

Online Retail Analysis

Case Study

Léa H.
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Summary Analysis

Summary Analysis

A clear trend of strong yearly growth, concentrated in UK, across a wide set of customers and products, with a refund rate below average for the industry.

Monthly Net Sales Trends from 1st Dec 2010 to 30th Nov 2011



Total Net Sales*: £7.9m over 12 months from 1st December 2010 to 30th November 2011.

Average Order Value: £465 per order.

UK sales: UK net sales were £6.5m (~81% of total), with remainder of sales mainly from Europe.

Best-selling product (in terms of quantity sold): World War 2 Gliders (52k units sold)

Best-selling product (in terms of net sales): Regency 3 tier cake stand (£128k sold)

Returns rate: ~4% average, compared to 17.6%** industry average for ecommerce.

* Total Net Sales value is net of discounts, refunds and includes postage.

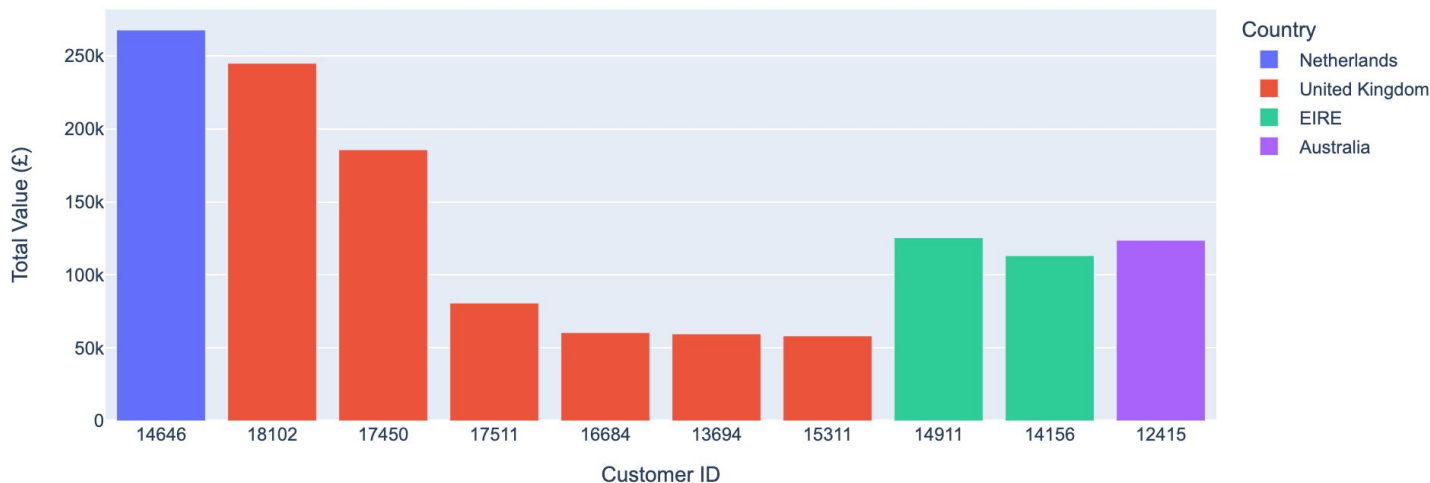
** [Ecommerce Returns and Refunds: Best Practices for Success in 2024 \(digitalmindsbpo.com\)](http://digitalmindsbpo.com)

Detailed Analysis

Customer Analysis

Wide range of customers (4,300+), but the top 10 customers generate ~17% of total net sales, so the spend is concentrated heavily in the top 10 customers.

Top 10 Customers by Total £ Net Sales



Top 10 customers: Top 10 customers are only ~0.2% of total customers, but they generate ~**17%** of total net sales. So, there is a concentrated customer base.

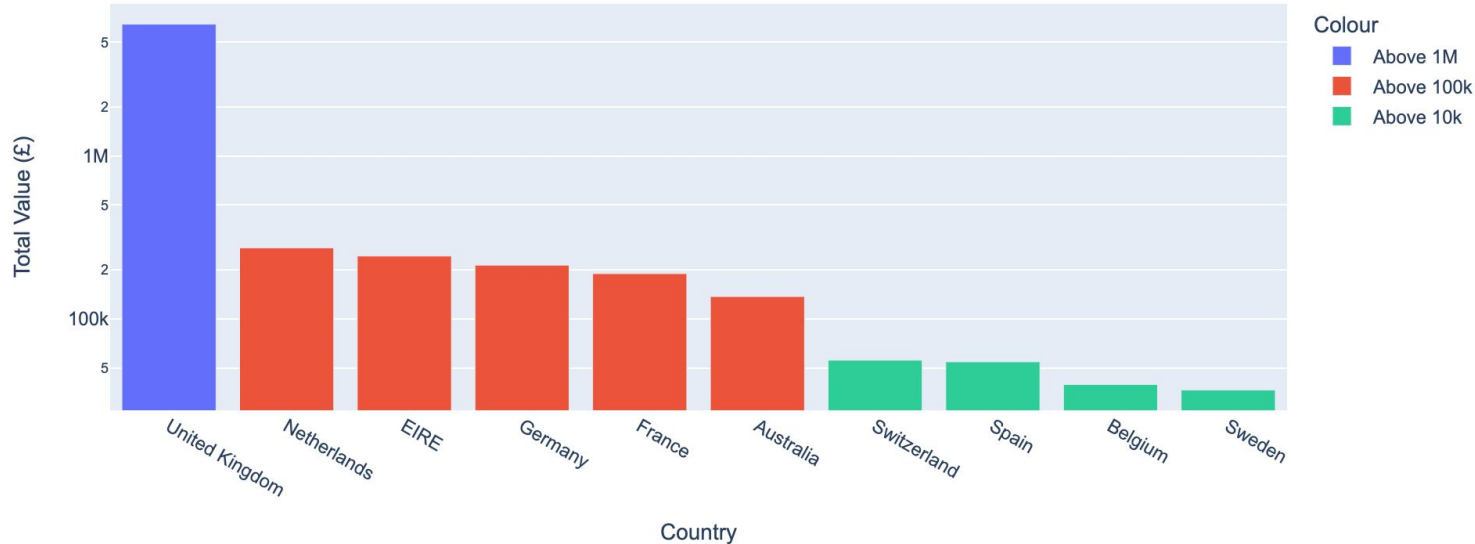
Suggestions:

Keep top customers happy, e.g. with special discounts for top customers and premium customer service.

Country Analysis

Sales are concentrated in the UK, but there are also important markets in Europe and Australia.

Top 10 Countries by Total Value



UK Market: UK market generates ~81% of total net sales, showing a clear concentration in the UK market.

Suggestions:

Expansion: Expand further into the Europe and Australia markets, e.g. advertise for European and Australian bank holidays.

UK Market: continue focus on UK sales, e.g. discounts for top UK customers.

Product Analysis

Large number of products (3,800+), but top 10 products generated ~8% of total net sales.

| Description | Net Sales (£) | Percentage of Total Net Sales (%) |
|------------------------------------|---------------|-----------------------------------|
| REGENCY CAKESTAND 3 TIER | 128139 | 1.61 |
| WHITE HANGING HEART T-LIGHT HOLDER | 91775 | 1.16 |
| JUMBO BAG RED RETROSPOT | 81067 | 1.02 |
| PARTY BUNTING | 67163 | 0.85 |
| ASSORTED COLOUR BIRD ORNAMENT | 54332 | 0.68 |
| RABBIT NIGHT LIGHT | 44193 | 0.56 |
| CHILLI LIGHTS | 43805 | 0.55 |
| PAPER CHAIN KIT 50'S CHRISTMAS | 37570 | 0.47 |
| JUMBO BAG PINK POLKADOT | 35635 | 0.45 |
| SPOTTY BUNTING | 34413 | 0.43 |
| Total | 618092 | 7.78 |

Top 10 products: Top 10 products generate ~8% of total net sales

Top Selling Product: Regency Cake Stand generates the highest net sales.

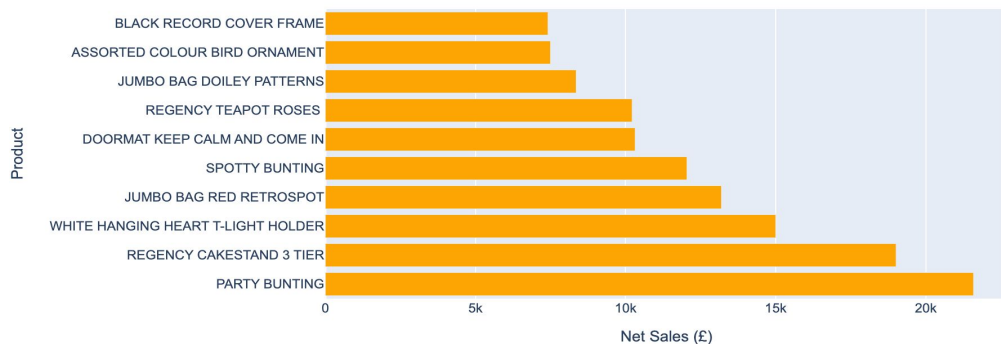
Suggestions:

Add more variations of the cake stand as it's the most popular product in terms of net sales, e.g. a Christmas cake stand.

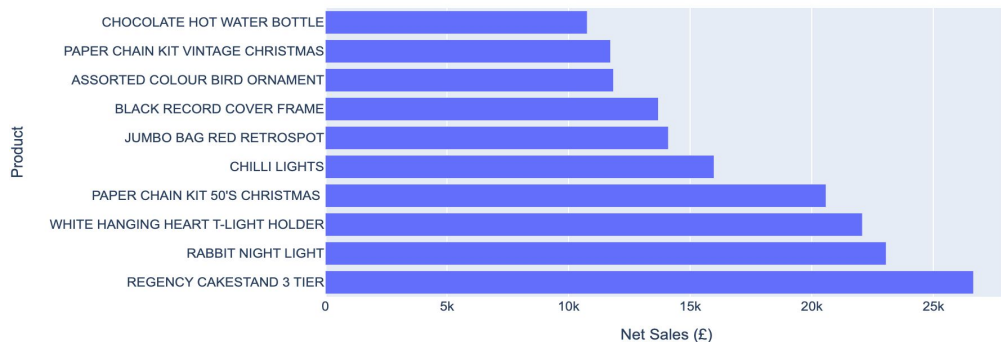
Summer vs Winter Product Analysis

The types of products sold are different in summer and winter, but the Regency Cake Stand generates high sales throughout the year.

Top 10 Products by Net Sales in May and June 2011



Top 10 Products by Net Sales in December 2010 and November 2011



Summer vs Winter:

Party and home products generate the most sales in summer, and home and Christmas products generate the most sales in winter.

Suggestions:

Focus on selling a lot of seasonal products during summer and Christmas, by making sure there is enough stock in these periods. Then, use discounts to sell unsold seasonal products.

Refunds Analysis

The average refund rate of 4% of gross sales is lower than industry average of 17.6%.

Refund Rate as a % of Total Gross Sales



Suggestions:

Minimise refunds:

Include accurate product descriptions on website and use high quality images of products.

Investigate refunds:

Investigate months which have high refund rates, (e.g. April 2011) to find the cause, in case it's related to a specific product.

* [Ecommerce Returns and Refunds: Best Practices for Success in 2024 \(digitalmindsbpo.com\)](http://digitalmindsbpo.com)

Appendix

Data Cleaning

1. **Removed December 2011 rows** - Test data was up to 9th of December 2011, so if we included December 2011 as a month, it would make the results incorrect. Also, it's easier to analyse 12 months.
2. **Removed duplicate rows** - Removed rows in which all values across all columns are duplicated (because they are considered to be duplicates).
3. **Removed blank Customer ID rows** - Removed rows with Customer ID = blank, because we focused a part of our analysis on customer behaviour.
4. **Removed £0 Unit Price rows** - Removed rows with Unit Price = £0, because these appear to be incorrect as they don't generate order value, and so they would impact the calculation of Average Order Value.
5. **Outliers** - Removed outliers which exceed the typical range of values in our dataset and likely don't reflect normal transactions and their total value is zero (they were probably refunded to the customers or the transactions were reversed).

Thank you
