

ENIAC Discount Strategy Analysis



by ENIAC Business Intelligence Team

ENIAC – Business Context, Objectives & Data Preparation

ENIAC is a Premium electronics retailer

Discount debate:

- Marketing: grow sales & customers
- Investors: protect revenue & brand image















Project Objectives

- Analyze **products & price distribution**
- Measure **discount impact on sales & revenue**
- Assess **seasonality (Black Friday, Christmas)**
- Identify **data collection improvements**
- Enable **data-driven decision making**

Data Preparation

- **Data cleaned and standardized:** missing values checked, dates & prices fixed, invalid orders removed, completed orders kept, product categories standardized.

Product Categorization

Category	Examples / Products
Desktop & Professional Hardware 	Apple Mac/PC, docking stations
Storage & Memory 	SSDs, HDDs, RAM modules, NAS drivers, servers, memory cards
Smartphone 	Apple iPhone
Laptop 	Apple MacBook
Tablet 	Apple iPad, Graphics tablets
TV_Monitor 	Monitors, TVs, displays
Audio 	Air pods, headphones, speakers, microphones
Wearable 	Smartwatches, fitness trackers, health monitors
Smart Home 	Smart bulbs / locks / ..., IoT sensors, connected home devices
Camera & Drone 	Action cameras, drones, video capture devices
Accessory 	Cables, adapters, cases, keyboards, batteries, protectors, chargers
Networking 	Routers, switches, Wi-Fi extenders, network adapters
Software 	Licenses, apps, software packages
Other 	Warranties, repair/replacement service, other products

Purpose

- Simplify reports
- Compare similar products
- Identify trends and patterns in pricing, discounts, sales.
- Adapt marketing strategies

Approach

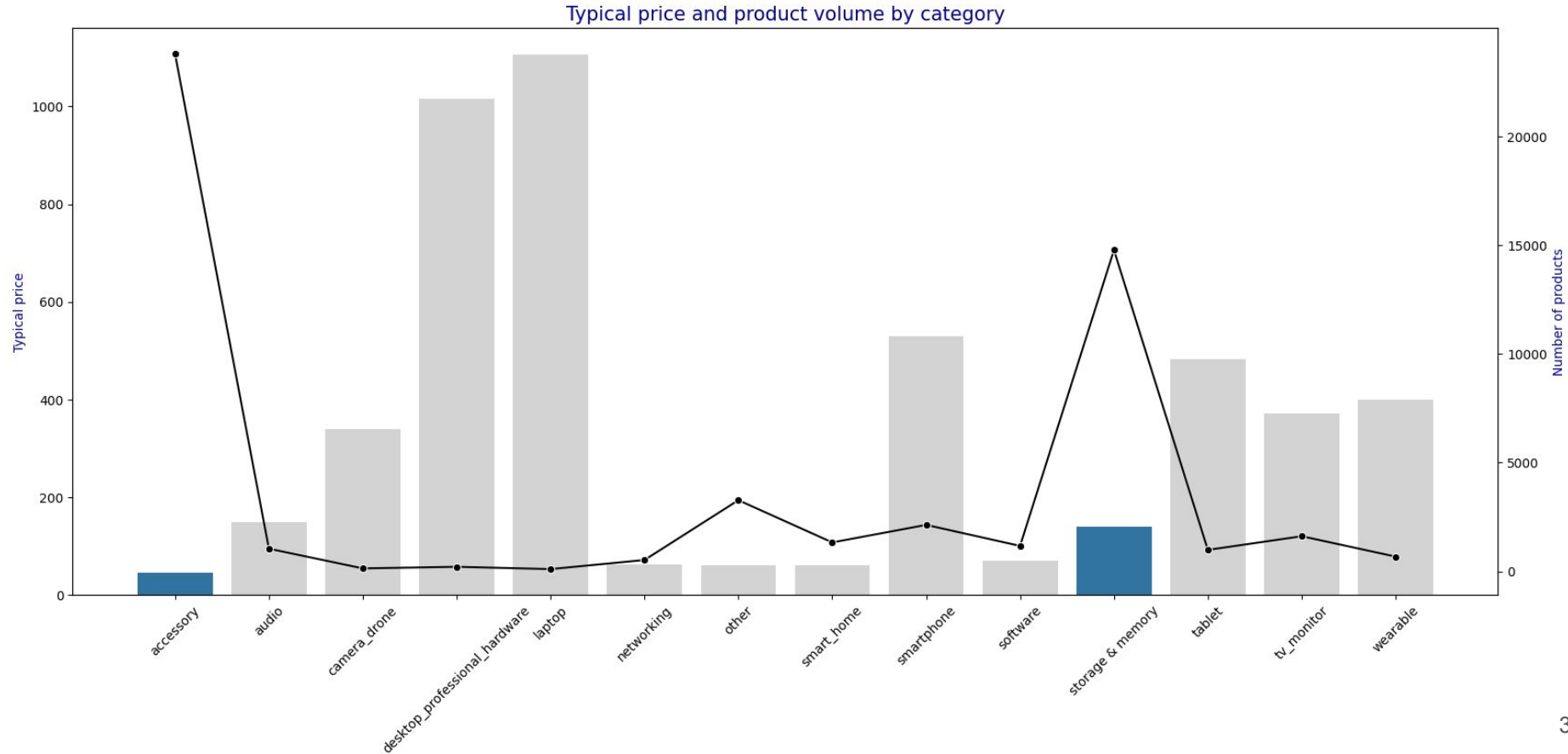
- keywords from product names
- primary function of product

Conclusion

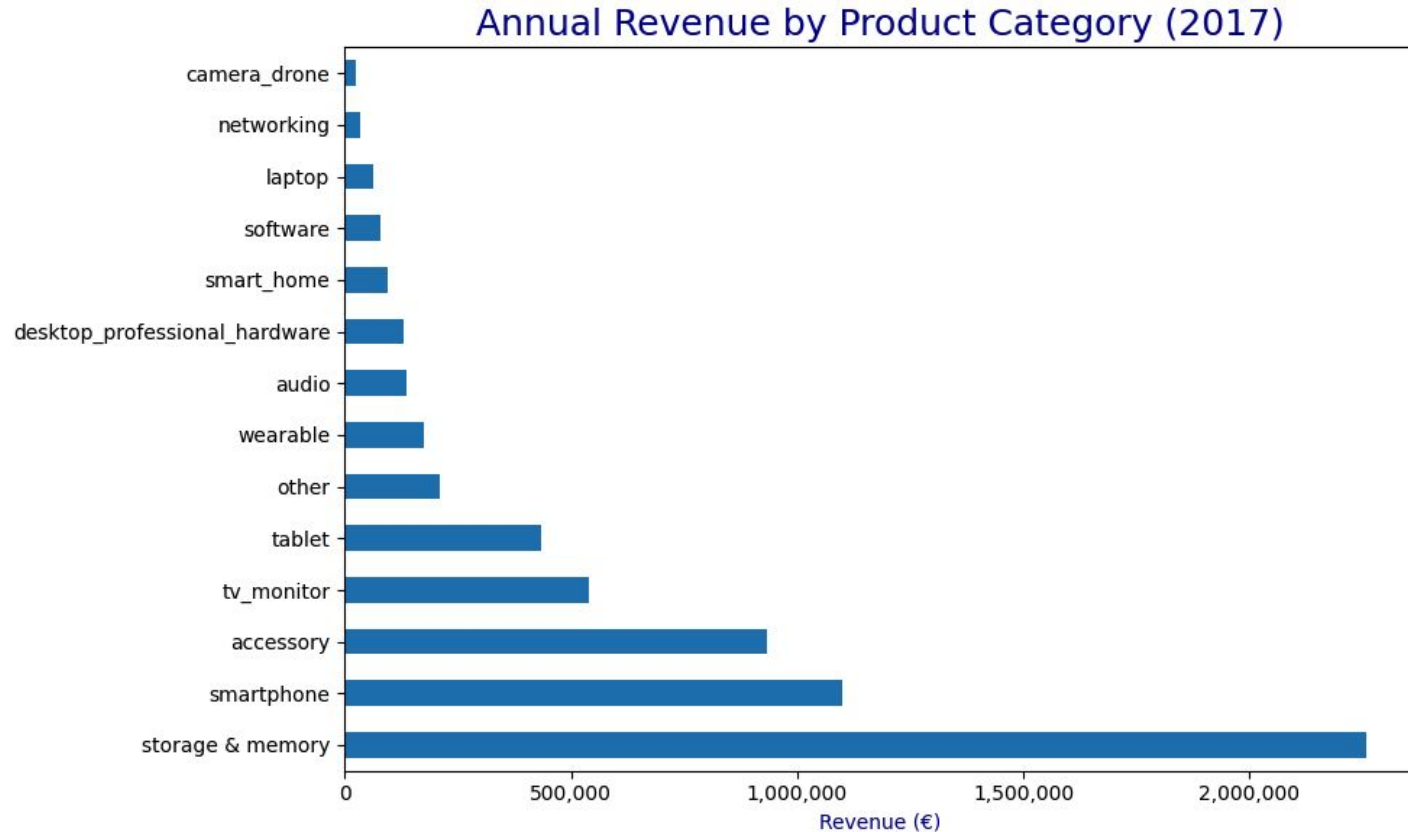
Product categorization makes it easier to answer the key business question:

Are discounts an effective strategy for increasing revenue and customer satisfaction at Eniac?

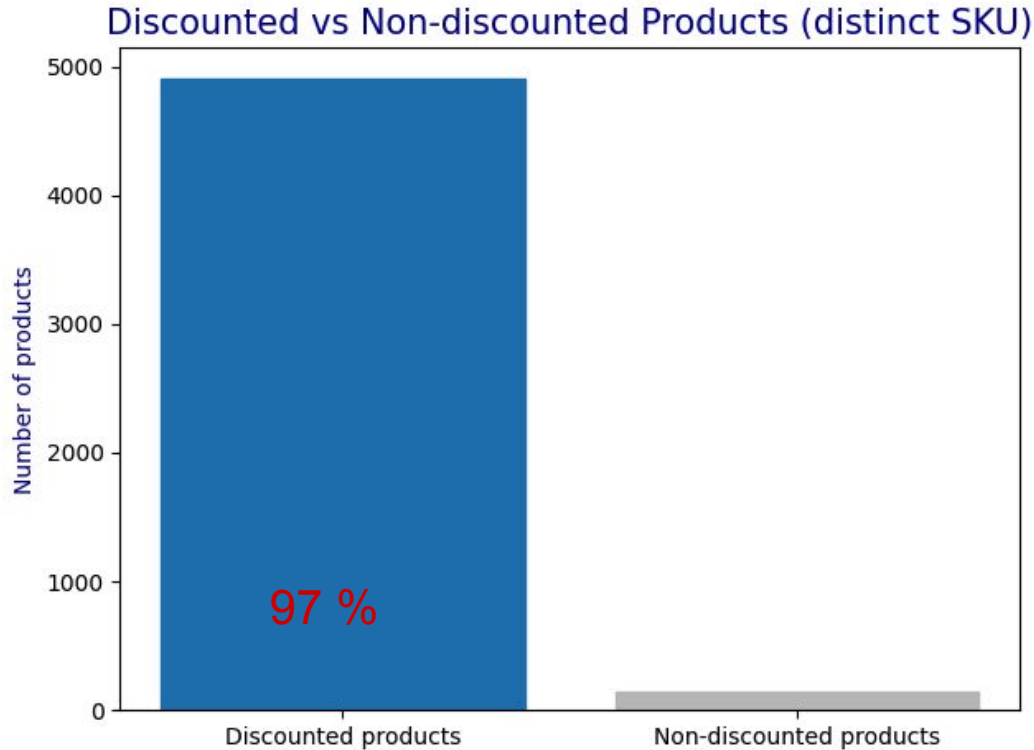
Product volume is concentrated in a few low-price categories, while higher prices are concentrated in more specialized categories.



3 Dominant Product Categories generating the highest revenue



Almost 97% of Eniac's Products Are Sold at a Discounted Price



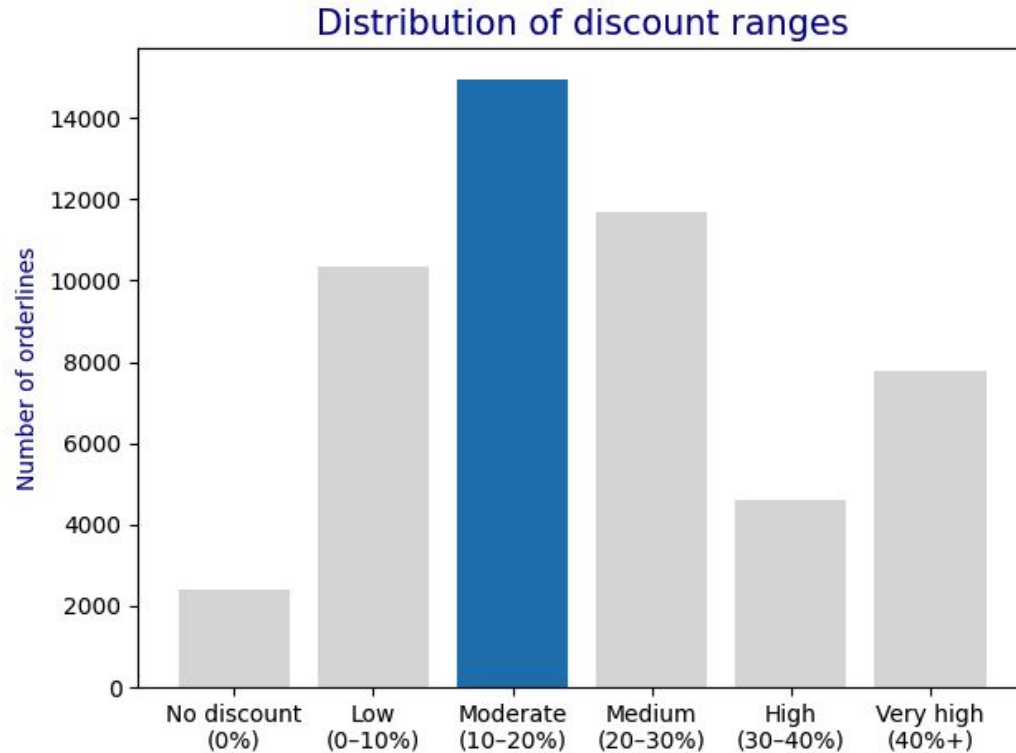
Quantity of Products Sold:

Total products - 5043

Discounted products - 4899

Non discounted products - 144

Most Sales Are Concentrated in the 10–20% Discount Range



Higher Discounts Do Not Increase Revenue and Reduce Value

0–10% discount

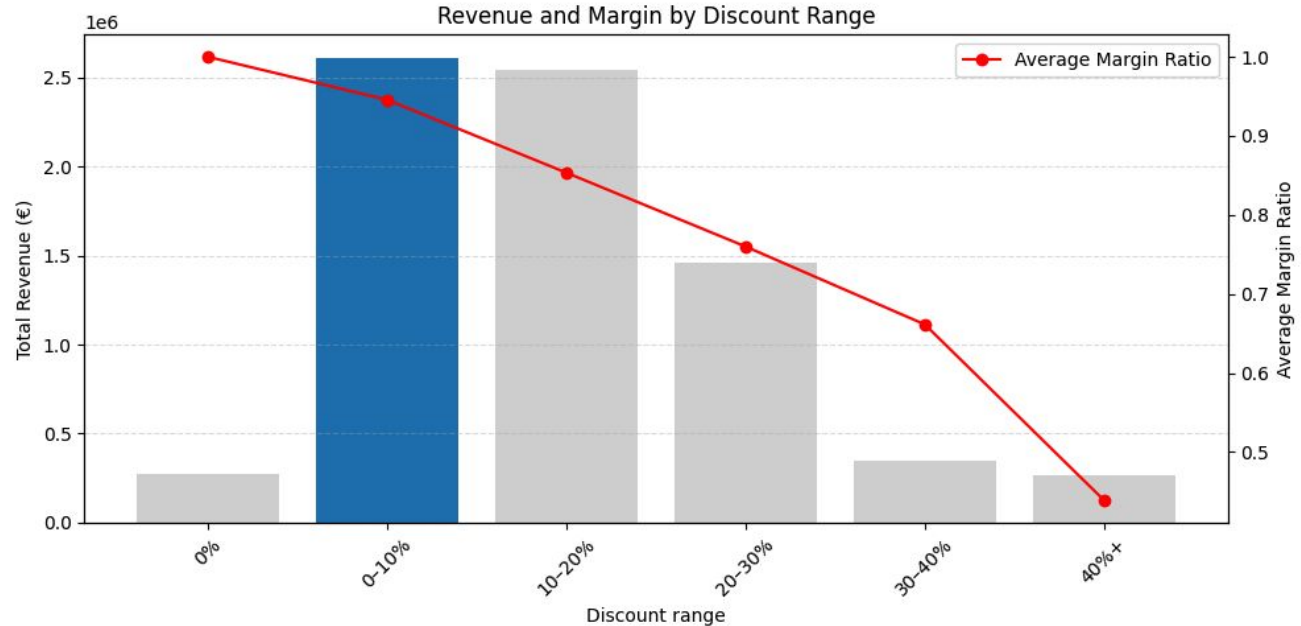
- High revenue despite fewer orders
- ~95% average margin

10–20% discount

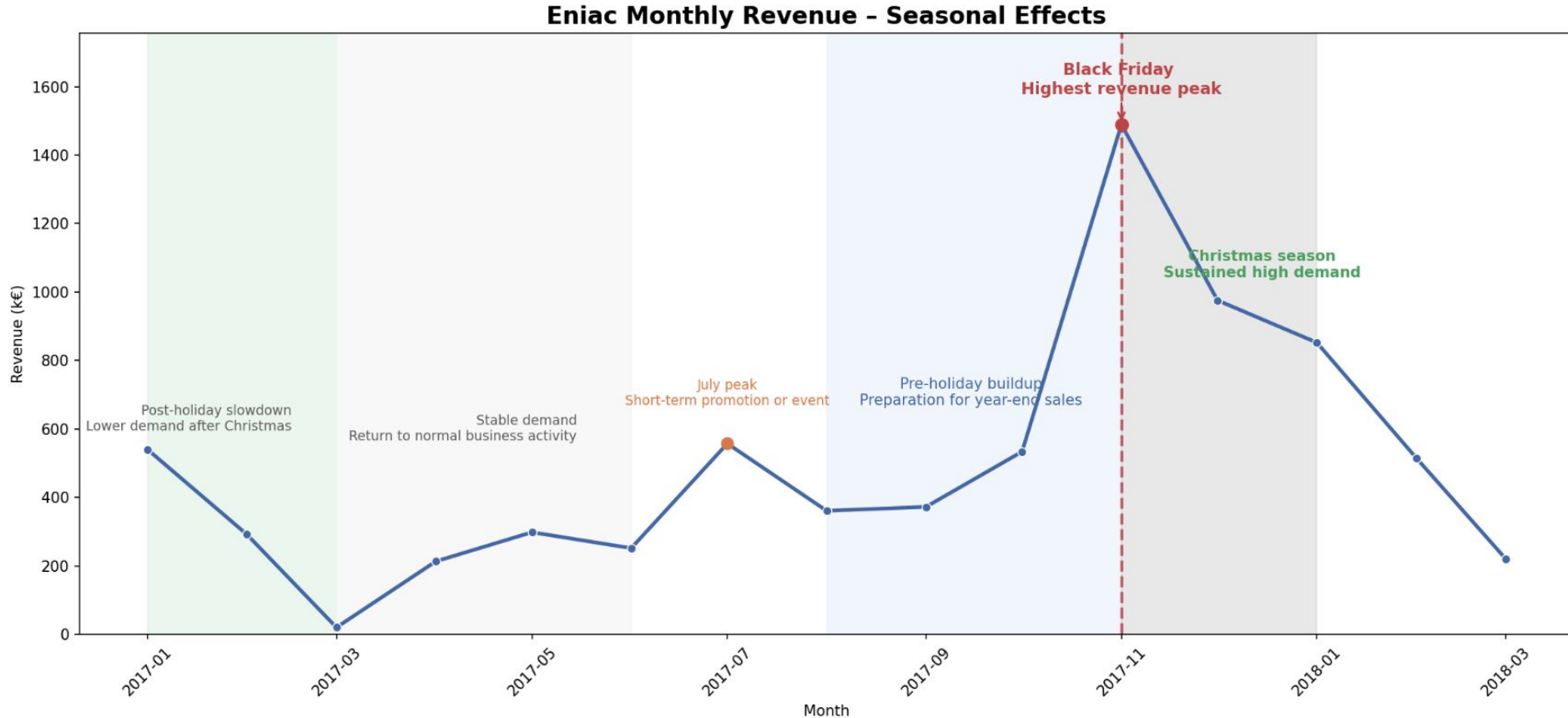
- **More orders, but no revenue uplift** (almost the same as 0–10%)
- **Margin drops to ~85%**

40%+ discount

- ~€0.27M in revenue
- ~44% margin
- very low value per order

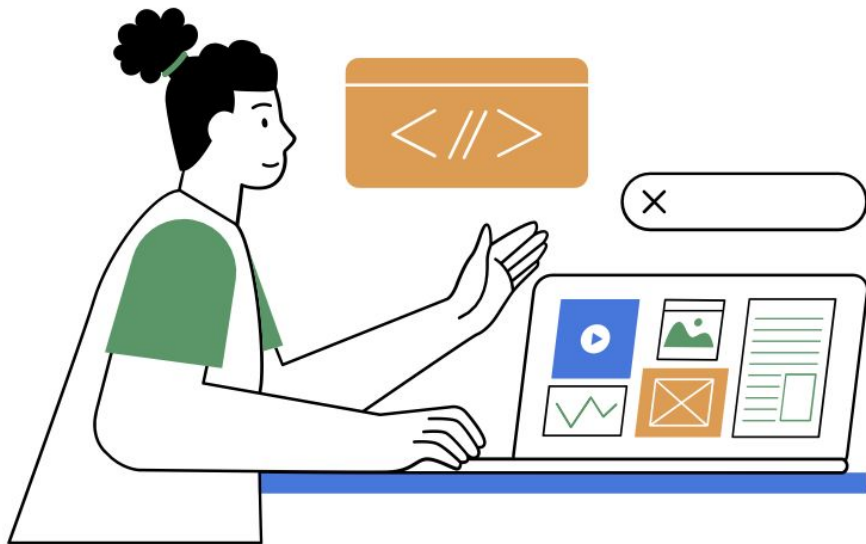


Seasonality and Special Dates Significantly Increase Sales



Data Collection Improvements

“For reliable statistical analysis, we need enforced IDs, mandatory core fields, controlled categories, and validation at data entry. Otherwise results are biased and not reproducible.”



- Standardize product categories at data source
- Store promotion and campaign data (campaign name, type, start and end dates)
- Capture full order lifecycle timestamps (created, paid, shipped, delivered)
- Store validated revenue and margin per order
- Collect customer, country & channel data

Conclusion & Recommendations

Key Facts

- **5,043 products** (distinct SKUs)
- Revenue is highly concentrated in storage & memory and smartphones
- **97%** of products are sold with a discount

Key Insights

- **Orders increase with higher discounts**, but **order value and margins decline**
- **Low discounts (0–10%)** generate the highest and most stable revenue, with strong margins
- Revenue peaks are driven by **Black Friday & Christmas**, not by permanent high discounts

Strategic Recommendations

- Improve data collection
- Use discounts between 0–20% as the default strategy
- Avoid frequent aggressive discounts (20%+)
- Apply strong discounts only through targeted campaigns
- Optimize after-sales services, customer support, and service quality



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