

# **Sales Project using Power BI**

Deep Data Analysis and  
Create Dashboards

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**Power BI**



**Orange**  
**Digital Center**

## Step 1 : General Understanding

This dataset contains transactional retail data covering orders, products, retailers, and returns, including details about sales, costs, profit, discounts, time, and geographic information. It enables analysis of sales performance, profitability, customer returns, product characteristics, and retailer distribution across different regions and time periods.

### Orders Table

- Order ID
- Order Date
- Order Year Month
- Retailer ID
- Product SKU
- Product Cost
- Order Quantity
- Sales Amount
- Cost of Goods Sold
- Product Discount
- Profit
- Profit Margin

### Retailers Table

- Area
- City
- Country
- Distance from Warehouse
- Region
- Retailer Channel
- Retailer ID
- Retailer Name

### Products Table

- Product Category
- Product Color
- Product Full Description
- Product Gender
- Product Name
- Product Size
- Product SKU

### Returns Table

- Hour
- Minute
- Order ID
- Return Date
- Return Month
- Return Year
- Second

## Step 2 : Data Cleaning and Transformation

### Date Optimization

- Action: Transformed `Order_YearMonth` from `201801` to `2018 / 1`.
- Benefit: Better readability and correct chronological sorting in Slicers.

### Financial Data Cleaning

- Action: Removed currency `symbols (£)` and converted columns to `Fixed Decimal Number`.
- Benefit: Enables accurate mathematical calculations and DAX measures.

### Data Integrity (Duplicates)

- Action: `Removed duplicate records` based on `Order_ID`.
- Benefit: Ensures sales figures and KPIs are not artificially inflated.

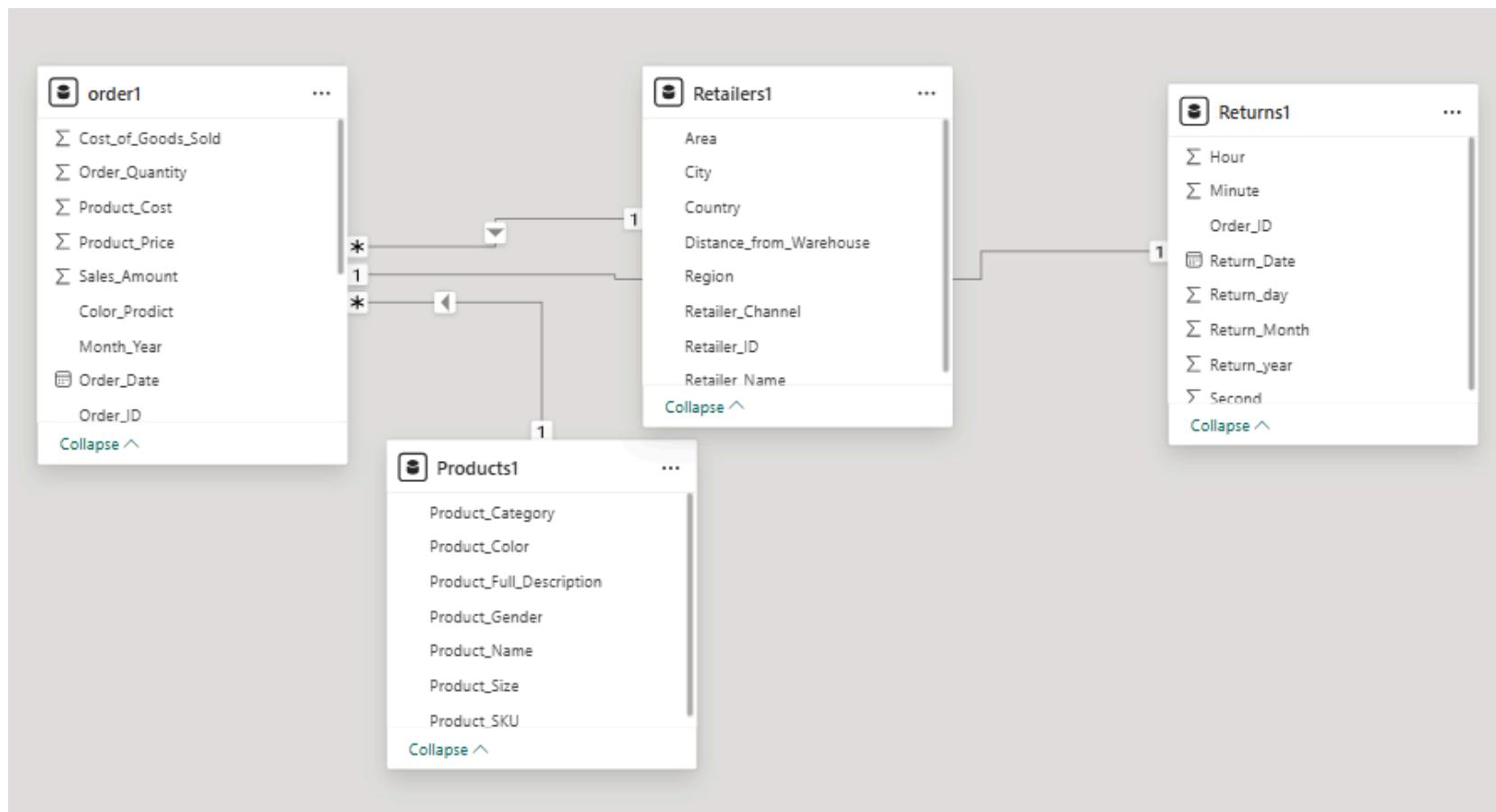
### Date Optimization

- Action: Cleaned `null` and `blank values` using Column Quality tools.
- Benefit: Eliminates gaps in reports and ensures "Zero-Error" visuals.

### SKU Decomposition

- Action: Split `Product_SKU` into three new columns: `Code`, `Size`, and `Color`.
- Benefit: Allows for detailed filtering and deep-dive analysis per product attribute

## Step 3 : Data Modeling

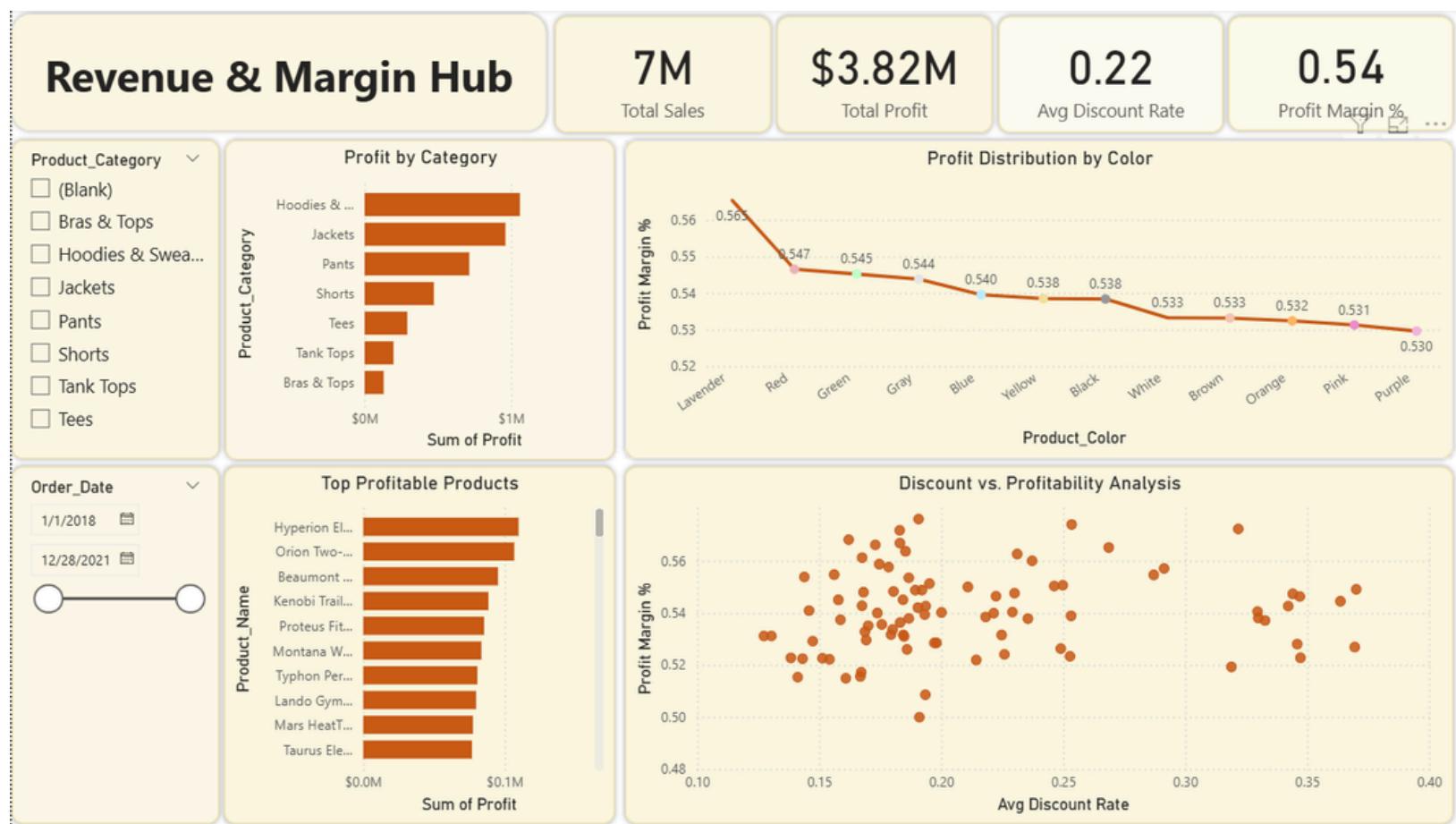


## Step 4 : Data Visualization and EDA

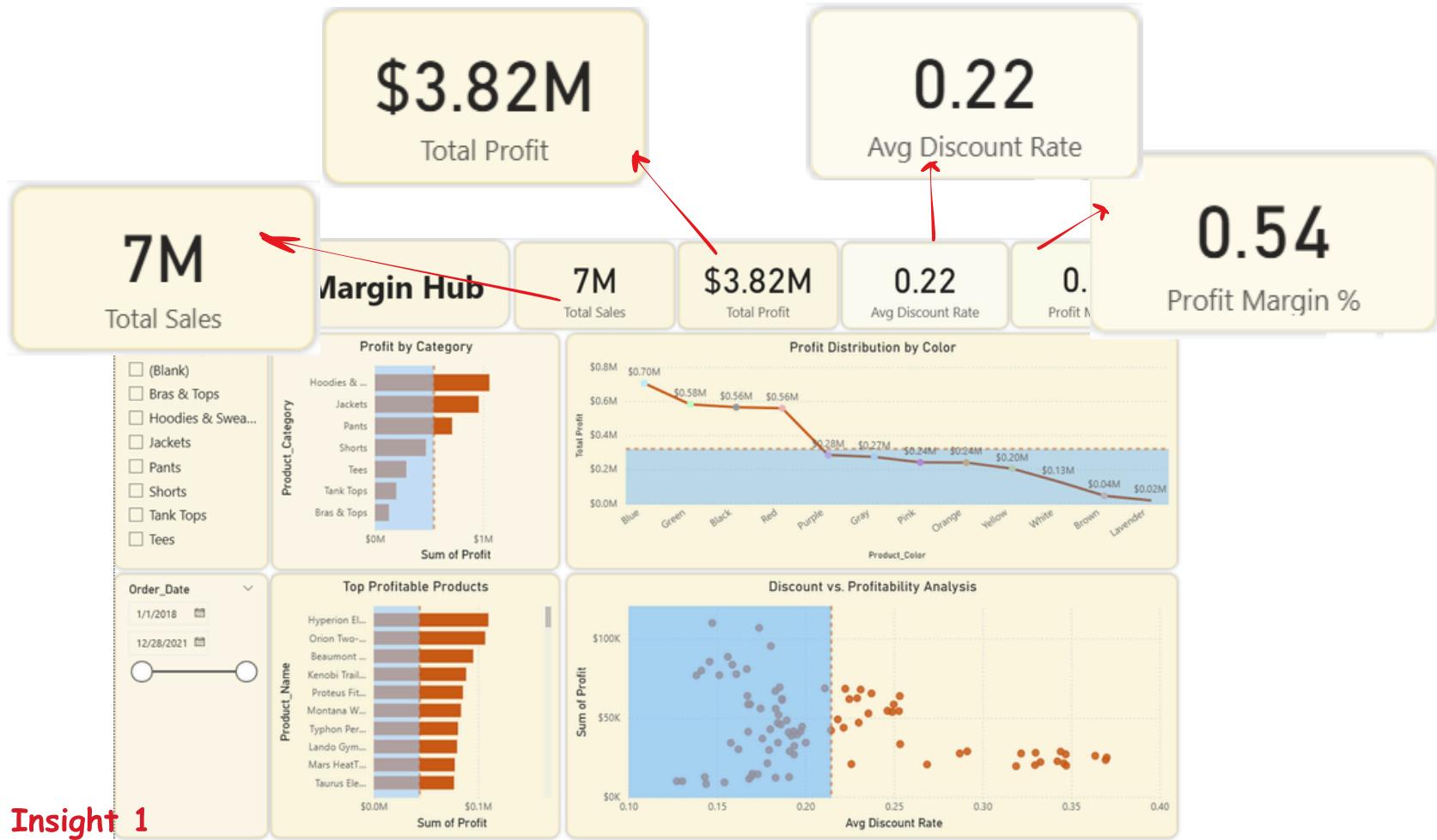
### Question

Which products should we focus on next quarter to maximize profit without increasing discounts?

### Dashboard 1



# 1- KPIs Cards



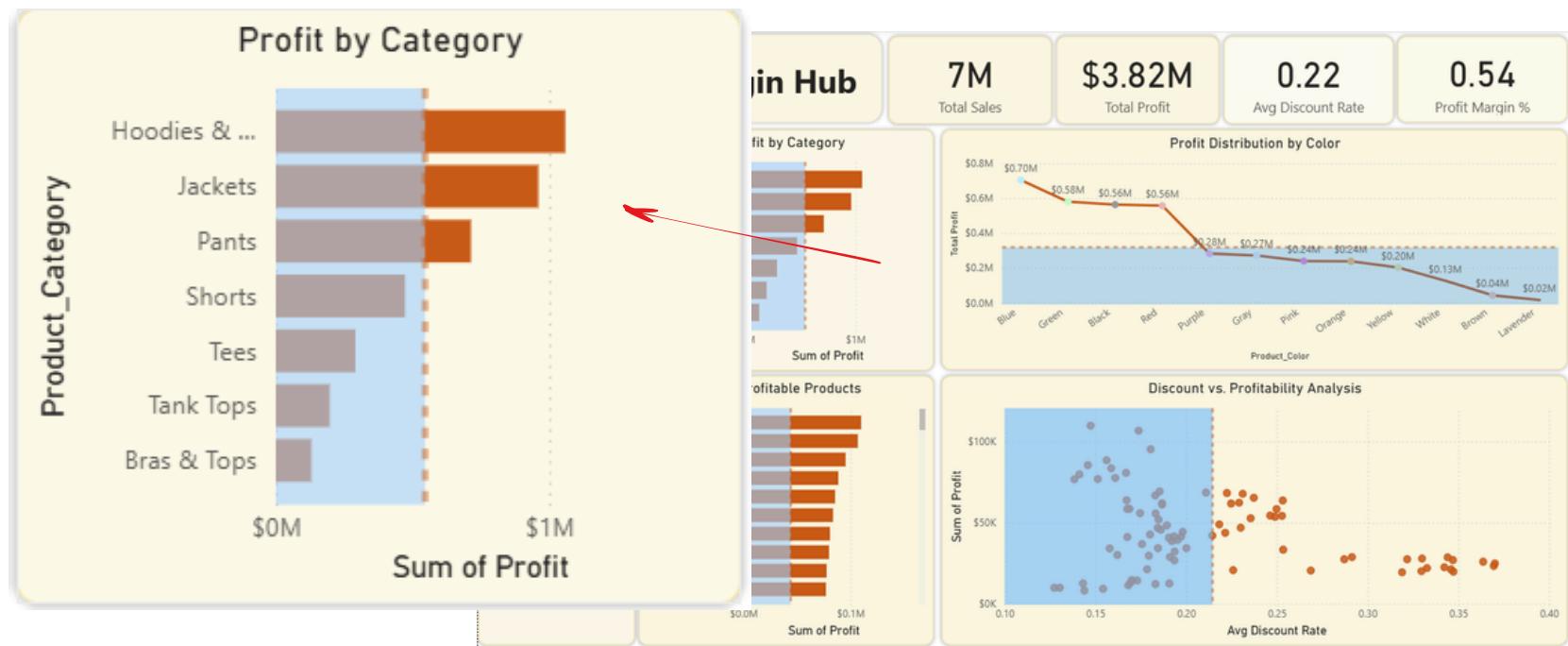
**Insight 1**

High average discount (22%) is driving volume but requires tighter control to protect brand value.

**Insight 2**

Despite aggressive discounting, our 54% profit margin proves exceptional cost efficiency and business health.

## 1- Bar Chart (Profit by Category)



### Insight 3

Hoodies & Sweatshirts lead total sales, generating nearly 1M in revenue, making it our top-performing category. Jackets follow closely at 900K, reinforcing Hoodies & Sweatshirts as the primary revenue driver.


**Hoodies & Sweatshirts**

Total Profit : 1M \$

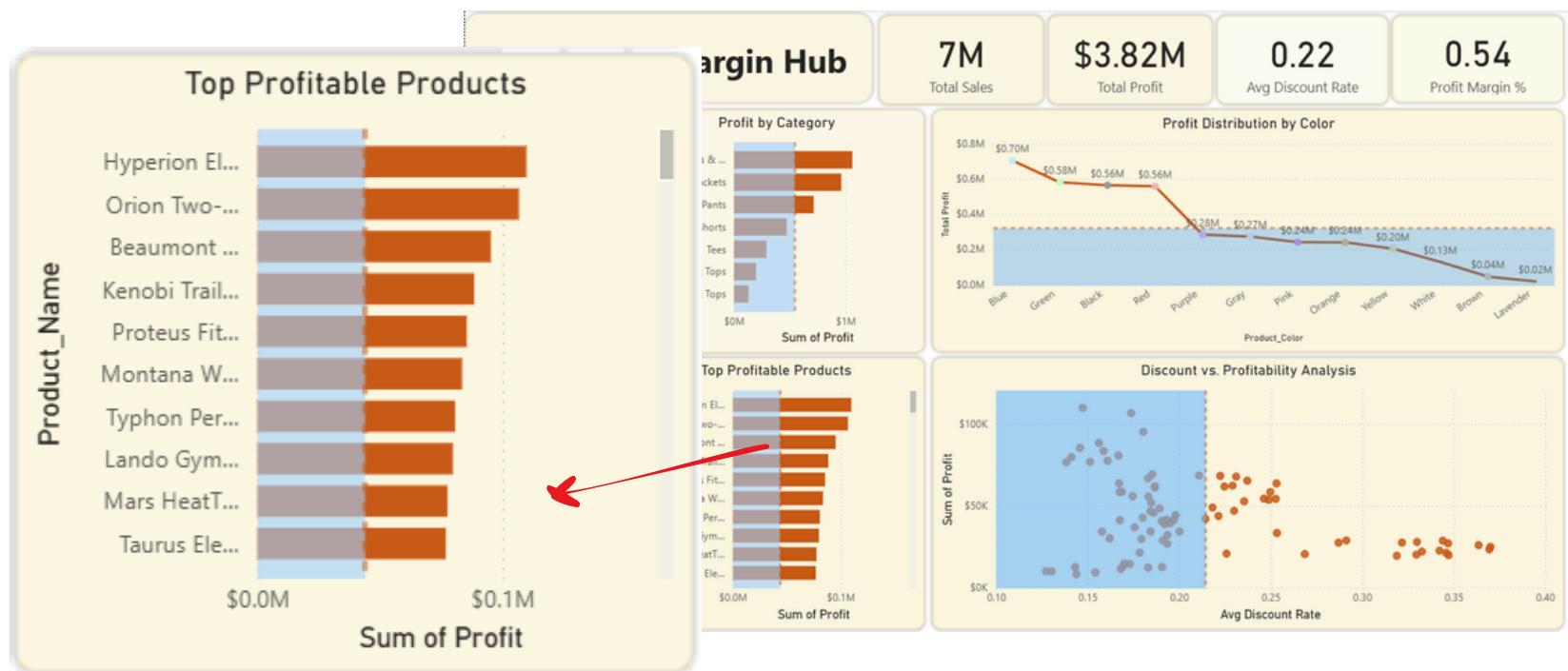

**Jackets**

Total Profit : 960k \$


**Pants**

Total Profit : 713k \$

## 2- Bar Chart (Profit by Product Name )



## Insight 4

Hyperion Elements Jacket leads product-level sales at ~109K, closely followed by Orion Two Tone Fitted Jacket (~106K) , indicating strong demand concentration among top-performing SKUs.



hyperion elements jacket

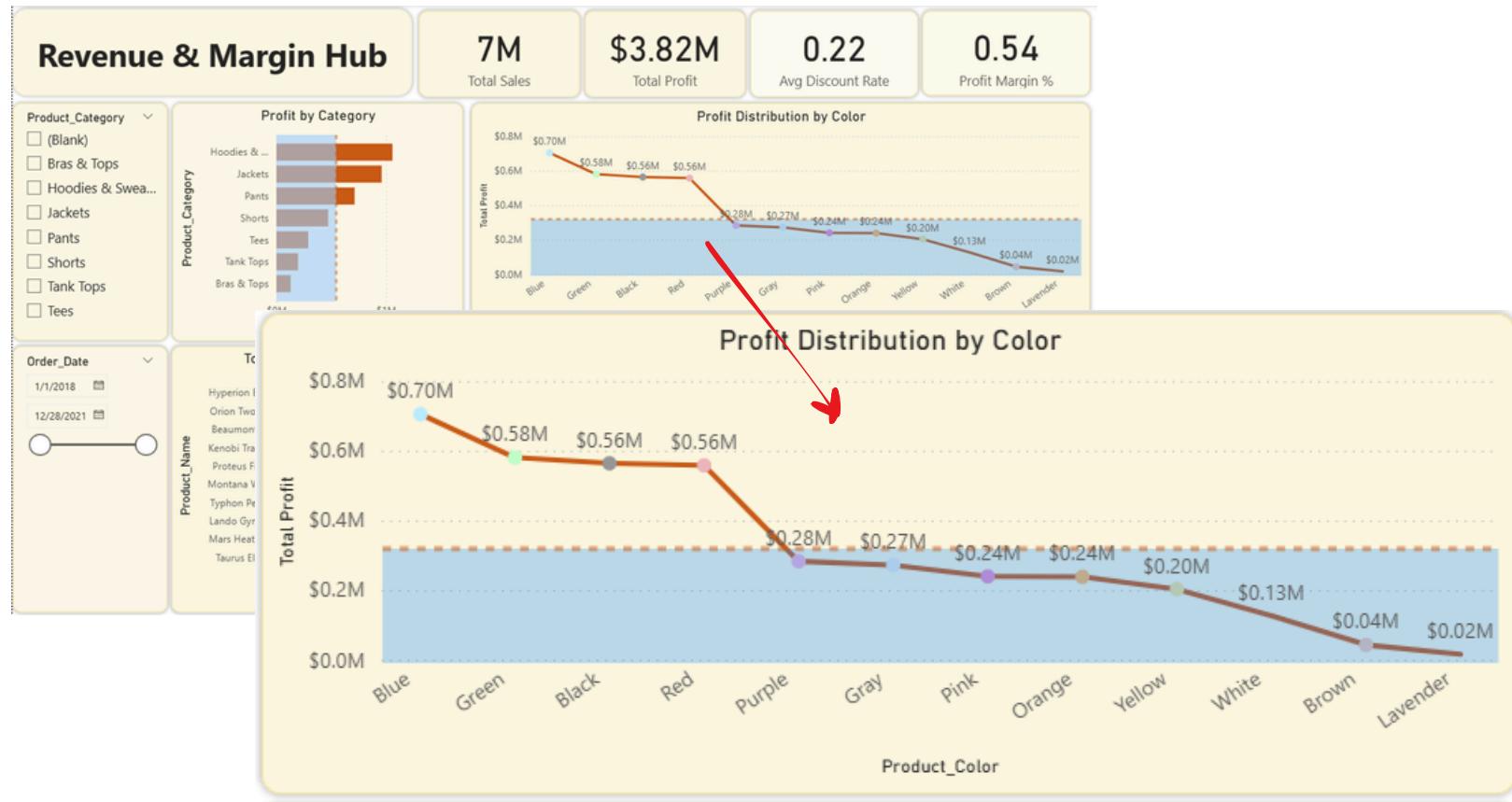
Total Profit : 109K \$



orion two tone fitted jacket

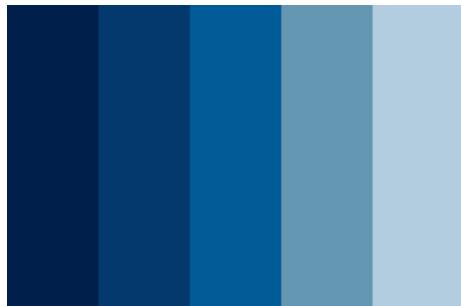
Total Profit : 106K \$

## 2- Line Chart (Profit by Color )



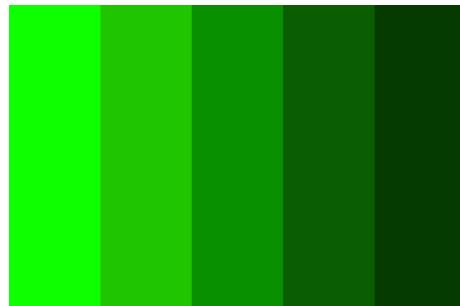
### Insight 5

Blue is the most profitable color, generating approximately 704K in profit, followed by Green (~580K) and Black (~563K), indicating strong customer preference toward these shades



Blue Color

Total Profit : 704K \$



Green Color

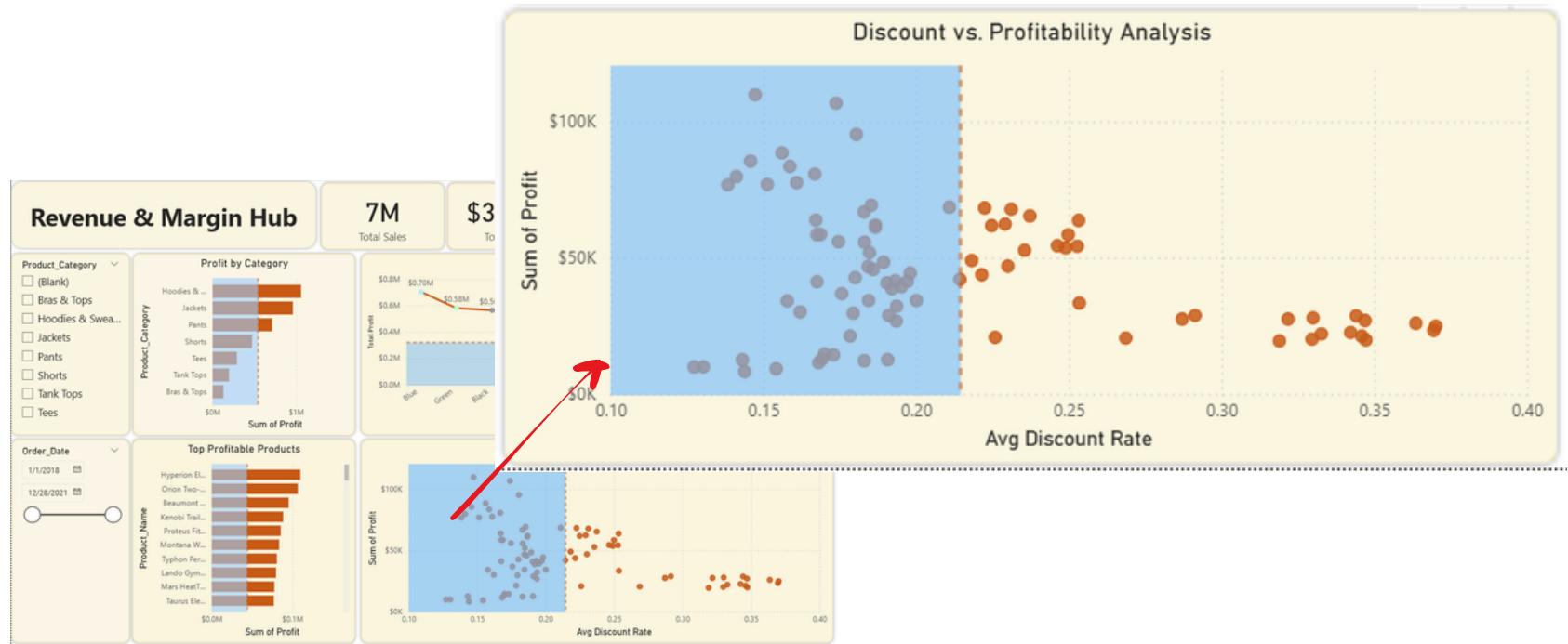
Total Profit : 580K \$



Black Color

Total Profit : 563K \$

## 2- Scatter Chart (Profit by Discount )



## Insight 6

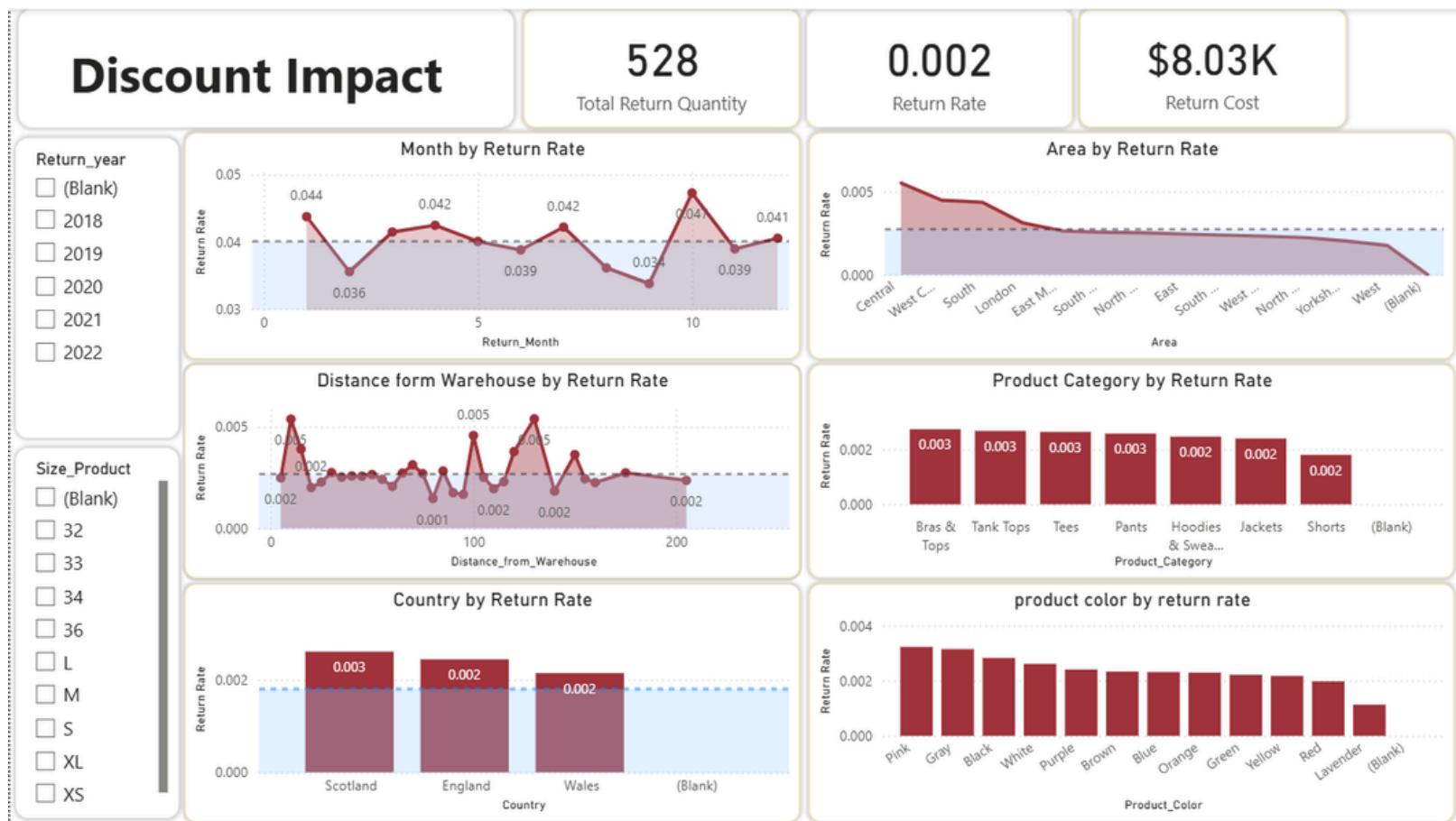
Tee products receive the highest discounts (30%+), yet fail to generate strong profit levels, indicating that aggressive discounting is not effectively translating into profitability for this category.



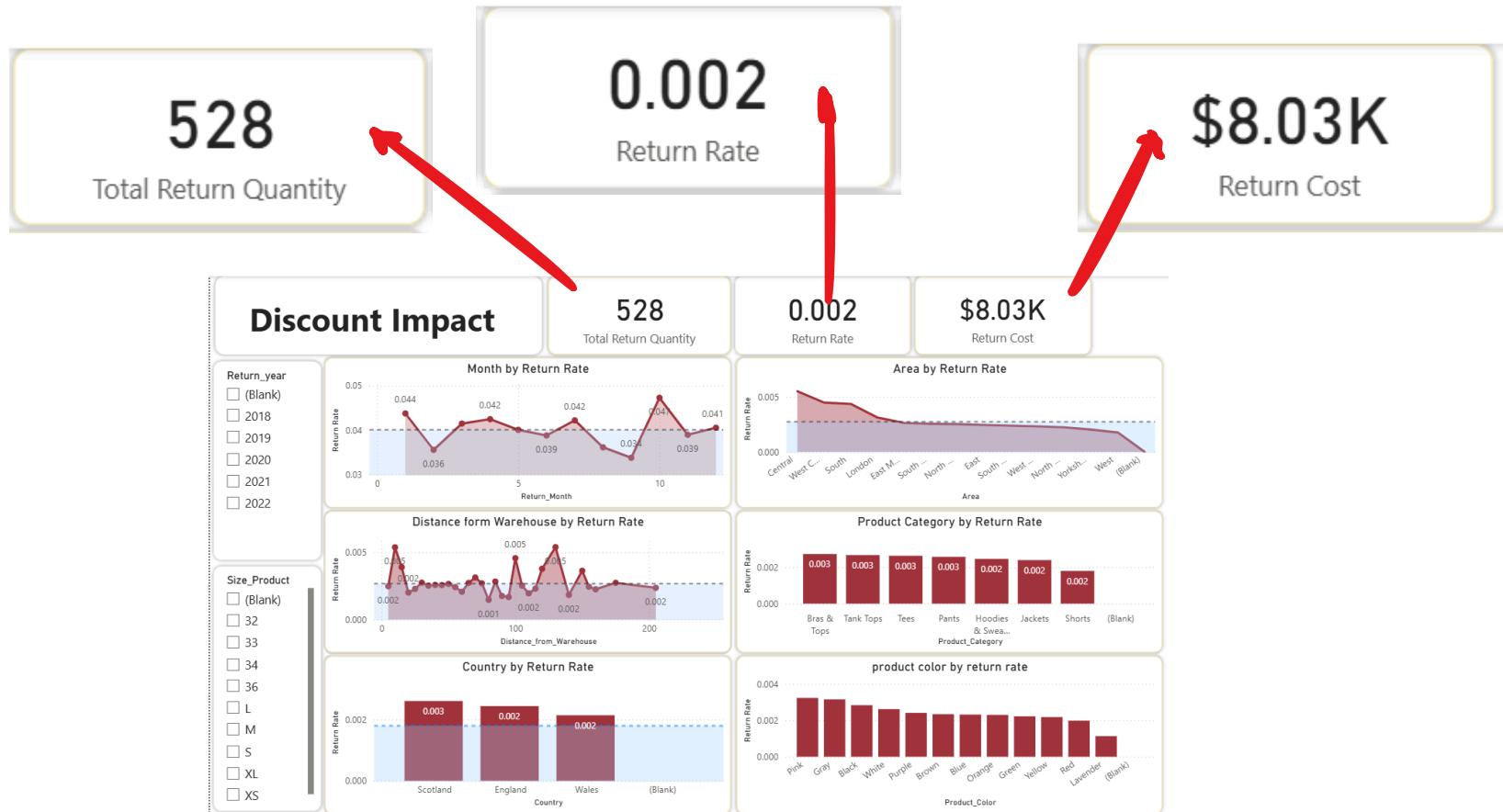
Tee products  
discounts (30%+)

## Dashboard 2

This dashboard aims to boost net profitability by **minimizing 'leakage'** from returns, identifying root causes of the **\$8.03K** in lost revenue without changing prices or costs. By analyzing geographical, seasonal, and product-specific return patterns, it transforms operational losses into direct profit gains.



# 1- KPIs Cards



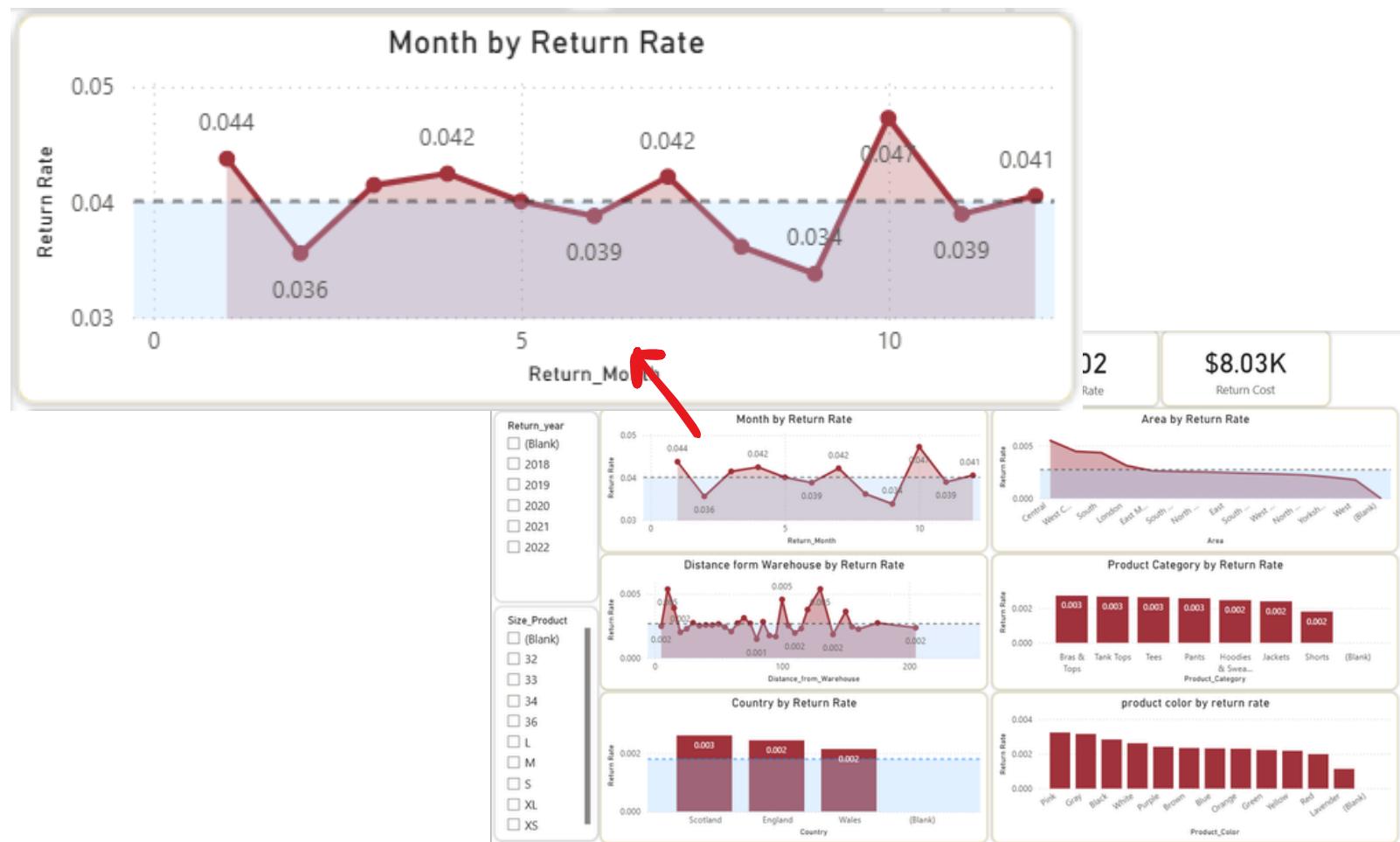
## Insight 1

**Total Return Quantity (528):** The total number of items returned during the monitored period was 528.

**Return Rate (0.002):** The overall return rate is very low and stable at 0.2%. This is a positive indicator that the vast majority of sales are successful, but any improvement in this rate will impact net profit.

**Return Cost (\$8.03K):** This is the direct cost of returns, a loss estimated at \$8,030. This figure is our "target"; we analyze it to reduce this amount and convert it into profit.

## 2- Line Chart (Month by Return Rate) :

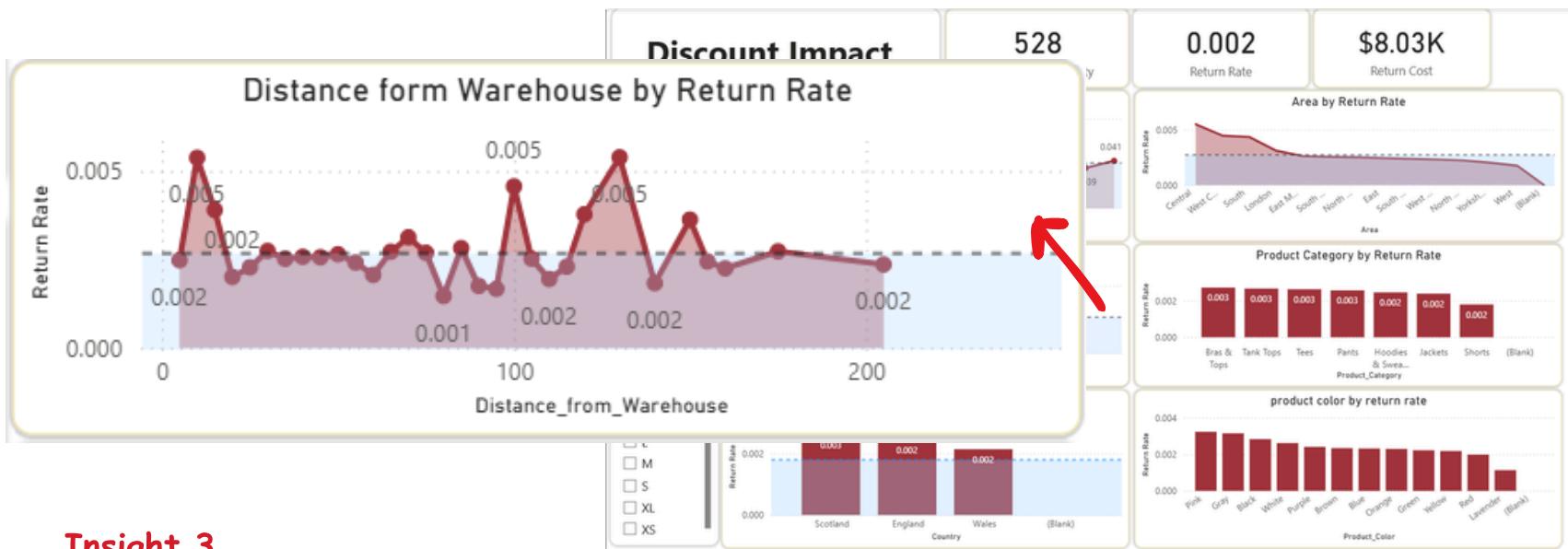


## Insight 2

The Peak: October saw the highest return rate at 0.047.

This sudden surge could reflect the start of the sales season or the arrival of new winter styles with sizing issues. Reducing returns this month alone would save a significant portion of the \$8.03K lost.

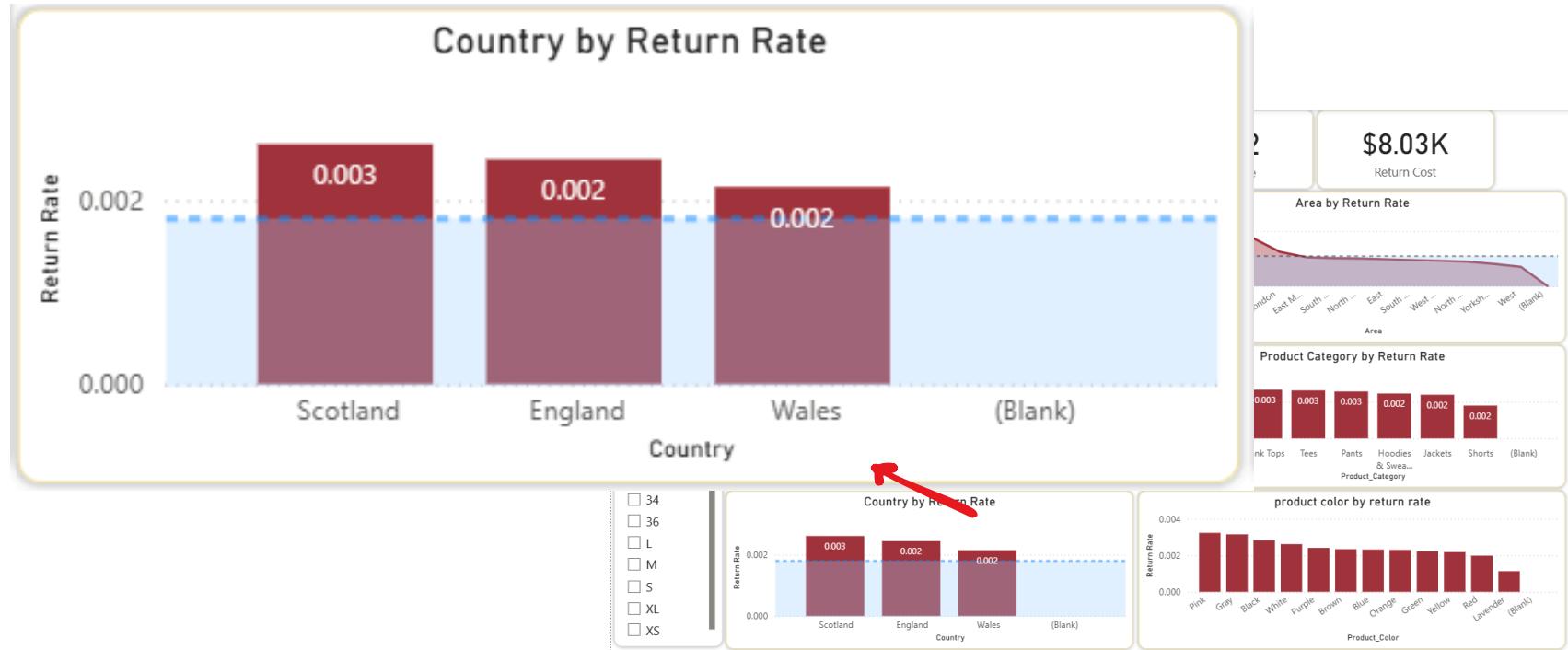
### 3- Line Chart (Distance from Warehouse by Return Rate) :



## Insight 3

"Analysis shows returns aren't driven by distance itself, but by specific 'geographic clusters' where return rates spike to 0.5%; suggesting localized inefficiencies in shipping or packaging that directly drain potential profits."

## 4- Line Chart (Country by Reurn Rate) :



### Insight 4

"Geographical analysis identifies Scotland as the highest return territory with a 0.003 rate, exceeding the baseline; this necessitates a review of local carrier performance or product-market fit in that region to prevent further profit erosion."

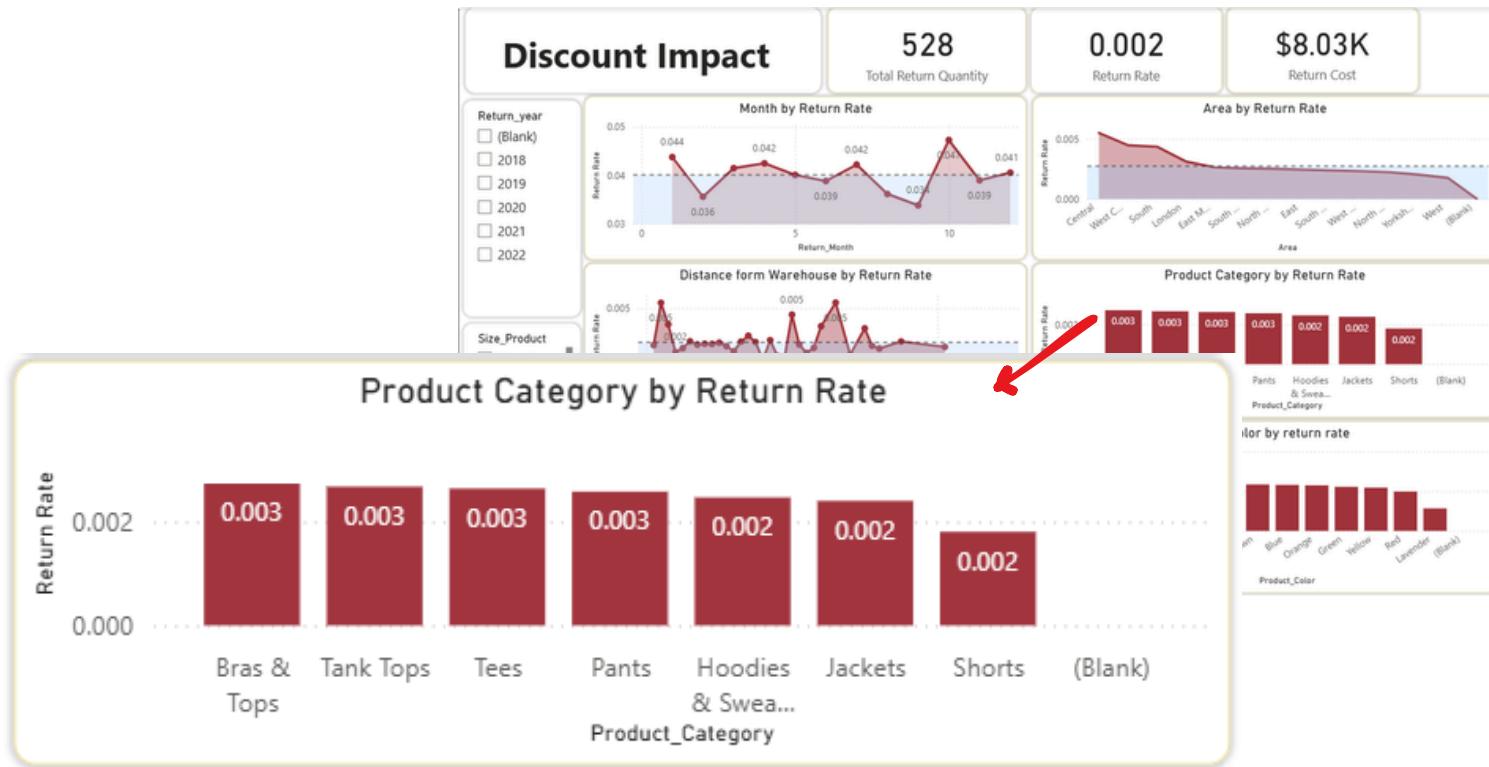
## 5 - Line Chart (Area by Return Rate) :



### Insight 5

"Granular geographic analysis identifies the 'Central' area as the primary profit drain, with a record return rate exceeding 0.005; this pinpoints the root cause behind high regional figures and suggests that profit recovery lies in fixing localized logistics inefficiencies within specific urban hubs."

## 6 - Line Chart (Product Category by Return Rate) :



### Insight 6

"Category analysis identifies 'Bras & Tops, Tank Tops, and Tees' as the highest return drivers at a 0.003 rate; suggesting a gap in 'size guide' accuracy or fitment. Prioritizing these categories is the fastest route to reclaiming the \$8.03K lost revenue and boosting net profit."

## 7 - Line Chart (Distance from Warehouse by Return Rate) :



### Insight 7

"Color analysis identifies Pink and Gray as the highest return drivers, with rates exceeding 0.003; this suggests a potential mismatch between online images and reality. Improving visual accuracy for these specific colors will directly reduce the \$8.03K return cost and protect net margins."

# **Thank You**