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OMNICHANNEL FASHION RETAIL PERFORMANCE REPORT

2026

INTRODUCTION

The fashion retail industry increasingly relies on data-driven decision-making to remain competitive in an omnichannel environment. Customers interact with brands through multiple channels such as e-commerce platforms and mobile applications, creating complex purchasing behaviors and performance patterns. Understanding not only sales volume, but also profitability, customer value, and channel effectiveness is essential for sustainable growth.

This project aims to analyze the performance of an omnichannel fashion retailer using transactional sales data. The analysis was conducted using Power BI, focusing on transforming raw data into actionable business insights through proper data modeling, key performance indicators (KPIs), and interactive visualizations.

The main objectives of this project are:

- To analyze sales and profitability across products, categories, channels, and customers
- To identify key performance drivers and inefficiencies
- To translate analytical findings into business recommendations
- To demonstrate effective data storytelling using Power B

The dataset consists of transactional sales data at the item level, combined with descriptive information about products, customers, time, channels, and marketing campaigns. Each transaction records information such as net revenue, quantity sold, discounts applied, and gross margin.

Before visualization, the data was cleaned and structured to ensure consistency. Numerical measures were validated, date fields were standardized, and categorical dimensions were prepared for analysis. This preparation step was critical to ensure reliable aggregation and accurate analytical results within Power BI.

DATA MODELING IN POWER BI

To enable efficient and scalable analysis, a star schema data model was implemented in Power BI.

3.1 Star Schema Design

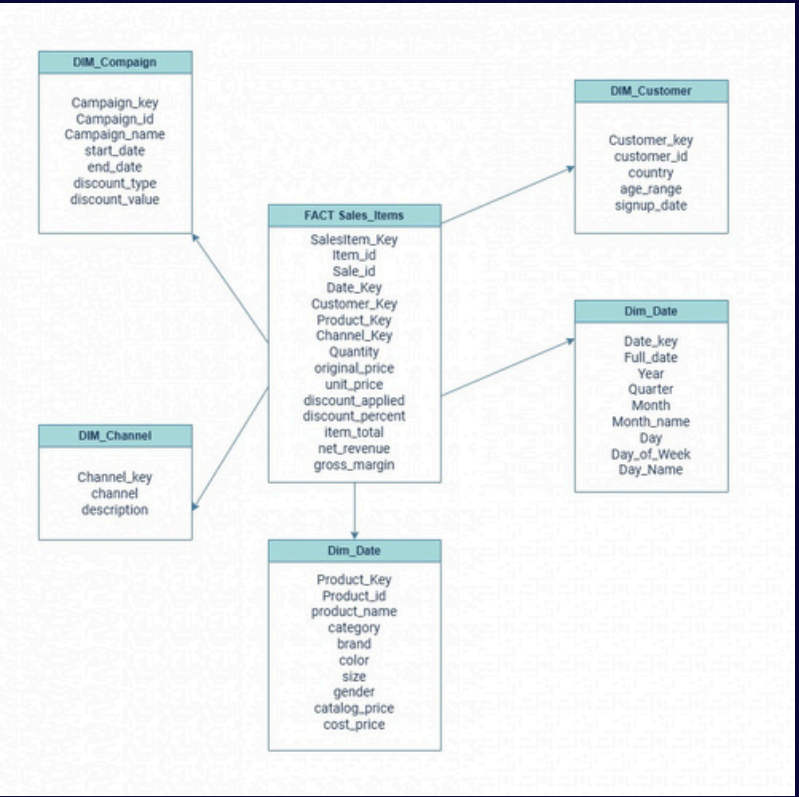
The model is centered around a single fact table:

- Fact_SalesItem: contains item-level sales transactions, including net revenue, quantity, discount percent, and gross margin.

This fact table is connected to several dimension tables:

- Dim_Products: product attributes such as category, brand, size, and cost price
- Dim_Customers: customer demographics and geographic information
- Dim_Date: calendar attributes (day, month, quarter, year)
- Dim_Channels: sales channels (E-commerce, App Mobile)
- Dim_Campaign: marketing campaign details and discount types

This structure allows measures from the fact table to be analyzed across multiple business dimensions while maintaining data integrity and performance.



3.2 Why the Star Schema Matters

The star schema:

- Ensures correct aggregation of KPIs
- Improves performance for large datasets
- Enables intuitive slicing and filtering
- Reflects real-world business processes

This modeling approach is considered a best practice in Business Intelligence and forms the foundation of all subsequent analyses in this project.

KEY PERFORMANCE INDICATORS (KPIS)

All performance metrics were implemented as measures using DAX, rather than raw columns, to ensure correct behavior under filtering and aggregation.
The main KPIs used in the dashboard include:

- Net Revenue: total sales value after discounts
- Gross Margin %: profitability indicator
- Total Orders: number of unique orders
- Total Quantity: volume of items sold
- Average Order Value (AOV): average revenue per order
- Units per Transaction (UPT): average number of items per order
- Active Customers: number of purchasing customers
- Customer Lifetime Value (CLV – simplified): estimated customer value

These KPIs provide a balanced view of sales performance, profitability, and customer behavior, avoiding over-reliance on revenue alone.

POWER BI ANALYSIS

324,24K	141K	0,44
Somme de net_revenue	Total Gross Margin	Gross Margin %

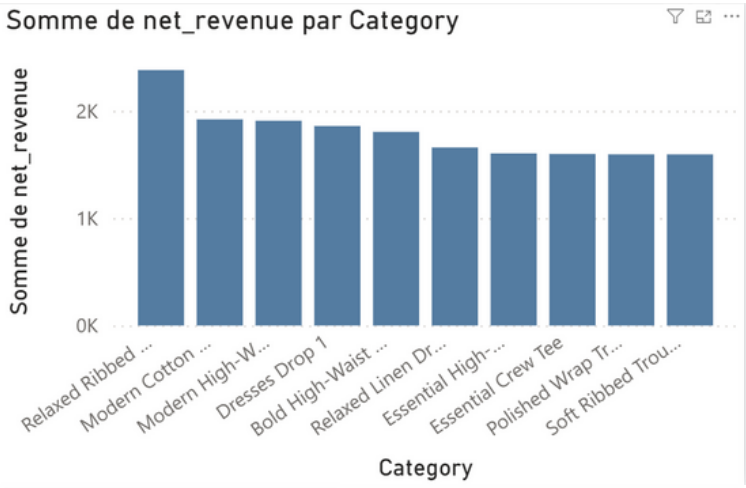
358,27
Average Order Value

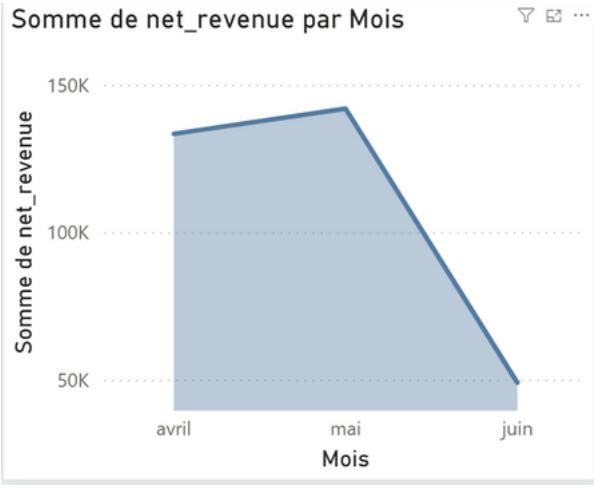
7,42
UPT

905
Total Orders

These key performance indicators provide a concise overview of both sales efficiency and customer purchasing behavior. The Total Net Revenue of 324.24K reflects the overall sales value generated during the period, while a Gross Margin of 44% indicates a relatively healthy level of profitability, suggesting that the retailer retains a substantial portion of revenue after costs.

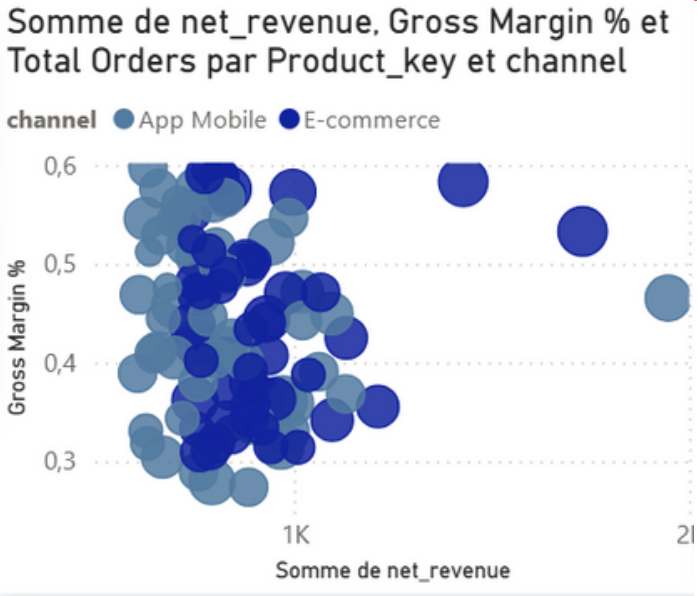
From a customer behavior perspective, the Average Order Value of 358.27 combined with a high Units per Transaction (UPT) of 7.42 shows that customers tend to purchase multiple items per order, which contributes positively to revenue growth. Additionally, the presence of 905 total orders suggests consistent demand across the period. Together, these KPIs indicate that performance is driven not only by order volume but also by strong basket size, highlighting opportunities to further optimize cross-selling and upselling strategies to sustain profitable growth.





These charts show two clear business signals. First, net revenue is concentrated in a few top categories, meaning these categories are the main "growth engines" and should be prioritized for stock availability, visibility, and merchandising. Second, revenue rises from April to May but drops sharply in June, which could indicate seasonality, weaker demand, or reduced promotional intensity. This pattern suggests the need to investigate what changed in June (campaigns, pricing, inventory, or channel mix) and to plan targeted actions to stabilize performance and avoid sudden revenue declines.

POWER BI ANALYSIS



Product performance: revenue vs profitability

The scatter plot (Net Revenue vs Gross Margin %, with bubble size = Total Orders) highlights three distinct product groups. First, products in the upper-right area represent the most attractive opportunities, as they combine high revenue and high profitability—these are "protect and scale" products that should receive priority in stock availability, visibility, and marketing support. Second, products with high revenue but low margin act as volume drivers but can dilute overall profitability; these items require a review of pricing, discount intensity, or cost structure. Third, products with high margin but lower revenue may represent underexploited opportunities; they could benefit from improved placement, bundling, or targeted promotion to increase demand without sacrificing profitability.

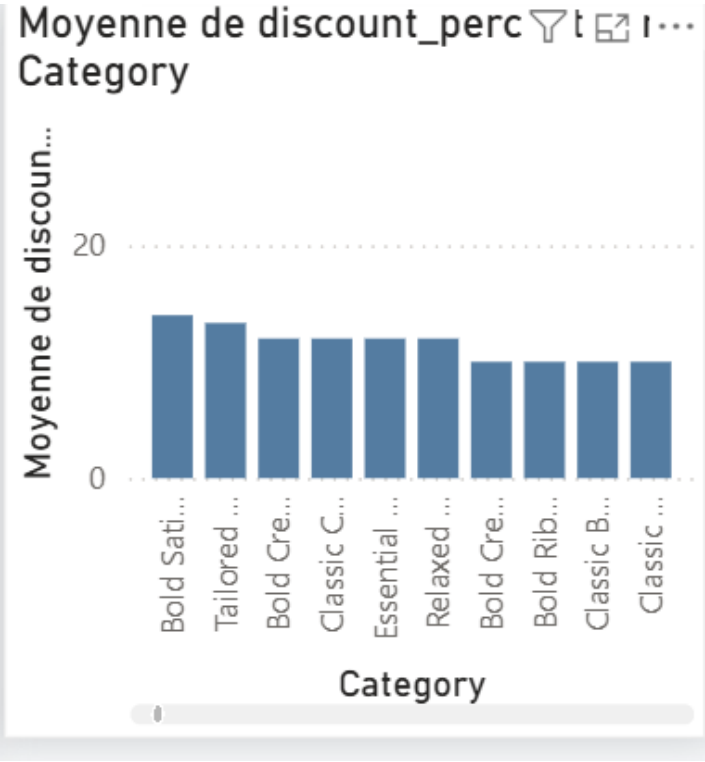
Category	Somme de net_revenue	Total Orders	Gross Margin %	Somme de discount_percent
Bold Boxy Dress	917,28	4	0,38	0,00
Bold Boxy Shoes	1 024,92	8	0,33	0,00
Bold Boxy Tee	179,70	1	0,49	0,00
Bold Cotton Dress	432,46	2	0,49	0,00
Bold Cotton Set	1 489,98	9	0,32	30,00
Total	**324 236,66**	**905**	**0,44**	**5 400,00**

The category table helps connect volume and profitability by showing revenue, orders, margin, and discount at the same time. This is useful for identifying categories that are:

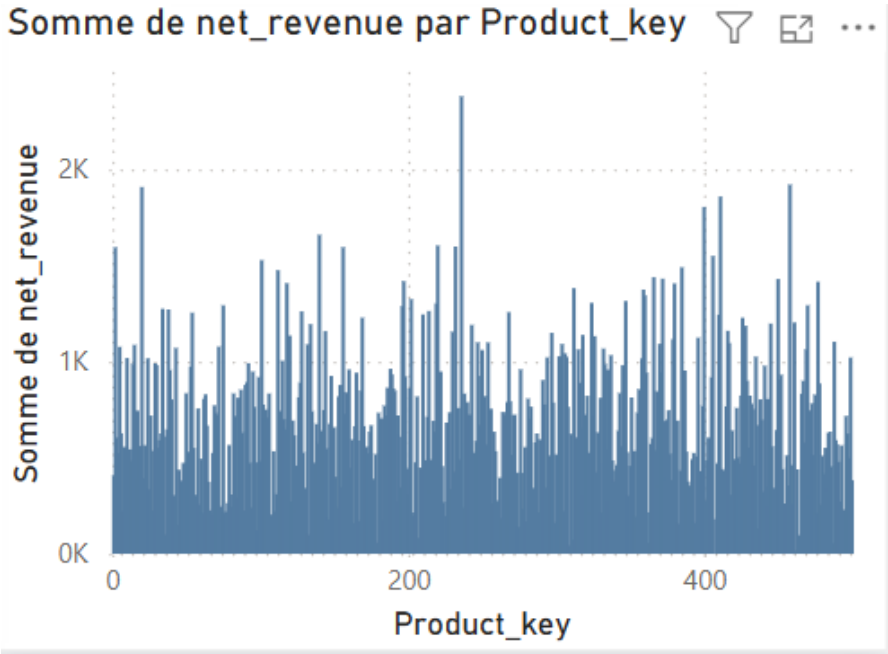
- High revenue + high margin (strategic core)
- High revenue + low margin (needs margin protection actions)
- Low revenue + high discount (potentially inefficient promotions)

This view supports category management decisions such as assortment optimization and promotion rules by category.

POWER BI ANALYSIS



The average discount by category chart shows that discount intensity varies significantly across categories. This suggests the retailer is using promotions unevenly, which can be a risk if higher discounts are applied to categories that do not generate proportional revenue gains. Categories with consistently high discounts should be audited to confirm whether discounts are driving incremental volume or simply reducing margin. A more selective promotion strategy—focused on price-sensitive categories and low-rotation products—would better protect profit while maintaining competitiveness.



The revenue-by-product chart shows strong dispersion: many products generate low to moderate revenue, while a smaller subset drives spikes. This reinforces the idea that product performance is not evenly distributed and supports the use of Top N filtering to focus decision-making on the items that materially impact results. Operationally, this implies that forecasting, replenishment, and merchandising efforts should prioritize the revenue-driving products, while lower-impact items should be reviewed for simplification or repositioning.

KEY INSIGHTS AND INTERPRETATION

01

— Revenue Is Highly Concentrated

The analysis shows that a small number of products generate the majority of total revenue, while many products contribute marginally. This long-tail distribution is common in retail but has significant strategic implications.
Why this matters: Business performance is highly sensitive to the success of top products. Decisions related to pricing, promotion, or stock availability for these products have a disproportionate impact.

02

— High Revenue Does Not Guarantee High Profitability

Products with similar revenue levels often show very different gross margins. Some high-selling products operate with relatively low margins.
Why this matters: Focusing only on revenue can hide profitability issues. Margin must be considered alongside sales volume to ensure sustainable growth.

03

— Discounting Reduces Margin Without Guaranteed Gains

Categories with higher average discount percentages do not consistently generate higher revenue and often exhibit lower margins.
Why this matters: Aggressive discounting can erode profitability without creating long-term value. Promotions should be targeted rather than applied broadly.

04

— Channel Performance Differs

E-commerce generates higher revenue than the mobile app, but product performance varies by channel.
Why this matters: Channels should not be managed identically. Pricing, promotions, and product focus should be adapted to channel-specific behavior.

BUSINESS RECOMMENDATIONS

Based on the insights above, the following recommendations are proposed:

1. Prioritize high-revenue, high-margin products in marketing and inventory decisions
2. Reduce blanket discounting and adopt targeted promotional strategies
3. Develop channel-specific strategies for pricing and product promotion
4. Rationalize low-performing products with low revenue and low margin
5. Monitor combined KPIs (revenue, margin, orders) rather than revenue alone
6. Strengthen customer retention initiatives to increase CLV
7. Use data-driven pricing analysis to optimize margins

These recommendations aim to shift the business focus from volume-driven growth to profitable and sustainable growth.

LIMITATIONS AND FUTURE IMPROVEMENTS

Limitations

- Limited time period restricts seasonal analysis
- Simplified CLV does not account for churn or time value
- No marketing cost data to evaluate campaign ROI
- Analysis is mostly descriptive, not predictive

Future work could include:

- Longer-term and year-over-year analysis
- Customer cohort and retention analysis
- Integration of marketing and operational costs
- Advanced CLV modeling
- Predictive analytics and demand forecasting

CONCLUSION

This project demonstrates how Power BI can be used to transform raw transactional data into meaningful business insights. By combining a robust star schema, well-defined KPIs, and interactive visualizations, the analysis highlights key drivers of revenue and profitability in an omnichannel retail context.
The findings emphasize the importance of focusing on profitable growth, optimizing discount strategies, and leveraging data analytics to support strategic decision-making. This dashboard provides a strong foundation for future analytical extensions and continuous performance monitoring.

Key Takeaways

- Revenue is highly concentrated among a limited number of products and categories, making focused product prioritization a critical performance lever.
- High sales do not always translate into high profitability, highlighting the need to evaluate revenue and margin together when making pricing and assortment decisions.
- Discount intensity varies across categories and can erode margins without guaranteeing revenue growth, reinforcing the importance of targeted rather than blanket promotions.
- Channel performance differs significantly, indicating that omnichannel strategies should be tailored to channel-specific customer behavior.
- Customer value is driven by strong basket size, suggesting clear opportunities for cross-selling and upselling strategies.