

Storytelling With Data

The following slides contain three questions and graphical answers on an ecommerce data set from an actual UK retailer. The data is a sample set derived from Kaggle:

"This is a transnational data set which contains all the transactions occurring between 01/12/2010 and 09/12/2011 for a UK-based and registered non-store online retail. The company mainly sells unique all-occasion gifts. Many customers of the company are wholesalers."

Kaggle: <https://www.kaggle.com/carrie1/ecommerce-data/home>

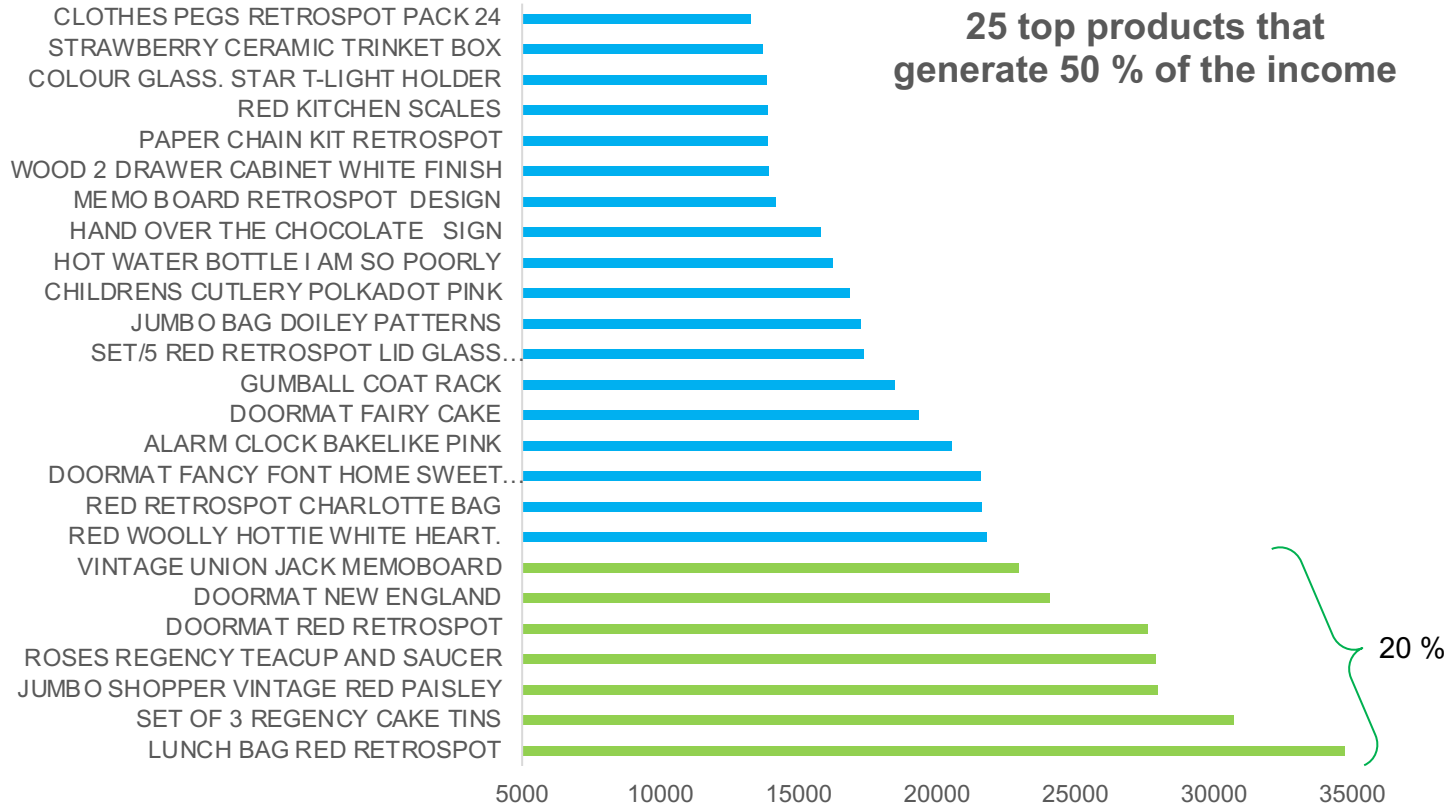
Udacity Nanodegree, Marketing Analyst: <https://www.udacity.com/course/marketing-analytics-nanodegree--nd023>

Data cleaning

To arrive at a clean and consistent data set, I have:

- removed 453 duplicate entries, which left 49629 unique entries,
- changed data types to appropriate data types,
- split the datetime into two separate columns, i.e. InvoiceDate and InvoiceTime,
- added InvoiceMonth and Income columns and
- replaced country names: EIRE -> Ireland, European Community -> EU, United Arab Emirates -> UAE

Which products generate the highest incomes?

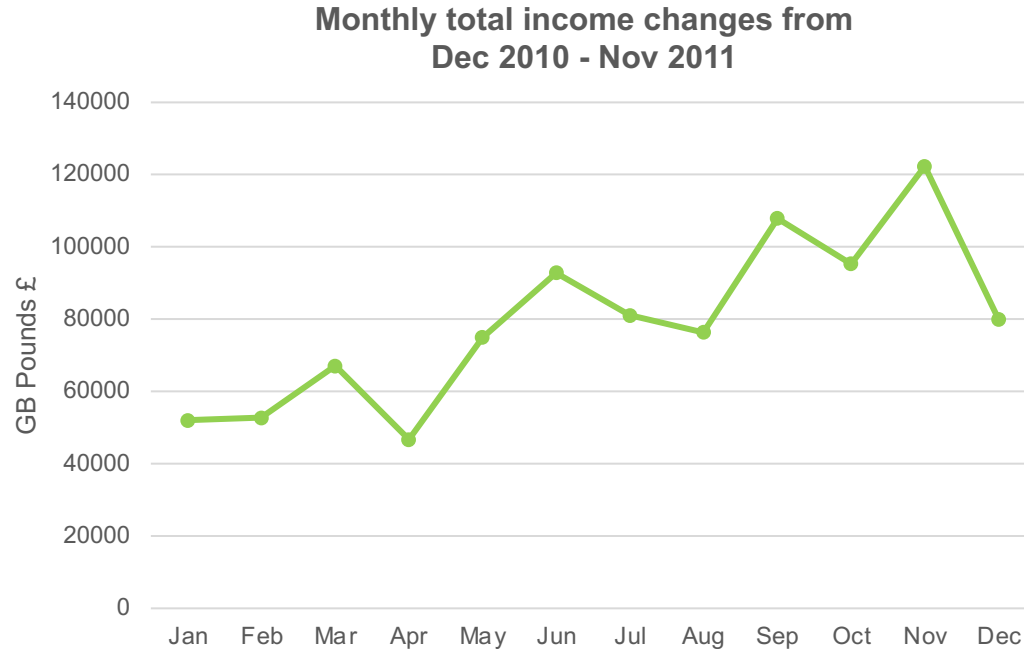


The lunch – bag red retrospot is the most successful item sold. 18,658 lunch bags were sold in all, generating £34,718 income.

The top 7 products generate together 20 % of the overall income.

Marketing efforts should be focused here and variations of these products may bring further income.

What months generate the highest and lowest income?



Monthly income is the highest in **November**. This can be explained by the pre-Christmas sales.

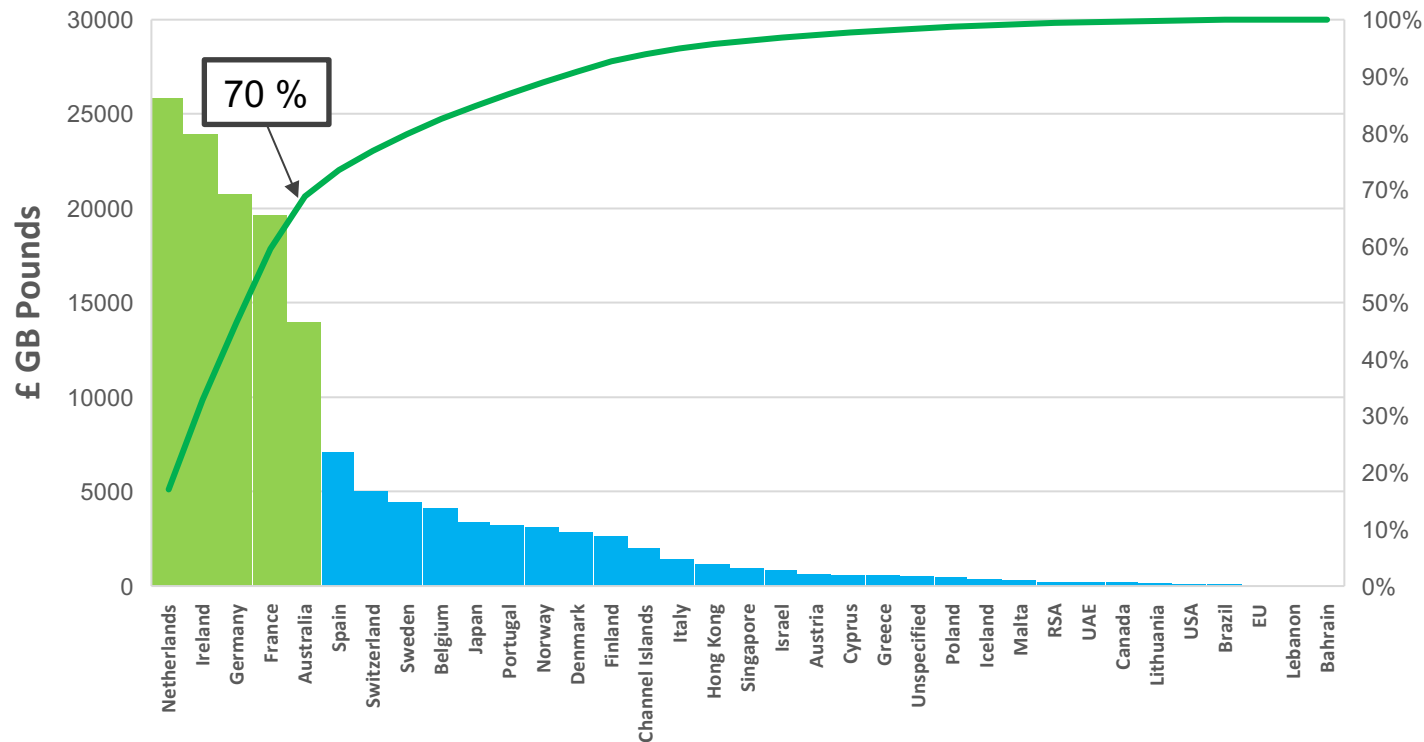
The month with the lowest total income is **April**.

Marketing spend is necessary in Nov and Apr. In November to increase income even further due the large potential of sales before Christmas.

In April, marketing should look for a way to tap into the Easter holidays to increase the monthly income.

Where are the biggest markets outside the UK ?

Biggest Markets outside the UK in Volume and Percentage



The five largest markets outside the UK were: **Netherlands, Ireland, Germany, France and Australia**. Together they make up **70 %** of the overall income from outside the UK.

In GB Pounds £ the income from the Top 5 countries is: **£104,171**. This is approx. a ninth of the UK income.

Marketing efforts outside the UK will be most effective if focused on the five identified countries.