Clothing Product Sales Analysis

A comprehensive SQL-driven analysis of product-level sales data to uncover revenue drivers, promotional effectiveness, and strategic opportunities across merchandise categories, seasons, and customer segments.

Project Scope and Dataset Overview

Analysis Objective

This project analyses clothing product sales data using SQL to derive concise, business-focused insights related to revenue drivers, promotions, seasonality, pricing strategy, product placement, materials, and sourcing. The analysis supports data-driven decision-making across merchendising, marketing, and supply-chain planning functions.

The dataset contains comprehensive product-level sales data including product name, product type, price, sales volume, promotion flags, product position, seasonal indicators, section classifications (MAN/WOMAN), material composition, and country of origin. Data integrity was ensured through rigorous cleaning processes, with rows containing missing critical identifiers systematically removed to maintain analytical accuracy.

Key Data Dimensions

- Product attributes and pricing
- Sales volume and revenue
- Promotional activity
- Store positioning
- Seasonal indicators
- Customer segments
- Material composition
- Sourcing origins

Revenue Distribution by Product Category

Product type analysis reveals significant concentration in revenue generation, with clear category leaders emerging from the data. Understanding this distribution is critical for inventory allocation, marketing investment, and strategic planning decisions.

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$3.32

$12.11

$13.36

$55.06

$16.15

■ Jackets   ■ Sweaters   ■ T-Shirts   ■ Jeans   ■ Shoes
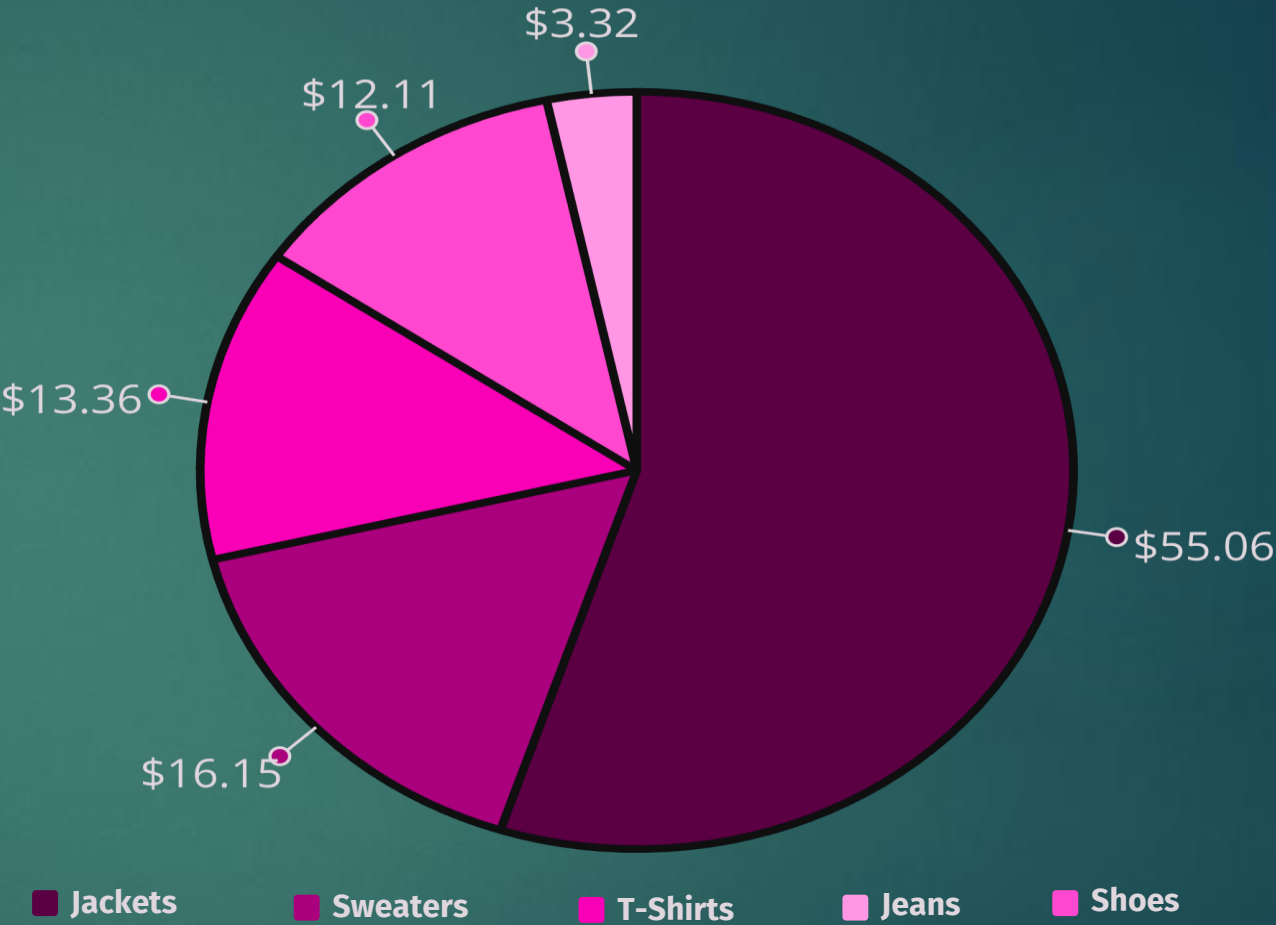
Jackets Dominate

Commanding over half of total revenue at 55.06%, jackets represent the brand's core revenue engine and deserve priority investment.

Secondary Categories

Sweaters and T-shirts combine for nearly 30% of revenue, providing important diversification and cross-selling opportunities.

Growth Potential

Jeans represent only 3.32% of revenue, suggesting untapped potential or need for assortment optimisation.

Top Performers and Category Economics

Revenue Champion

The **PLAID OVERSHIRT** emerges as the single highest-revenue product with total sales of $349,656.73. This performance benchmark demonstrates the commercial potential of well-designed, versatile outerwear that bridges casual and smart-casual occasions.

This product's success provides a blueprint for future development: timeless patterns, versatile styling options, and strong visual appeal combine to drive exceptional sell-through rates and minimal discounting requirements.
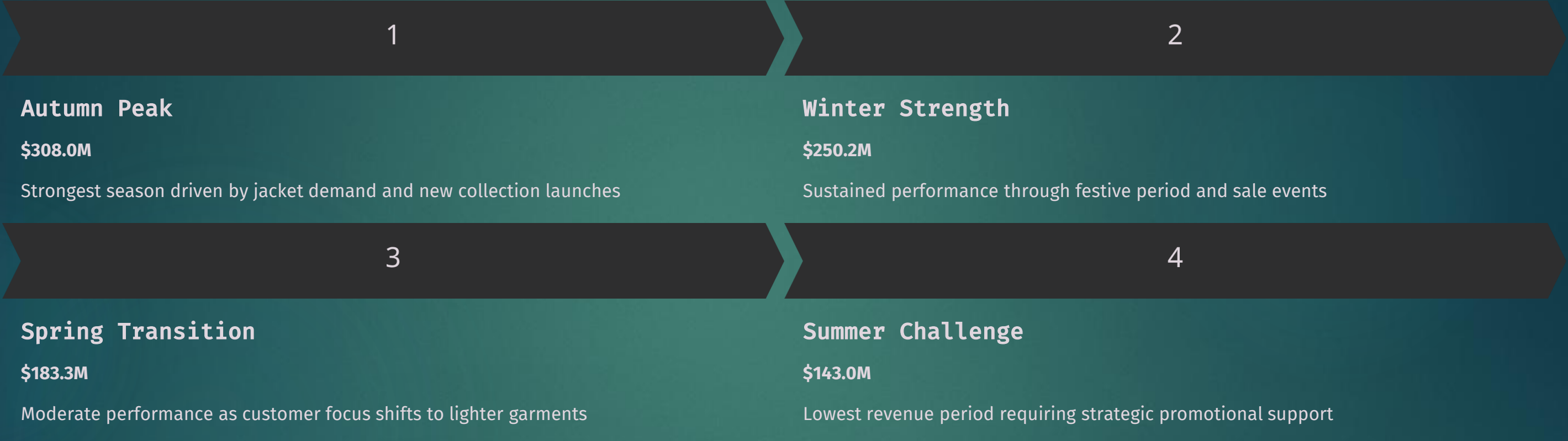
Average Revenue by Category

Category-level revenue analysis reveals relatively consistent average performance across product types, suggesting effective price architecture and assortment planning:

- Jackets: $47,332 per product
- T-Shirts: $45,823 per product
- Sweaters: $44,984 per product
- Jeans: $44,737 per product
- Shoes: $44,419 per product

The relatively narrow range between highest (jackets) and lowest (shoes) average revenues indicates balanced portfolio management, though jackets' 6.6% premium over shoes reinforces their strategic importance to the business model.

Seasonal Revenue Patterns

Seasonal analysis reveals pronounced variation in revenue generation, with clear winners and underperformers across the calendar year. These patterns have significant implications for inventory planning, promotional calendar design, and working capital management.

1

Autumn Peak

$308.0M

Strongest season driven by jacket demand and new collection launches

2

Winter Strength

$250.2M

Sustained performance through festive period and sale events

3

Spring Transition

$183.3M

Moderate performance as customer focus shifts to lighter garments

4

Summer Challenge

$143.0M

Lowest revenue period requiring strategic promotional support

Strategic Implications

The 115% revenue differential between peak (Autumn) and trough (Summer) seasons creates significant operational challenges. Cash flow management, inventory risk, and capacity utilisation all require careful planning to navigate these pronounced fluctuations.

Opportunity Analysis

Summer's underperformance presents both risk and opportunity. Developing stronger summer assortments, earlier promotional activation, and enhanced digital marketing could narrow the seasonal gap and improve annual revenue consistency.

Customer Segment Performance

$598.5M

WOMAN Section Revenue

Generates more than double the revenue of MAN section, representing 67.6% of total business

$286.1M

MAN Section Revenue

Accounts for 32.4% of revenue, indicating significant growth potential

558

WOMAN Promo Lift

Average sales unit increase during promotional periods

503

MAN Promo Lift

Average sales unit increase showing strong but slightly lower promotional responsiveness

The WOMAN section's dominant revenue contribution reflects both higher purchase frequency and potentially higher average transaction values. This 2:1 revenue ratio has significant implications for floor space allocation, visual merchandising investment, and marketing budget distribution.

Promotional analysis reveals interesting segment dynamics. Whilst WOMAN products demonstrate 11% higher promotional lift (558 units vs 503 units), both segments show strong price sensitivity and promotional responsiveness. This suggests opportunities to refine promotional strategies, potentially reducing promotional intensity in WOMAN whilst maintaining sales momentum, thereby improving margin performance.

The MAN section's lower revenue base but solid promotional responsiveness indicates untapped growth potential. Strategic investment in assortment breadth, targeted marketing, and enhanced store presentation could meaningfully narrow the revenue gap whilst improving overall portfolio balance and reducing business risk concentration.

Promotional Effectiveness and Store Positioning

Promotional Impact by Product Type

Promotion effectiveness varies significantly across categories, with Jeans, Sweaters, and Jackets showing the highest sales lift during promotional periods. This pattern suggests customers actively seek value on higher-priced, considered purchases.

T-shirts and shoes demonstrate lower promotional elasticity, indicating these categories may sell effectively at full price. This insight supports a more selective promotional approach, reserving markdowns for clearance rather than traffic-building events.

The strong promotional response for jackets—already the revenue leader—presents a strategic dilemma. Whilst promotions drive volume, they may be cannibalising full-price sales on the brand's most important category. Testing reduced promotional frequency on selected jacket styles could improve overall category profitability.

Aisle Placement

8.5M units sold

Standard aisle locations generate highest absolute volume through sheer space allocation

End-cap Position

7.47M units sold

Premium positioning delivers strong performance despite limited space availability

Front of Store

6.23M units sold

High-visibility entrance locations underperform relative to expectations

Seasonal Product Strategy and Pricing Architecture

Seasonal Products

1,171 units average sales

Season-specific products deliver 14.5% higher unit sales, validating the investment in seasonal assortment development and timely market delivery.

Non-Seasonal Products

1,023 units average sales

Core, year-round products provide stability and continuity but sacrifice some sales velocity compared to seasonal newness.

Jacket Versatility

Leaders across all seasons

Jackets dominate sales volume in every season, demonstrating exceptional versatility and confirming their position as the portfolio's foundation.

Pricing Strategy Insights

Price architecture analysis reveals the classic volume-margin trade-off. High-priced products generate significantly higher average revenue per SKU ($76,368) despite lower unit sales, whilst mid and low price points drive volume but compress per-product returns.

This dynamic supports a barbell strategy: maintain premium pricing on hero products and key seasonal items to maximise margin capture, whilst offering compelling opening price points to drive traffic and basket building.

Strategic Recommendations

- Expand seasonal assortment given 14.5% sales premium
- Protect high-price products from excessive discounting
- Develop year-round jacket subcategories to leverage category strength
- Test higher price points on proven bestsellers
- Rationalise low-performing SKUs in underperforming price tiers

Material Performance and Sourcing Strategy

Material composition and sourcing origin both demonstrate measurable impact on sales performance, providing actionable insights for product development and supply chain optimisation. These operational factors directly influence both customer appeal and margin structure.

Linen Blends

Lead average sales volumes, appealing to customers seeking natural fibres with performance benefits. Strong in spring/summer seasons.

Acrylic and Wool Blends

Show robust performance in sweater and jacket categories, balancing warmth, care ease, and price accessibility.
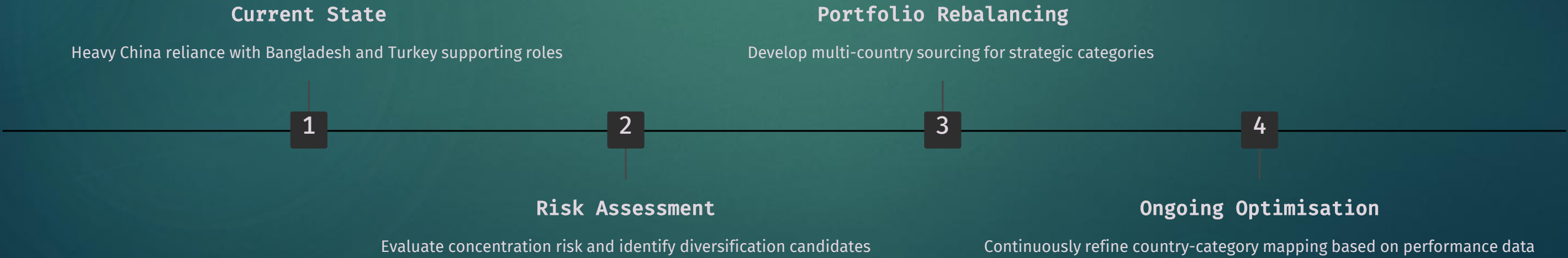
Cotton Compositions

Deliver consistent performance across seasons and categories, providing reliable foundation for core assortments.

Sourcing Origin Revenue Contribution

Geographic sourcing analysis identifies **China** as the top revenue-contributing country, followed by **Bangladesh** and **Turkey**. This concentration presents both advantages and risks. China's manufacturing sophistication enables complex product development and quality consistency, justifying its dominant position despite higher unit costs.

Bangladesh offers compelling cost advantages for high-volume, price-sensitive categories, whilst Turkey provides European proximity benefits for faster replenishment and reduced working capital requirements. Strategic category-to-country mapping optimises the balance between cost, quality, speed, and risk diversification.

Current State
Heavy China reliance with Bangladesh and Turkey supporting roles

Portfolio Rebalancing
Develop multi-country sourcing for strategic categories

1 — **2** — **3** — **4**

Risk Assessment
Evaluate concentration risk and identify diversification candidates

Ongoing Optimisation
Continuously refine country-category mapping based on performance data

Strategic Recommendations and Next Steps

This SQL-driven analysis reveals clear strategic priorities for merchandising, marketing, and supply chain optimisation. The following recommendations translate data insights into actionable business initiatives designed to drive revenue growth, improve profitability, and reduce operational risk.

Double Down on Jackets

With 55% revenue contribution and consistent cross-season performance, expand jacket assortment breadth whilst protecting premium pricing through selective promotional strategies.

Grow MAN Section

Address the 2:1 revenue gap through targeted investment in assortment, marketing, and visual merchandising to balance portfolio and reduce concentration risk.

Solve Summer Challenge

Develop stronger warm-weather assortments and promotional strategies to narrow the 115% peak-to-trough seasonal revenue gap.

01

Immediate Actions (0-3 months)

Analyse front-of-store underperformance, test reduced jacket promotional frequency, expand linen blend offerings for upcoming season

02

Short-term Initiatives (3-6 months)

Develop MAN section growth plan, optimise seasonal vs. non-seasonal mix, refine price architecture based on elasticity analysis

03

Medium-term Strategy (6-12 months)

Diversify sourcing concentration, build summer category strength, implement sophisticated promotional segmentation

Measurement Framework

Establish KPIs to track progress: jacket full-price sell-through rates, MAN section revenue growth, summer season year-over-year improvement, promotional ROI by category, and sourcing country diversification index.

Continuous Learning

Implement regular SQL-based performance reviews, testing hypotheses and refining strategies based on emerging data patterns. Build organisational capability in data-driven merchandising to sustain competitive advantage.