



Amazon Sales Data Analysis



Amazon is one of the leading E-commerce platform where users can buy millions of products from a lot of categories.

Objectives

- To calculate total sales, total profit, average profit margin and average unit price
- To find which order priority gave highest sales
- To find which is the bestseller Item type
- To find which mode of channel generated maximum sales
- To find yearly total sales
- To find total sales and total profit by region
- To find the number of units sold of a particular item type

The Process

- Data Collection
- Data Cleaning
- Data Analysis
- Insights
- Summary

Data Collection

The Data has been collected in the form of a CSV file named "**Amazon Sales Data.csv**".

The CSV file has the data of sales of products during the timespan of **2010** and **2017**.

Data Cleaning

There were no Null values or blank fields

Some values in '**Order Date**' and '**Ship Date**' columns are in String datatype. So we converted them to **datetime** datatype using **Python**

Most of the values in '**Total Revenue**', '**Total Cost**' and '**Total Profit**' columns are written with two decimal places, so we make sure that each value in these columns have **two decimal places** by using **Excel**

Data Analysis

137.35M

Total Sales

44.17M

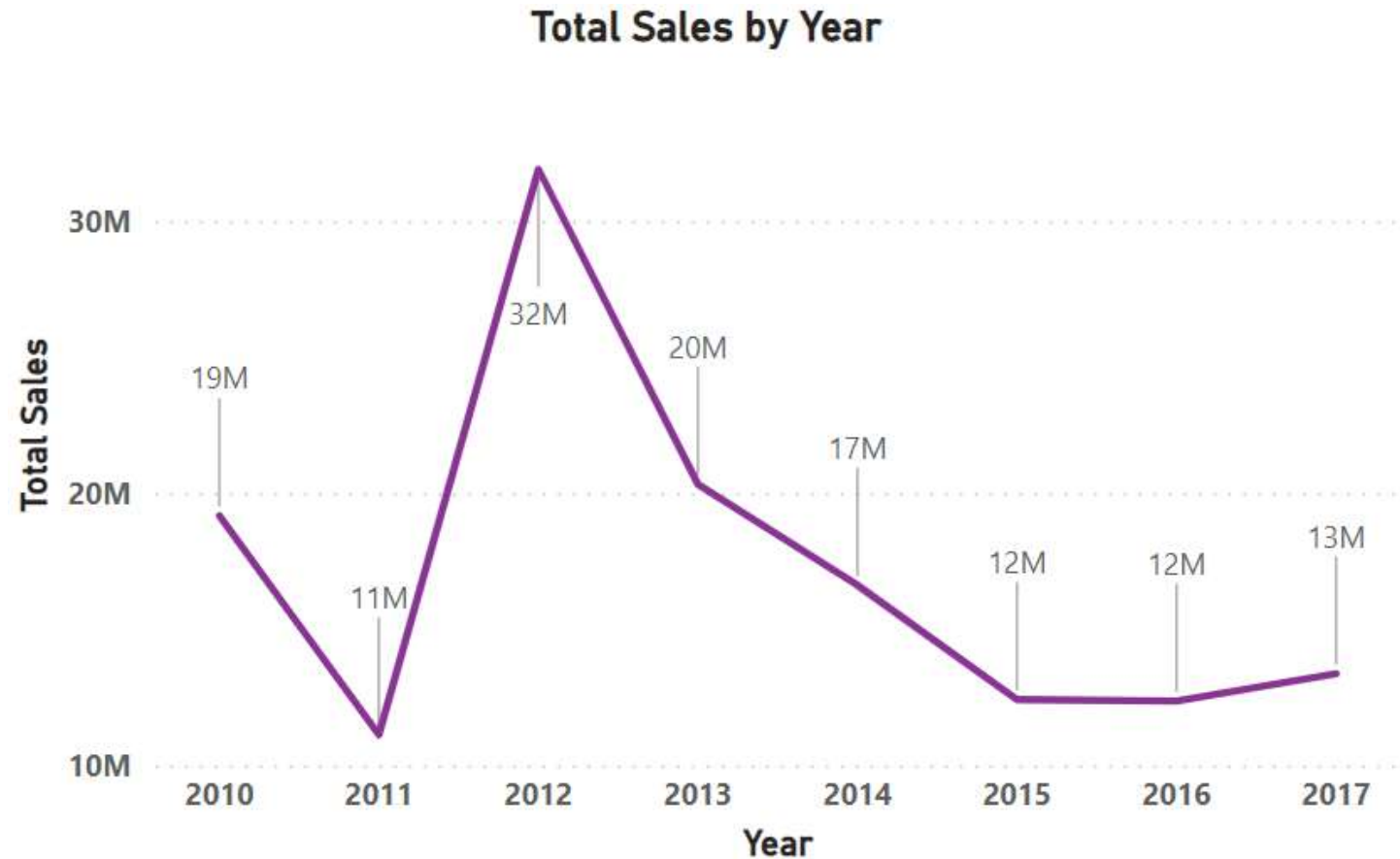
Total Profit

32.16

Avg Profit Margin

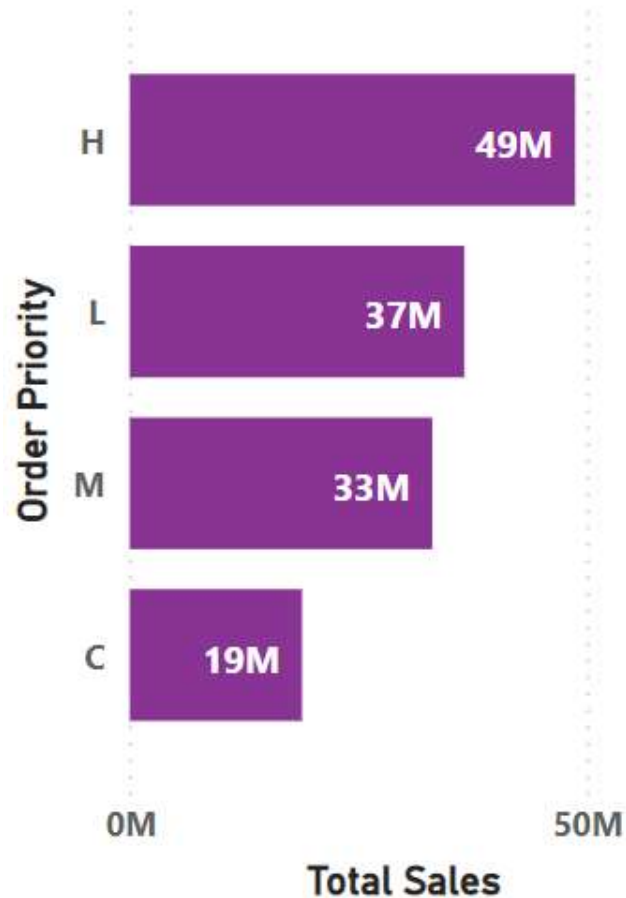
276.76

Avg Unit Price

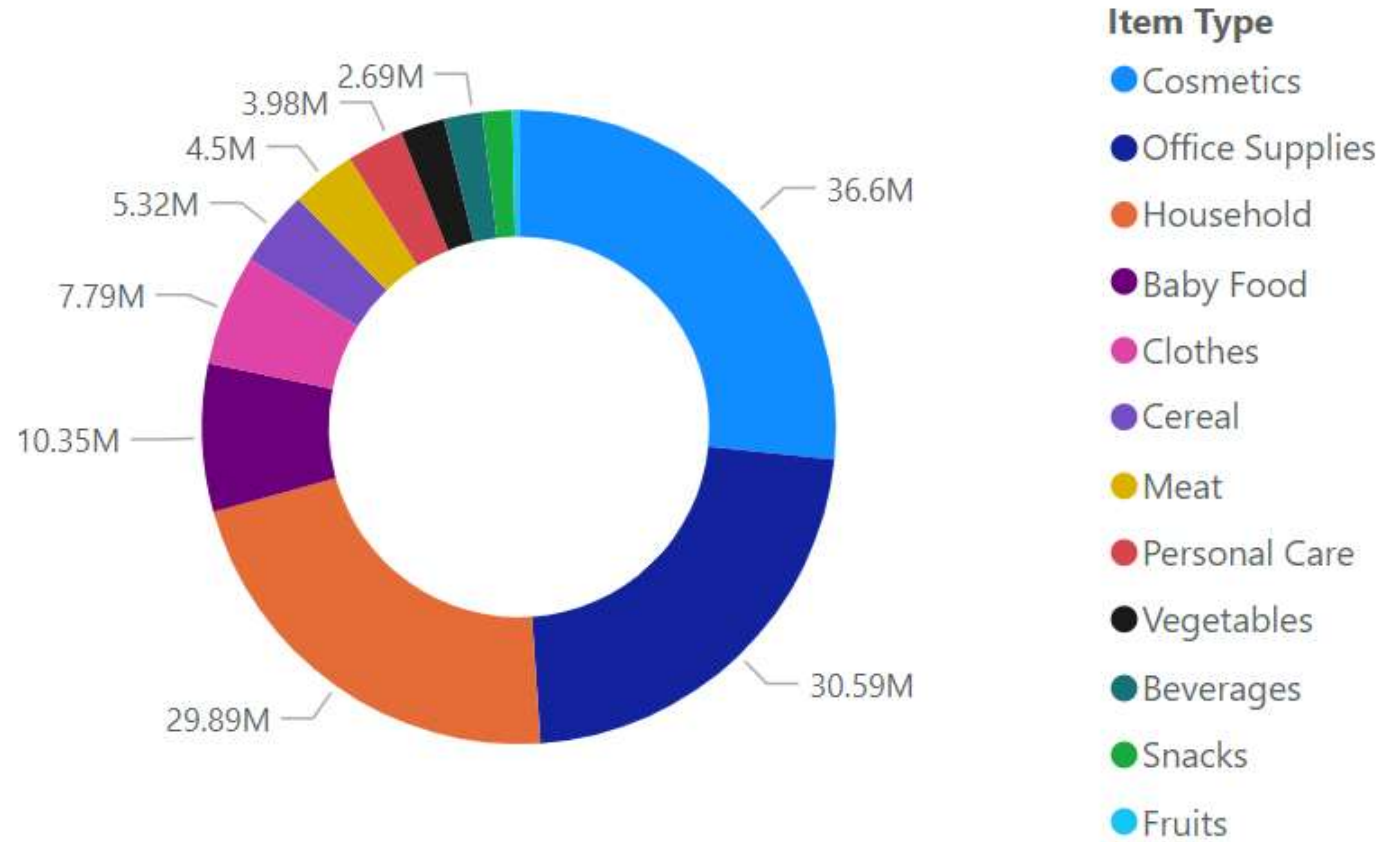


Data Analysis

Total Sales by Order Priority



Total Sales by Item Type

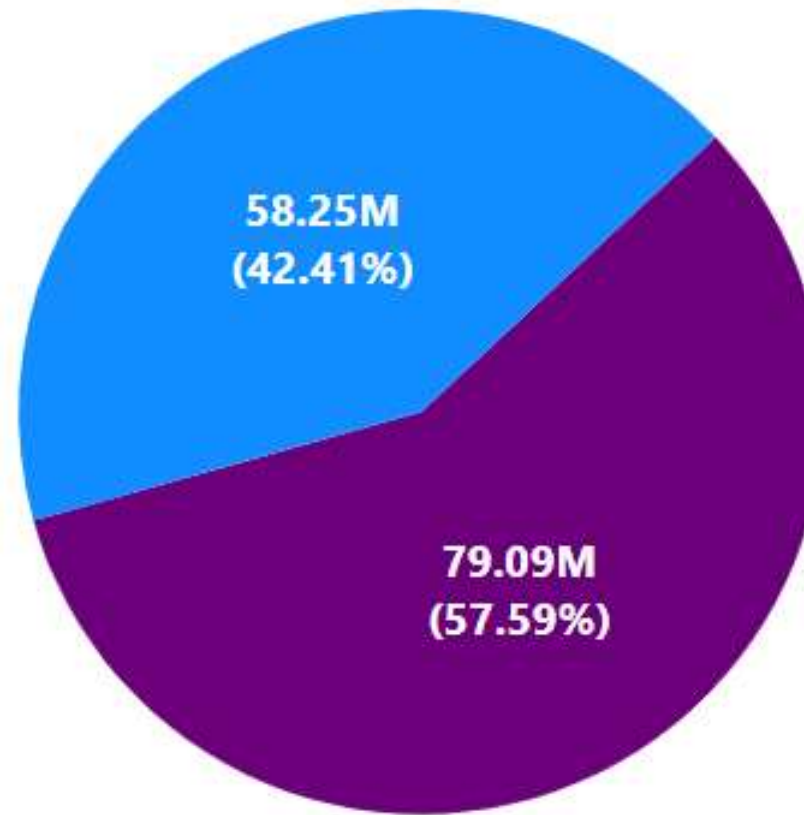


Data Analysis

Sales Channel

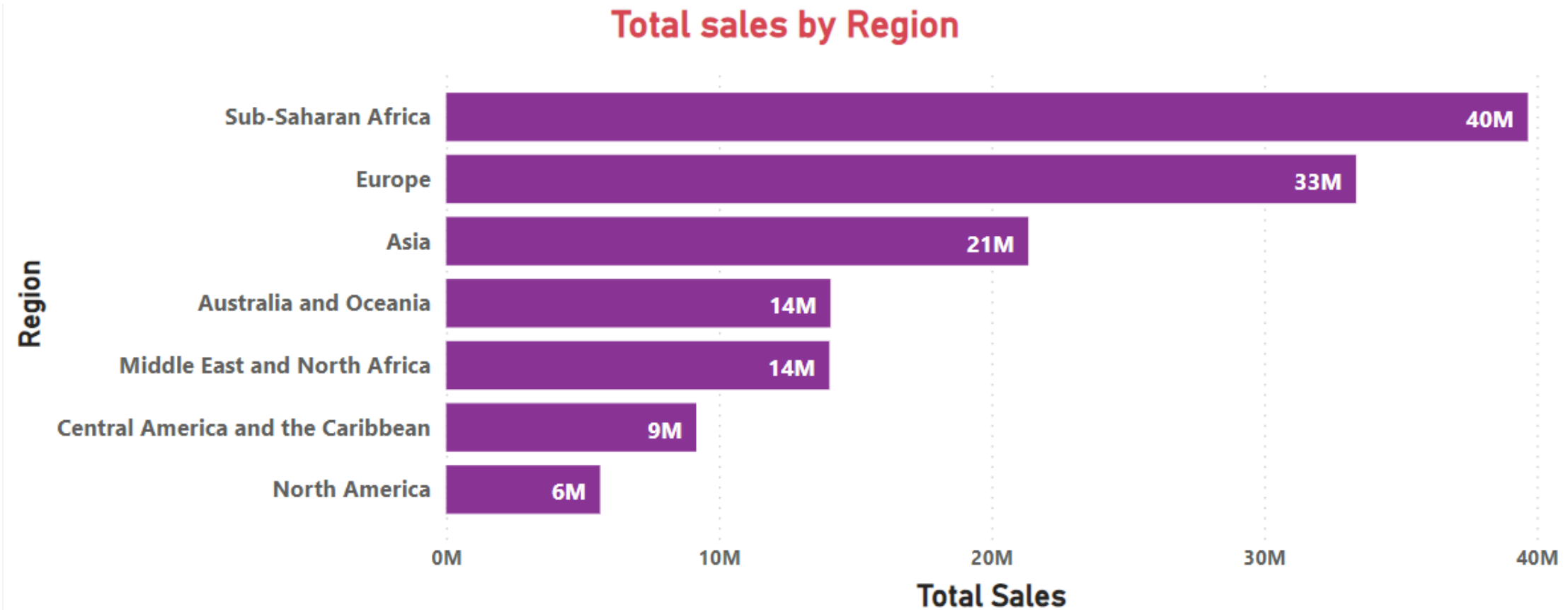
● Offline

● Online



Total Sales by Channel

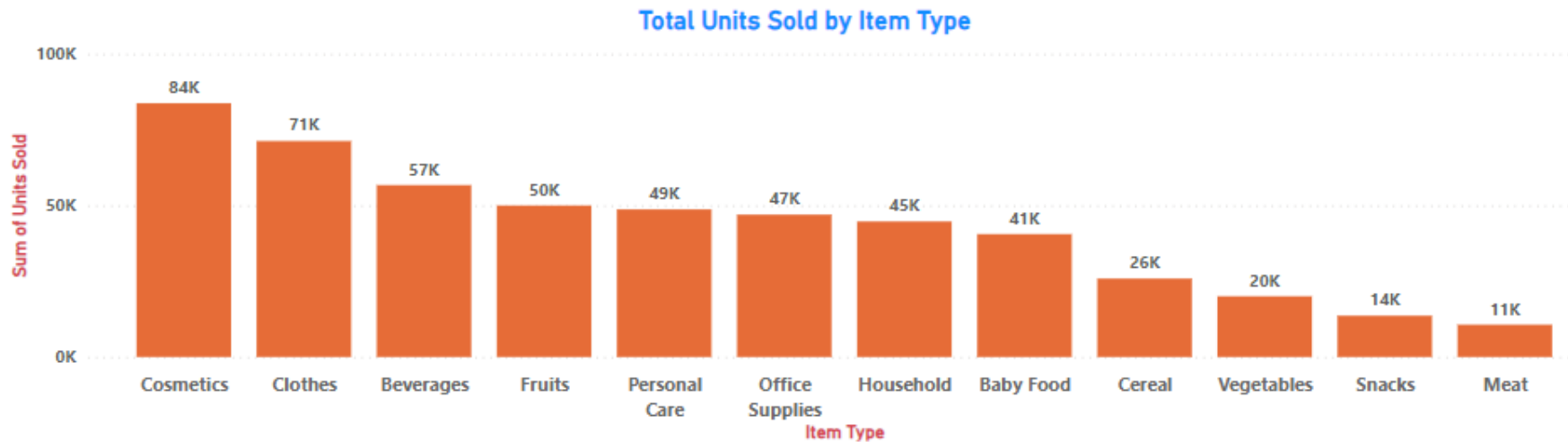
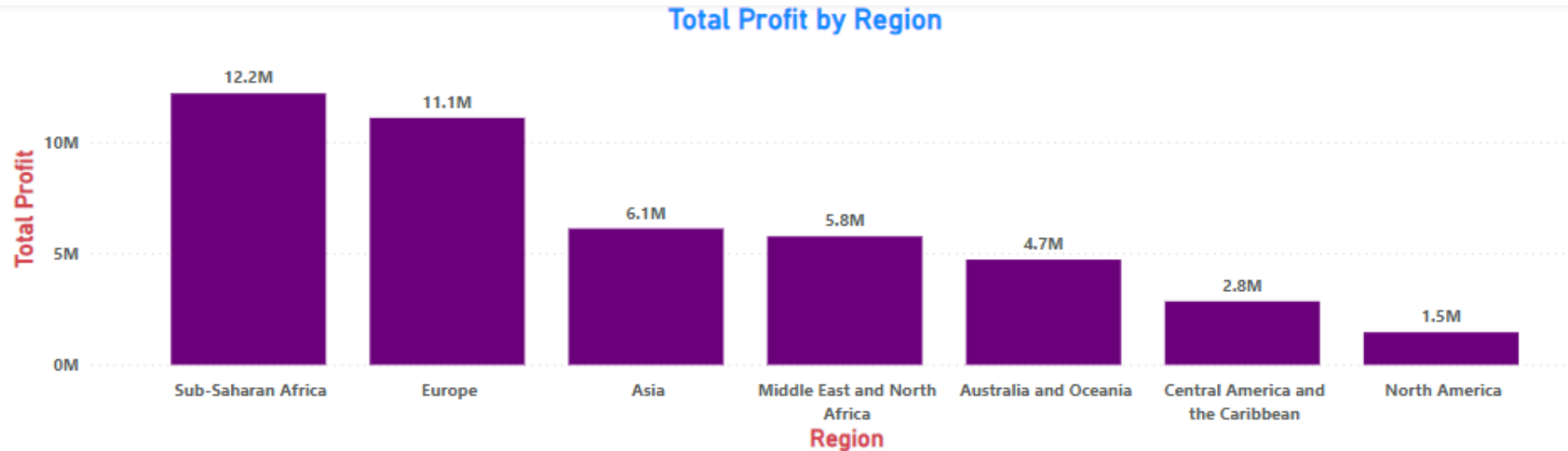
Data Analysis



Data Analysis

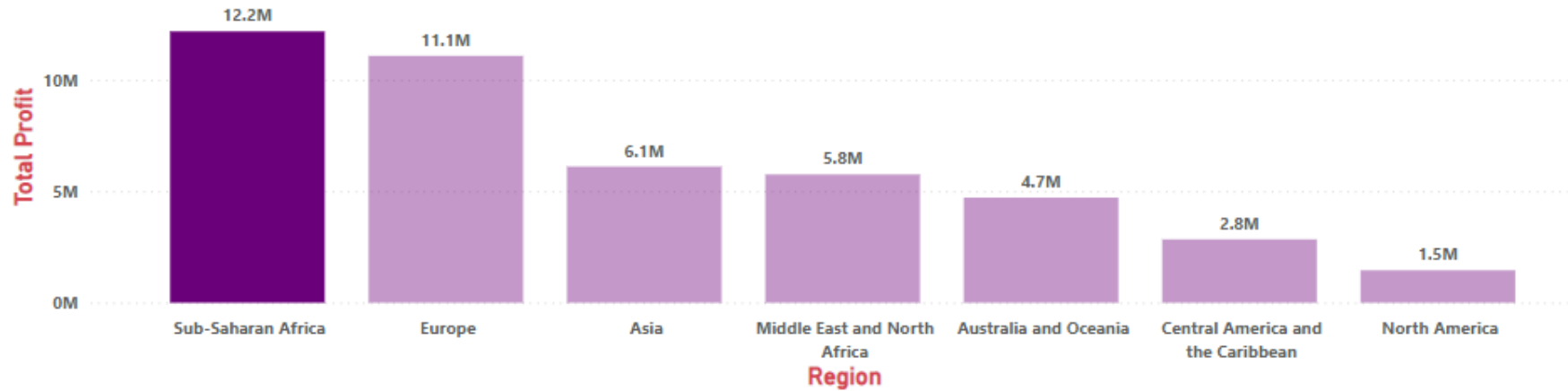


Data Analysis

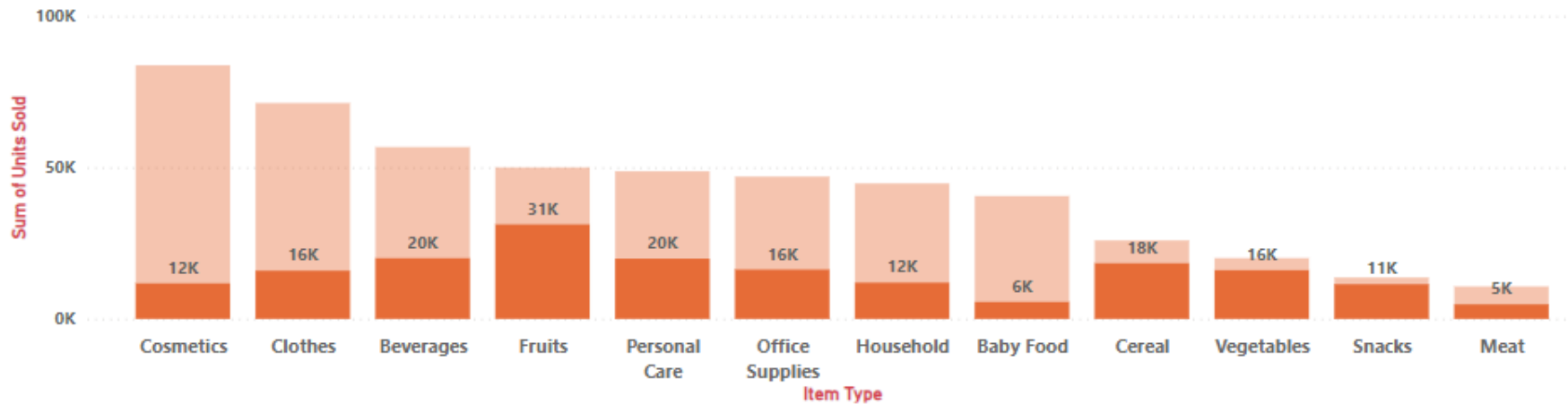


Data Analysis

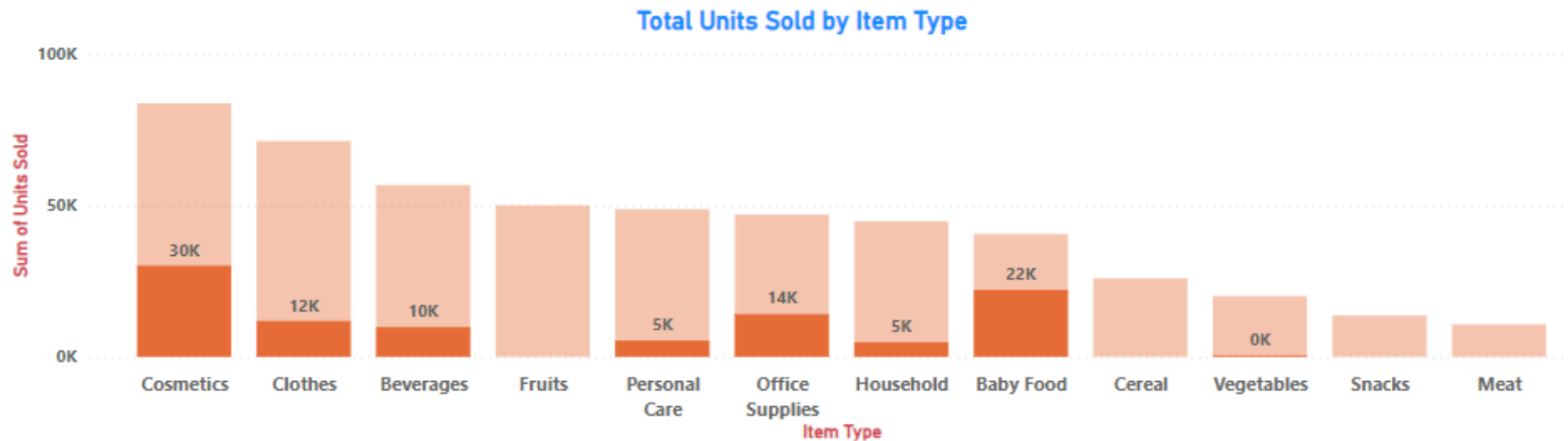
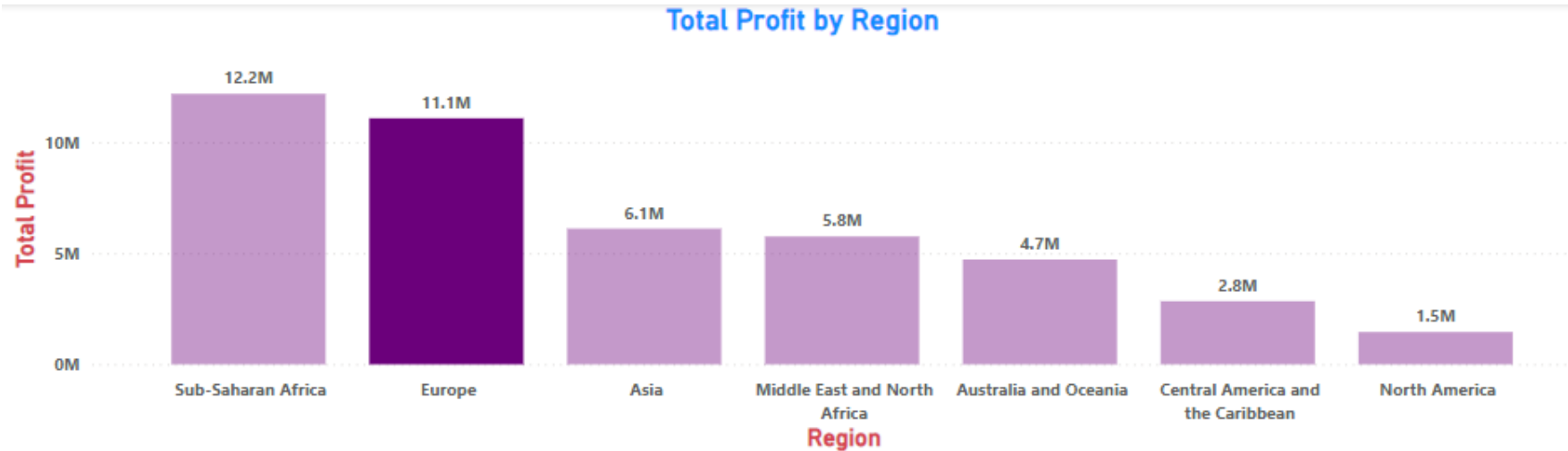
Total Profit by Region



Total Units Sold by Item Type

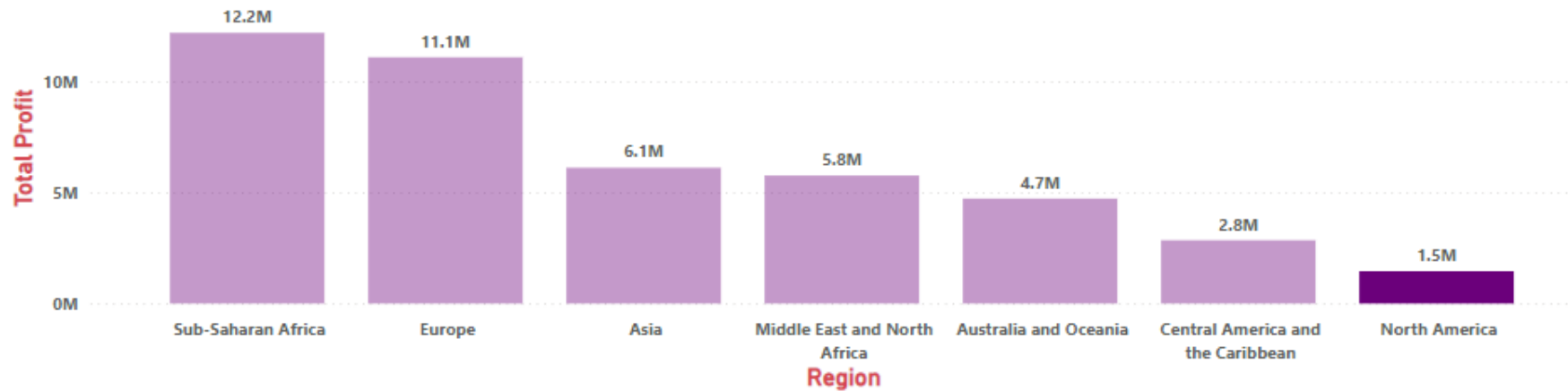


Data Analysis

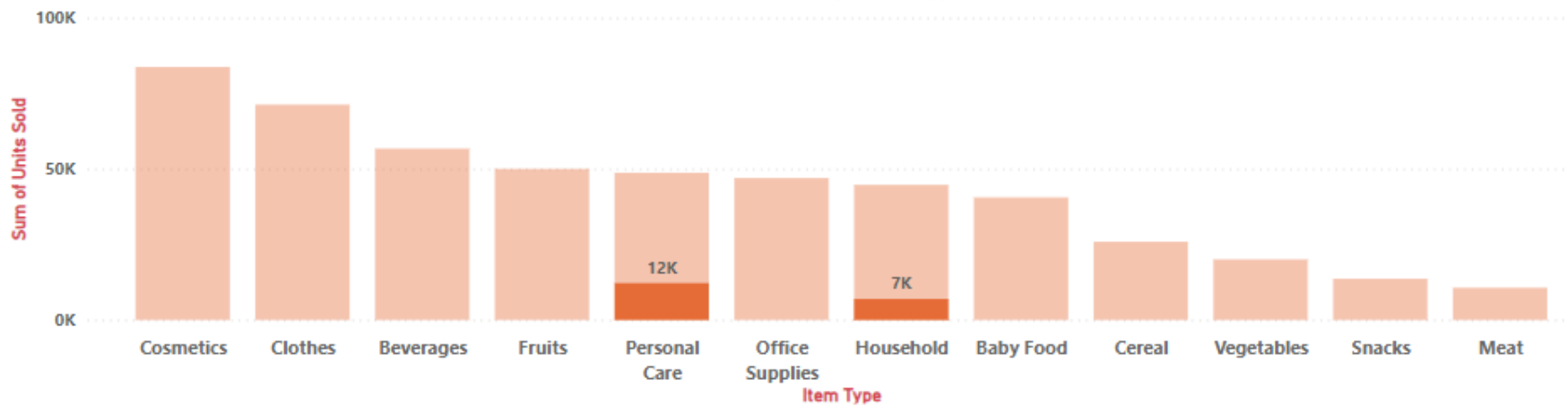


Data Analysis

Total Profit by Region



Total Units Sold by Item Type



Insights

- The total sales is **\$137.35** million out of which total profit is **\$44.17** million.
- The average profit margin and unit price is **\$32.16** and **\$276.76** respectively.
- The **“H”** order priority gave the highest sales, which means people need their products fast.
- **“Cosmetics”** products gave the highest sales.
- Majority of people still prefer **“Offline Channel”** for buying products.
- The year **2012** has seen the highest sales
- The **Sub-Saharan Africa** region has seen the highest sales

Summary

- Cosmetic products are very popular among people of Europe and these products generated the highest profit (**\$14.56 million**) of all items. So, it is advisable to create some marketing campaigns promoting Cosmetic products.
- Total Population of North America prefer to shop offline as compared to people of Europe, who mostly prefer Online channel for shopping. But because high profits are coming from Online channel, it advisable to **promote products online**.
- The Region Sub-Saharan Africa has generated the highest profit where people bought **Fruits** the most, with approx. **31 thousands** unit sold. Highlight the health benefits of fruits during campaigns and align marketing with local preferences.
- The second most purchased item, after Cosmetics in Europe is **Baby Food**. This insight tells us that majority of people of Europe are newlywed couples. Thus you can **promote products related to new born babies** to these people.

Summary

- **Fruits** has generated the least profit of all item types which is only **\$120.50** thousands. It is advisable to understand the customer needs, adjust the price and analyse the local preference.
- **North America** Region has generated the least profit by selling only **Personal Care** and **Household Items** through **Offline** Channel. Try to promote products other than both these item types through Online Channel by giving some discounts. Do some survey to find local people's preferences.
- **Meat** is the least sold item type with **11 thousands** units sold in Australia and Oceania and Sub-Saharan Africa Region using only **Online** Channel. Consider selling different kinds of meat products and adjust the prices.
- **Household Items** and **Cosmetic Products** are sold the most through **Offline** and **Online** Channels respectively. Enhance physical stores with attractive displays and promotions for Household Items. Run targeted ads and make the website more user friendly for Cosmetic products.



Thank you