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:
- 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?

**25 top products that generate 50 % of the income**
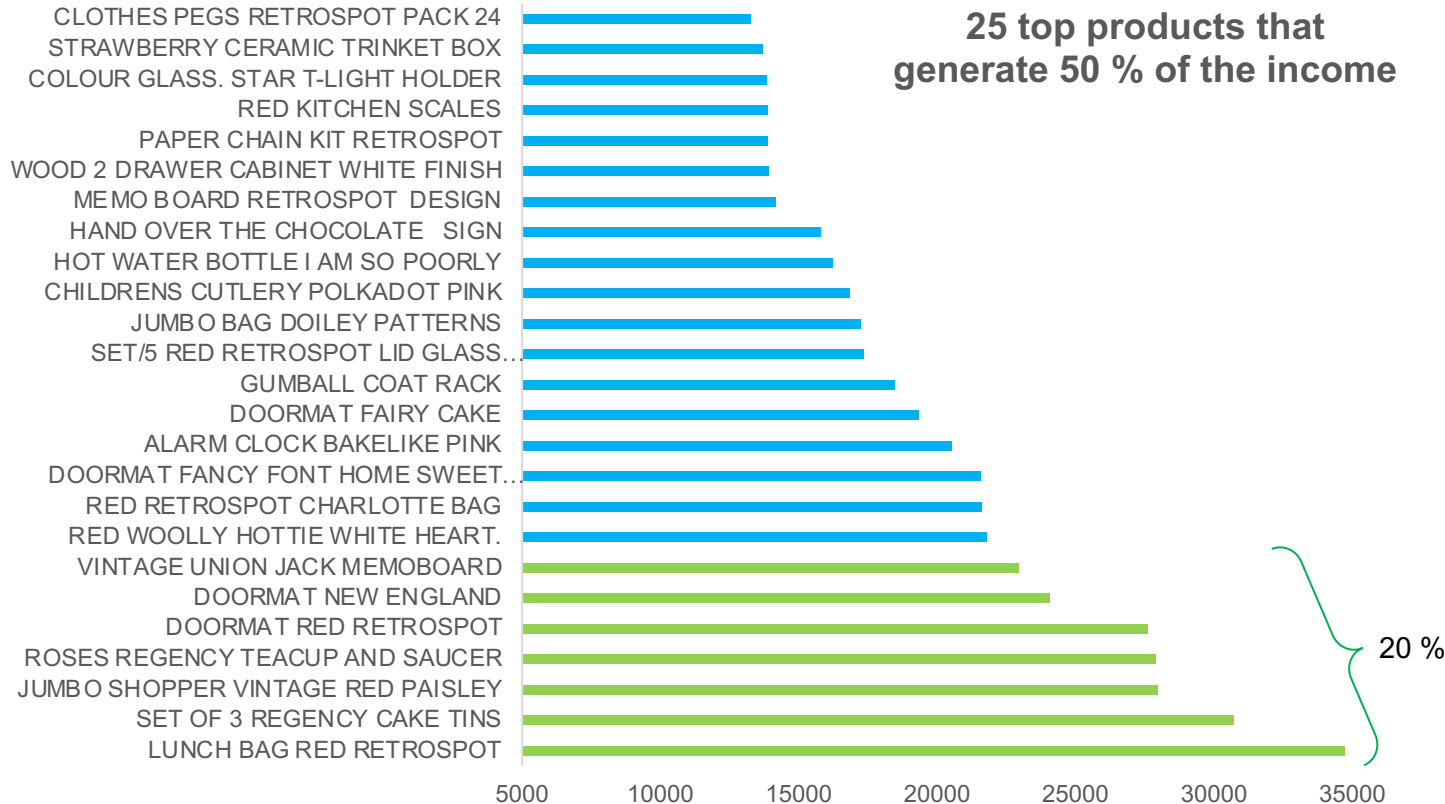
The **lunch – bag red retrospot** is the most successful item sold. 18,779 lunch bags were sold in all, generating £34,897.31 income.

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 total income changes from Dec 2010 - Nov 2011**
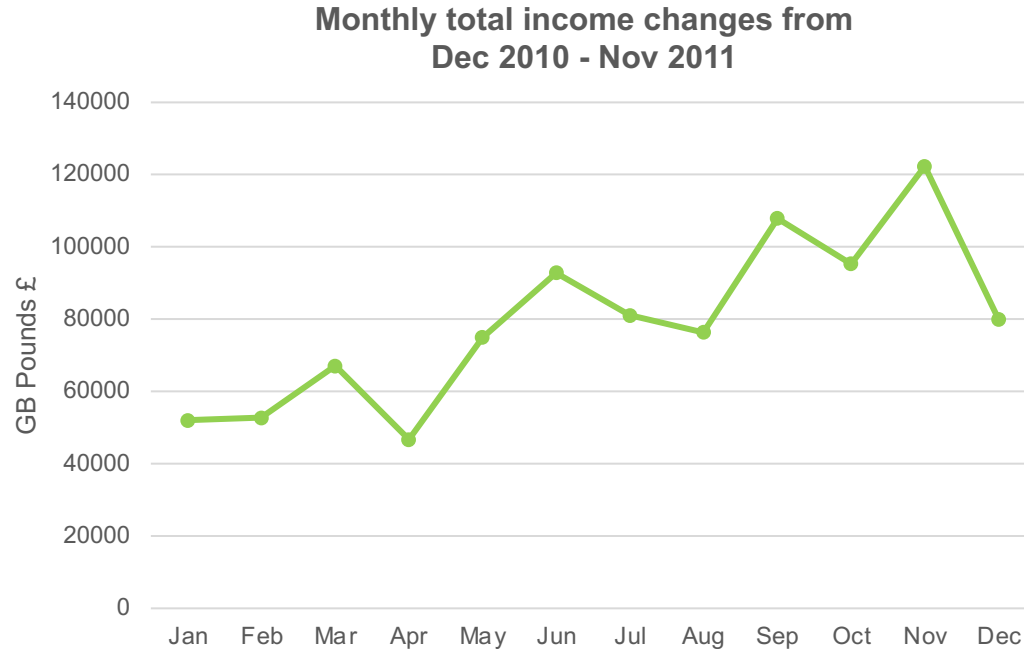
Monthly income is the highest in **November.** This can be explained by the pre-Christmas sales.

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 (2011)
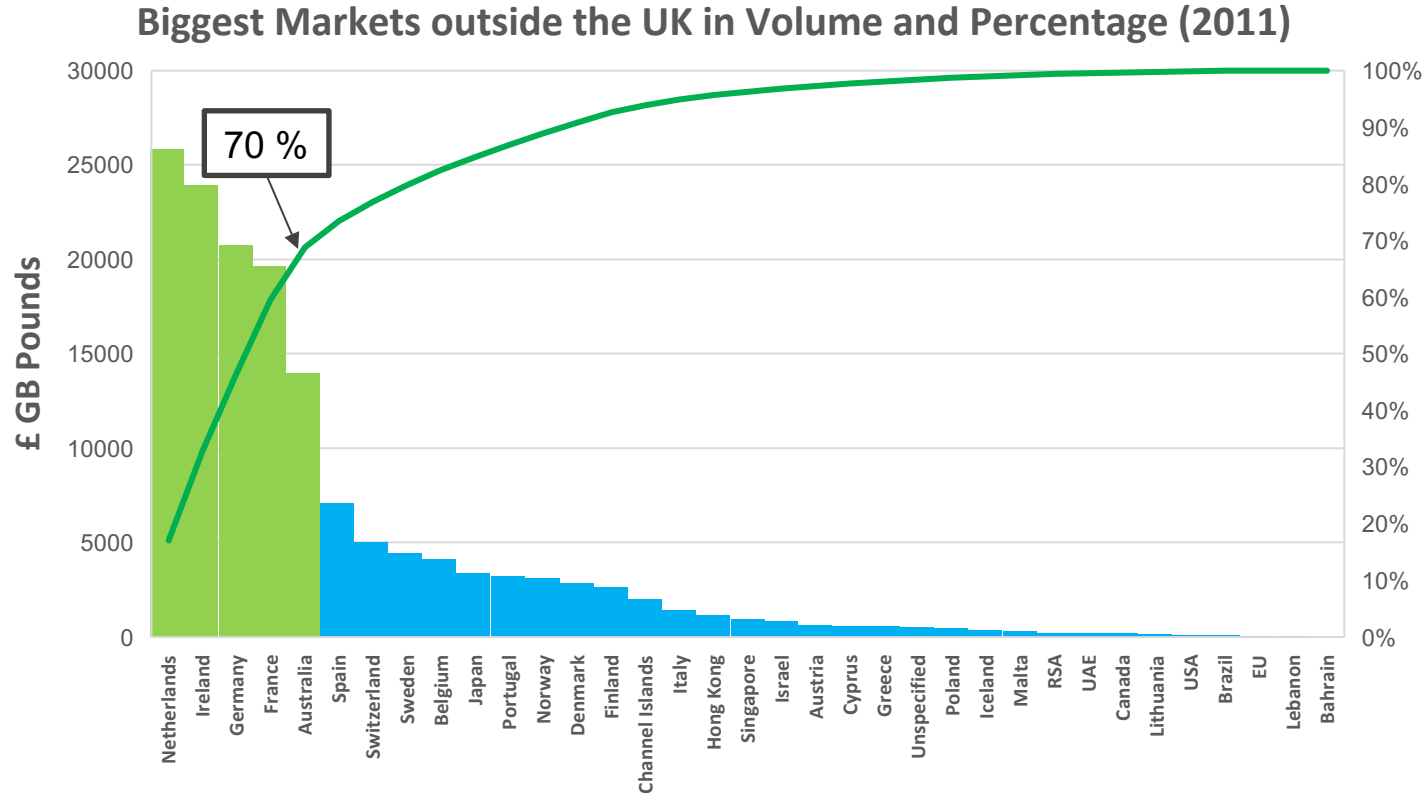
The five largest markets outside the UK in 2011 were: **Netherlands, Ireland, Germany, France and Australia.** Together they make up **70 %** of the overall income from outside the UK.

In GB Pounds £ the income from the Top 5 countries is: **£100,503.19**. 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.