peaks show **mid-festival weeks** as key revenue drivers.
- **Issue:** Manual inventory led to stockouts during high demand.
- **Fix:** Use ARIMA model for **festive seasonal forecasting and pre-stocking**.

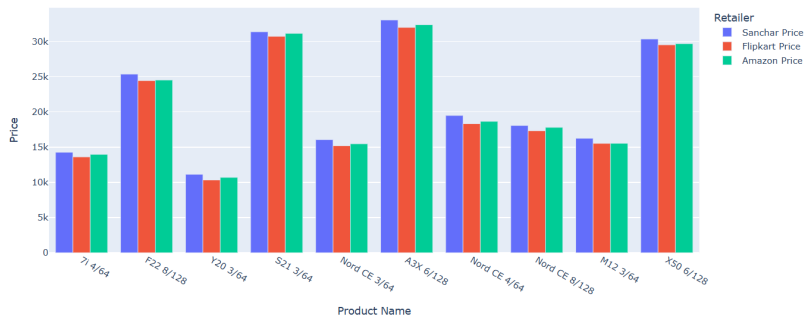
# Top Low Performing Products



- **Top Sellers:** Vivo Y20 6/64, F22 6/128 — mid-range hits.
- **Low Sellers:** MI 7i 4/64, MI A4 6/64— very poor movement.
- **Issue:** Overstocked dead stock blocking capital.
- **Fix:** Restock fast-movers, bundle low sellers, optimize shelf space.

# Dynamic Pricing Gap

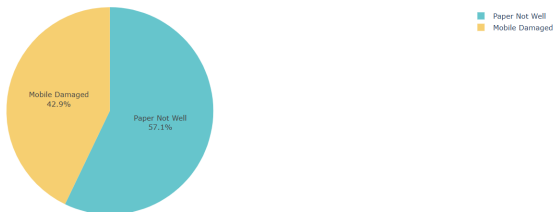
Price Comparison for Top 10 Models



- **Flipkart:** Frequently offers lower prices than the Sanchar Zone, indicating aggressive discount strategies.
- **Amazon:** Volatile pricing due to frequent auto-adjustments.
- **Issue:** Sanchar Zone lacks dynamic pricing — stays costlier.
- **Fix:** Deploy **rule-based price engine** with competitor tracking.

# Warranty Disputes Analysis

Warranty Claim Rejection Reasons



- **60% of warranty claims** rejected due to bad documentation.
- Major issue: **“Paper Not Well”** (60% of all rejections).
- **Issue:** Manual process frustrates customers, impacts support load.
- **Fix:** Use **digital warranty system** — uploads, tracking, validation.



# Interpretation of Results

## Festive Sales Spike

Sales rose by 20–30% during festive periods. However, manual inventory tracking led to stockouts and missed opportunities.

## Top Products

Best-sellers like Vivo Y20 and F22 6/128 lacked dynamic reordering — causing potential loss in recurring sales.

## Pricing Disadvantage

Sanchar Zone's prices were higher than Flipkart, where dynamic discounts attracted more customers.

## Warranty Disputes

60% of warranty claims were rejected due to documentation errors. Manual handling eroded customer trust.

## Inventory Inefficiencies

Low-selling models were overstocked, blocking capital. Real-time inventory were missing.

## TM Brand Insights

Infinix and Realme led in sales. Vivo and OnePlus underperformed despite having available inventory.

# Recommendations – Part 1

## Plan for festivals

Keep more stock of fast-selling products at least a month before big festivals like new year, holi, rebulic day, dusheera, diwali etc.

## Clear dead stock

Giving offers on products that aren't selling much. This clears space and helps get back the money spent on them.

## Smarter pricing

Change prices based on competitor rates and product demand. Use simple tools like spreadsheets to start.

# Recommendations – Part 2

## Fixing warranty process

Use a digital bill system to register and track warranty claims, it ensures faster service, clearer document, and reduces rejections

## Customer feedback

Ask customers for feedback regularly. Use their responses to decide which products to keep or remove from stock.

## Share feedback to supplier

Use complaint trends to flag issues with specific models or brands to vendors for better support.

## Impact

These steps will reduce losses, improve customer trust, and help Sanchar Zone compete better in the market.

Thank You!