

Automated Retail Analytics

Sample Report — Retail Sales & Customer Analysis

Data Source

E-commerce Sales & Customer Data (2009–2011)

Analyses Included

- ① Data Cleaning & Quality Assurance
- ② Sales Trend Analysis (Monthly / Weekly / YoY)
- ③ Product Performance & Pareto Analysis
- ④ Customer Segmentation (RFM)

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[Available for freelance data analysis engagements](#)

Background & Objective

An e-commerce retailer held two years of sales and customer data but lacked the tools to turn it into decisions. This report structures the data across three lenses — revenue trends, product performance, and customer behaviour — and surfaces next actions.

£17.7M

Total Revenue

2009–2011

5,878

Customers Analysed

After data cleaning

Top 20%

of products drive 80%

of revenue (Pareto)

Key Findings (3)

1

Revenue shows strong November seasonality, consistent across both years.
→ Stock and staffing must be prepared by mid-September at the latest.

2

The top 20% of products generate the majority of revenue (Pareto principle).
→ Preventing stockouts on hero SKUs is the highest-leverage inventory action.

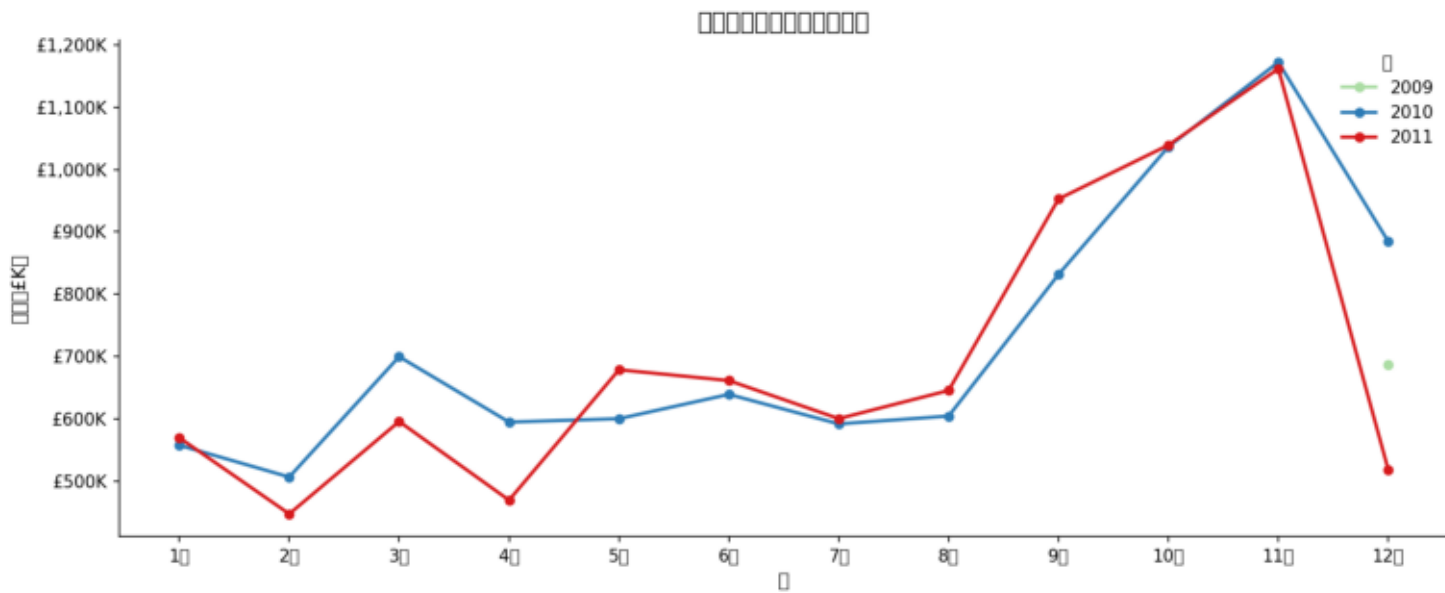
3

Champion customers are a small share of the base but contribute a disproportionate share of revenue. Retaining them delivers the best return on any retention spend.

Dataset Snapshot

Analysis Period	December 2009 – December 2011
Transaction rows	~805,000 (after cleaning)
Unique customers	5,878
Unique products	5,283 SKUs
Markets	UK-centric · 40+ countries

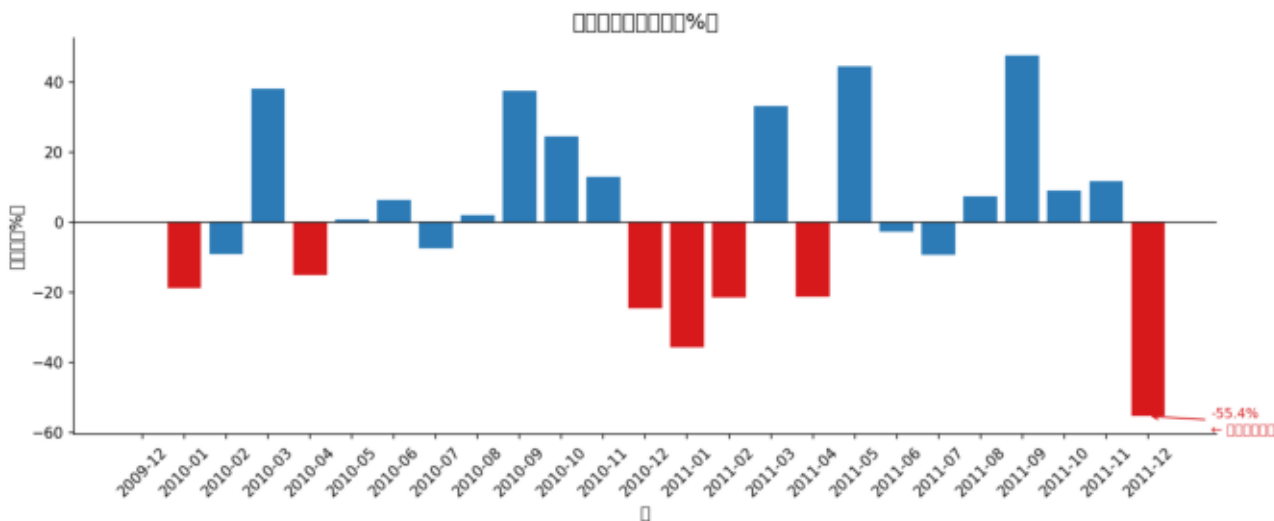
Monthly Revenue — Year-on-Year Comparison



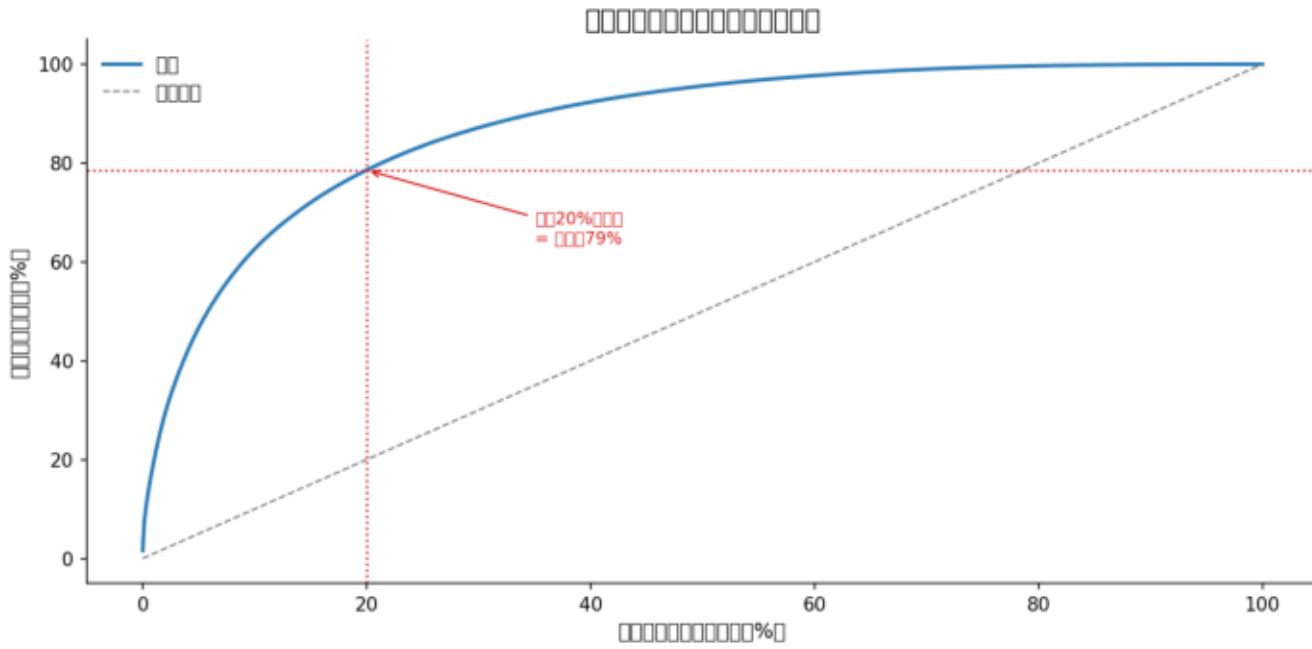
Analysis Commentary

- ▶ A November revenue spike is confirmed for two consecutive years, driven by holiday-season demand.
- ▶ Overall revenue grew year-on-year in 2011, confirming the underlying business growth trajectory.
- Inventory and staffing prep must begin by mid-September at the latest. Acting early on holiday demand is the single biggest revenue lever.

Month-over-Month Revenue Change (%)



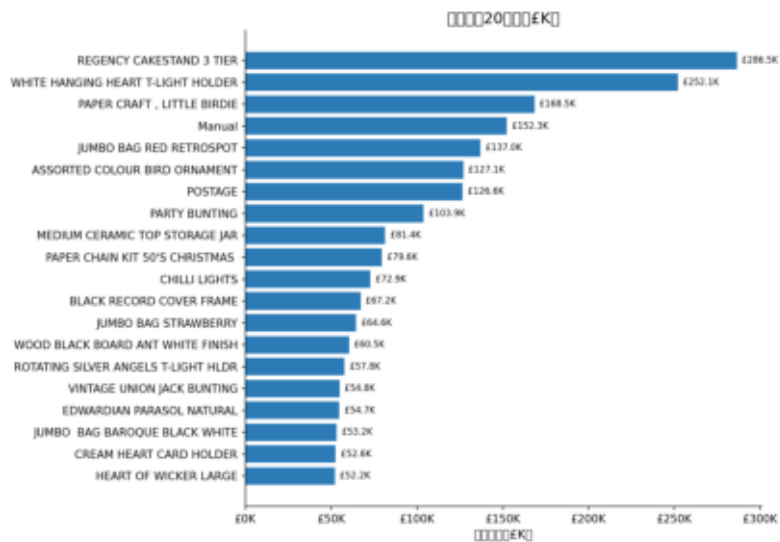
Pareto Analysis — Revenue Concentration



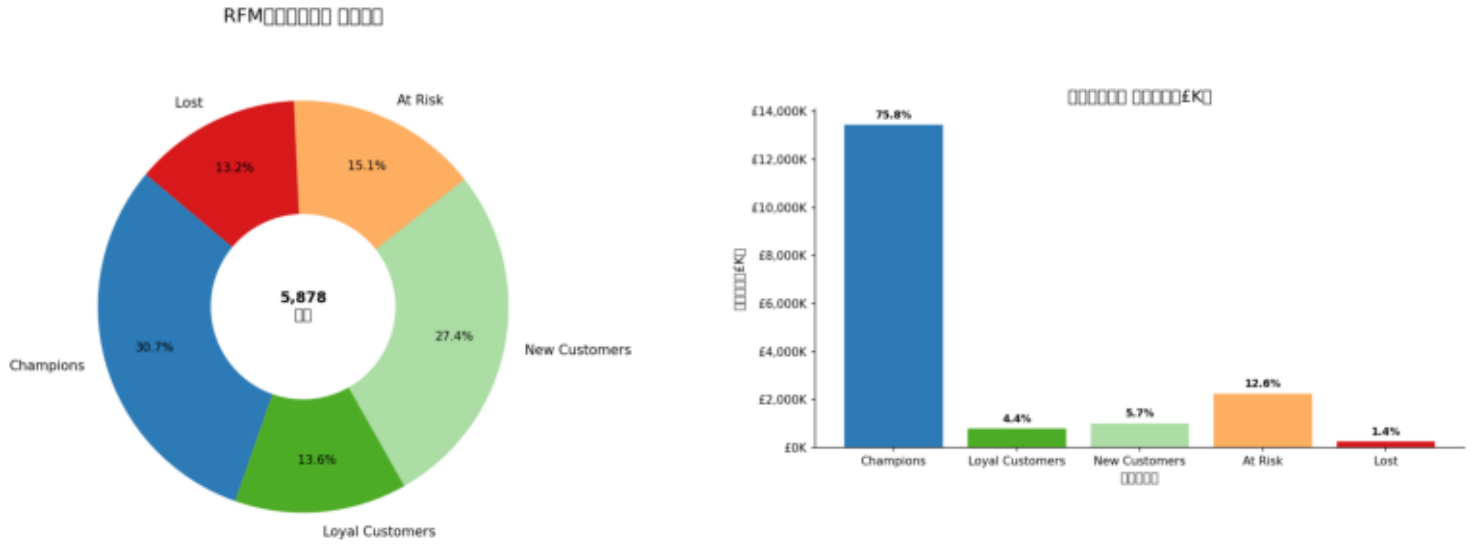
Analysis Commentary

- ▶ The Pareto principle holds: the top 20% of SKUs account for the large majority of revenue.
- ▶ High-order-frequency products with low revenue share are candidates for a modest price increase.
- Zero stockouts on the top 10 SKUs is the single most impactful supply-chain target — these items alone represent roughly 40% of total revenue.

Top 20 Products by Revenue



Segment Distribution — Customer Count & Revenue Share



Recommended Actions by Segment

Champions Recent · Frequent · High-value VIP perks, early access to new products

Loyal Customers Repeat buyers, high engagement Loyalty programme, subscription discounts

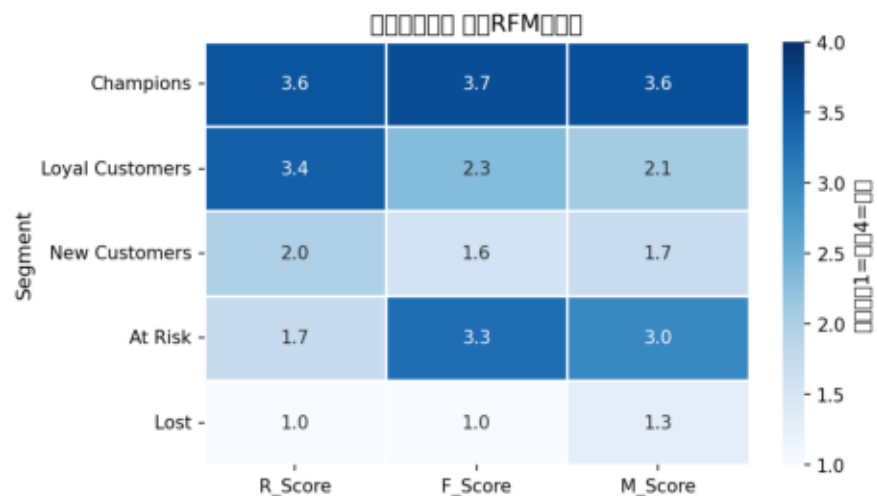
At Risk Past high-value, recently quiet Limited-time coupon within 30 days

New Customers First or second purchase 7-day post-purchase follow-up email

Lost Long-lapsed, no recent activity Win-back campaign or retire from list

→ Champions are ~31% of customers but drive ~76% of revenue. Protecting this group has a higher ROI than acquiring new customers.

RFM Score Heatmap by Segment



Average R (Recency), F (Frequency), and M (Monetary) scores per segment. Champions score high across all three dimensions; Lost customers score low across all three.

Seasonal Decomposition (Trend · Seasonality · Residual)

Revenue is decomposed into long-term trend, seasonal pattern, and residual noise. The upward trend persists after removing seasonality — confirming genuine underlying growth.



Methodology

This report was produced using industry-standard analytical methods. Results are presented in plain language — no technical background required.

■ Data Cleaning

Removed cancellations, missing customer IDs, and invalid prices. Only reliable records enter the analysis.

■ Trend Analysis

Monthly and weekly aggregation with year-on-year comparison. Seasonal decomposition isolates structural growth.

■ Pareto Analysis

Visualises revenue concentration. Identifies which products and customers deserve the most focus.

■ RFM Segmentation

Scores customers on Recency, Frequency, and Monetary value, then classifies them into 5 actionable groups.

Enquiries & Engagements

[Active data scientist. Available for freelance analysis projects.](#)

- Send your Excel or CSV — that's all we need to get started
- Delivered as a branded PDF or Excel workbook
- Plain-language commentary with every chart
- Happy to scope open-ended or unclear briefs

[Get in touch — first conversation is free.](#)

This is a sample report. All analyses are customised to your actual business data and objectives.