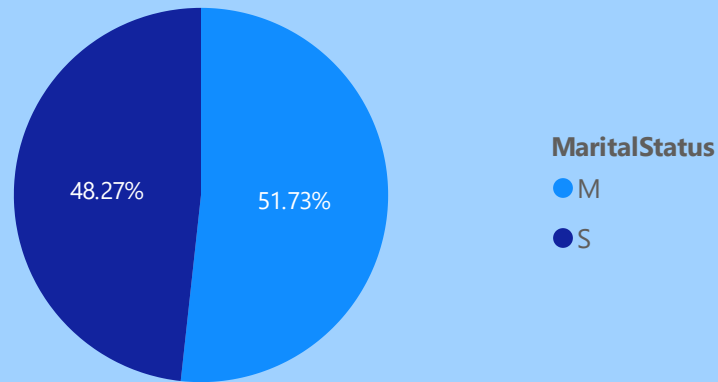




Sum of Sales Amount by Marital Status



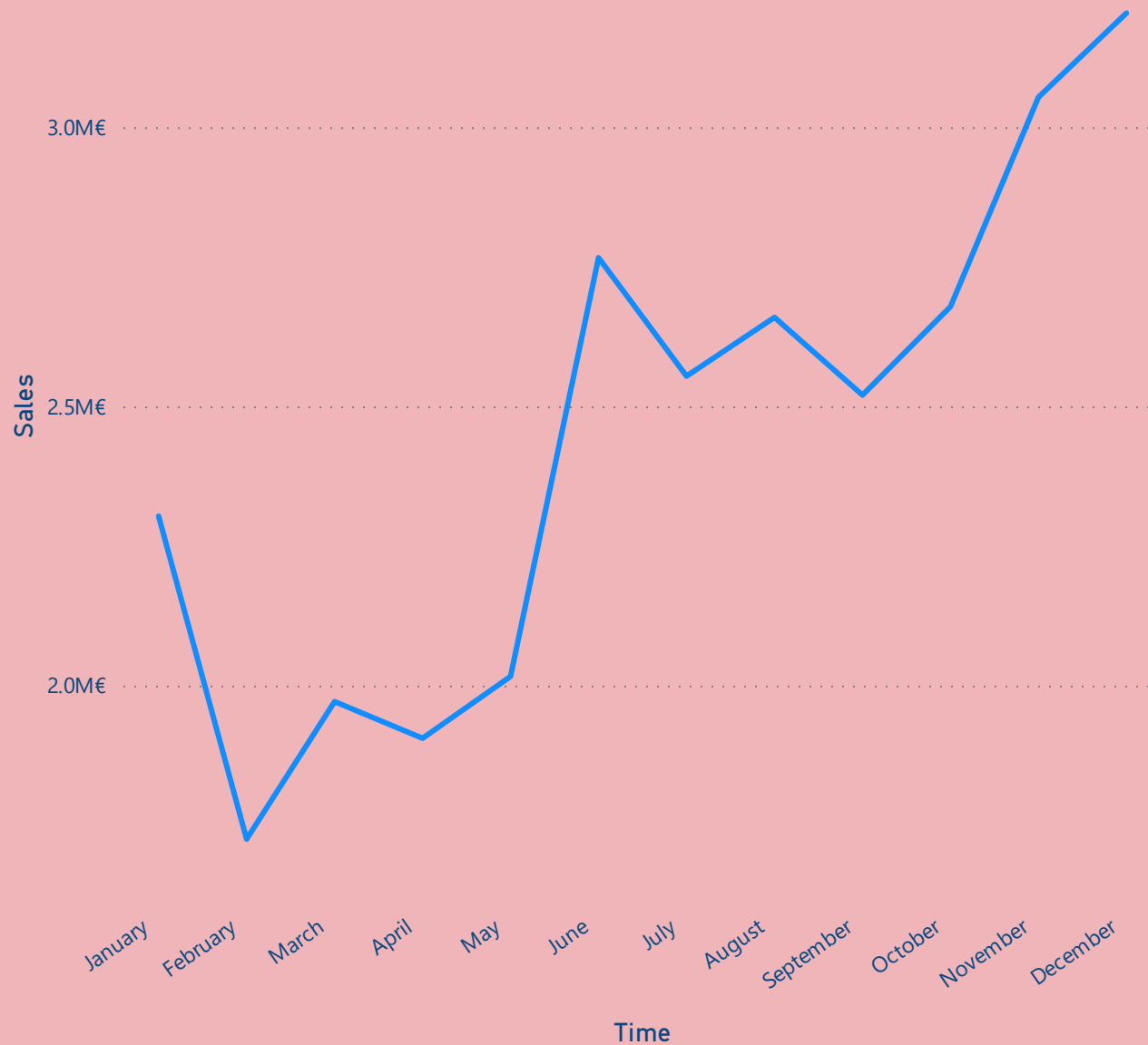
### Advantages of Pie Charts:

1. The pie chart is visually striking and easy to understand.
2. The pie chart gives us an idea of the relative proportion for each category of data at a single glance.
3. Pie charts are frequently used in presentations and marketing research to express the raw data in visual form.
4. Pie charts are the best way to represent percentage breakdowns. For example, we can represent the budget of a family by a pie chart by dividing it into categories such as food expenses, education, utilities, savings, etc.
5. Pie charts are easier to read for a statistically untrained person compared to bar charts and histograms.
6. Pie charts can allow us to easily make rough comparisons among different categories. For example, if one of the slices of the chart occupies roughly half of the area of the circle we can conclude that that category represents about 50% of the total without knowing the absolute frequency of that category.

### Disadvantages of Pie Charts:

1. Pie charts are less useful than bar graphs for accurate reading and interpretation when the series is divided into a large number of components or the difference among the components is very small.
2. If the given data has more than six categories the pie chart becomes very crowded and ugly. In such cases it is not advisable to use pie charts to represent the data.
3. If most of the sectors of the data are of roughly equal size then we cannot make visual comparisons between categories by simply looking at the pie chart.
4. Before drawing the pie chart, we need to do calculations of central angles for each category. These calculations are boring and tedious. On the other hand, no calculations are needed in order to draw simple bar graphs, line graphs, etc.
5. Pie charts cannot be used to represent time series data.
6. We cannot make comparisons between two sets of data with the help of a single pie chart. On the other hand we can draw two bars for each category to visually represent two sets of data in a single bar graph.
7. Circles are difficult to compare and thus pie charts are not very popular among professional statisticians.

## Sum of Sales Amount

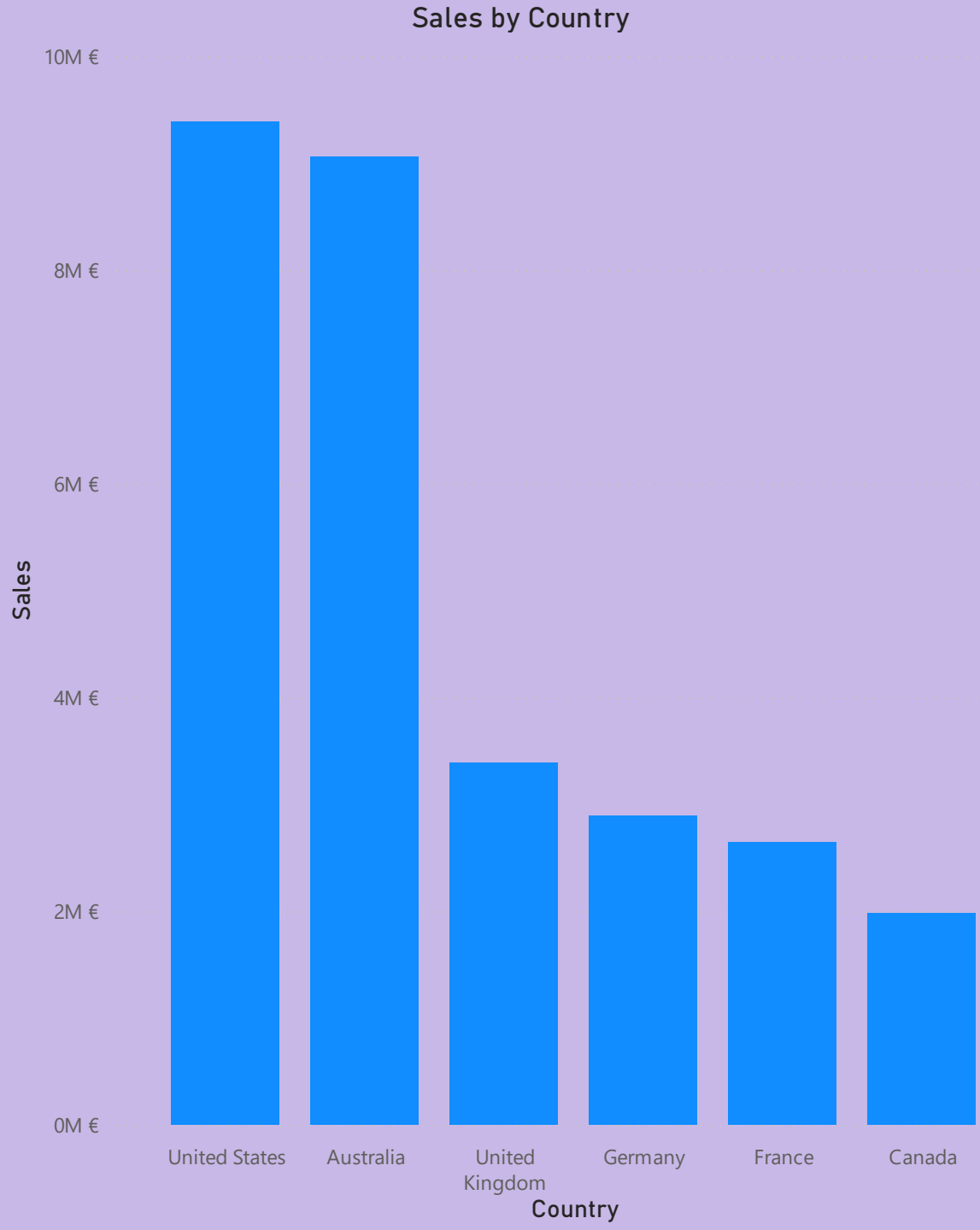


### Advantages of Line Charts:

1. These are suitable for representing the data points, i.e. given one variable, the other can easily be determined.
2. Convenient to plot time graphs along the x/y axis as it clearly depicts the rise and fall of data points. By correct selection of scales for each axis (time on the x-axis and the change is measured on the y-axis) the reader can easily observe the changes in one group over time. These help to detect the trends pretty early enabling the viewer to make predictions about the data that is yet to be recorded.
3. These enable observation of both short-term and long-term changes. This aids easy comparison of two or more values.
4. Simpler to construct and read than bar graphs or histograms.
5. Projects patterns and trends over time better than other graphs.
6. Requires minimal written or verbal explanation.
7. The time-series data relating to two or more related variables i.e., phenomena measured in the same unit and belonging to the same time period can be displayed together in the same graph using the same scales for all the variables along the vertical axis and the same scale for time along X-axis for each variable. The technique of drawing two or more line graphs on the same graph facilitates comparisons between the related phenomena.

### Disadvantages of Line Charts:

1. It does not tell us anything about the causes behind the fluctuation in the data.
2. It does not reveal much about the skewness or kurtosis of the data.
3. The technique of drawing two or more line graphs on the same graph facilitates comparisons between the related phenomena. However, its use should not be recommended if the number of variables is large, say, more than 4. In such a case the different line graphs which may intersect each other become quite confusing and it becomes quite difficult to understand and interpret them.
4. It can be used to manipulate or deceive the general public. A scammer can deliberately change the scales on the X and Y-axis in order to lead to misleading conclusions.



## Advantages of Bar charts

### 1. Summarizes large data in visual form

Clearly, it is impossible to understand this data in raw form. A simple percentage bar graph with four bars can provide us with a quick summary of the data.

### 2. Clarifies Trends better than tables

### 3. Easily understood by most people

Bar Graphs are the most common method used to represent data in visual form. Therefore most people are familiar with bar diagrams and can easily interpret the data represented in a bar diagram.

### 4. Allows estimation of key values at a glance

By looking at the height of the bar we can get an estimate of the frequency for any given category. If the data is drawn to scale on a graph paper then we can even obtain the exact value of the frequency from the bar diagram.

### 5. Permits visual check of accuracy and reasonableness of calculations

Suppose that the height of one of the bars exceeds the given total frequency of the data. This is clearly impossible and therefore we can conclude that there must be some error during data transcription. Thus we can visually check whether there are any obvious inconsistencies in the data.

### 6. Displays relative numbers or proportions of multiple categories

A multiple bar graph consists of two or more bars for each category to represent the additional data.

## Disadvantages of Bar charts

### 1. Requires additional written or verbal explanation

Sometimes the data in a bar graph can be too difficult to interpret on its own. In this case, an inexperienced person should be provided a verbal explanation to make sure that he draws the correct conclusions from the diagram.

### 2. Be easily manipulated to provide a false impression

By cleverly choosing the scale of the bar graph some scammers can make sure that one of the bars seems higher relative to the other. Even though this might not technically be a lie, it might suggest wrong conclusions to laypeople who are not trained statisticians.

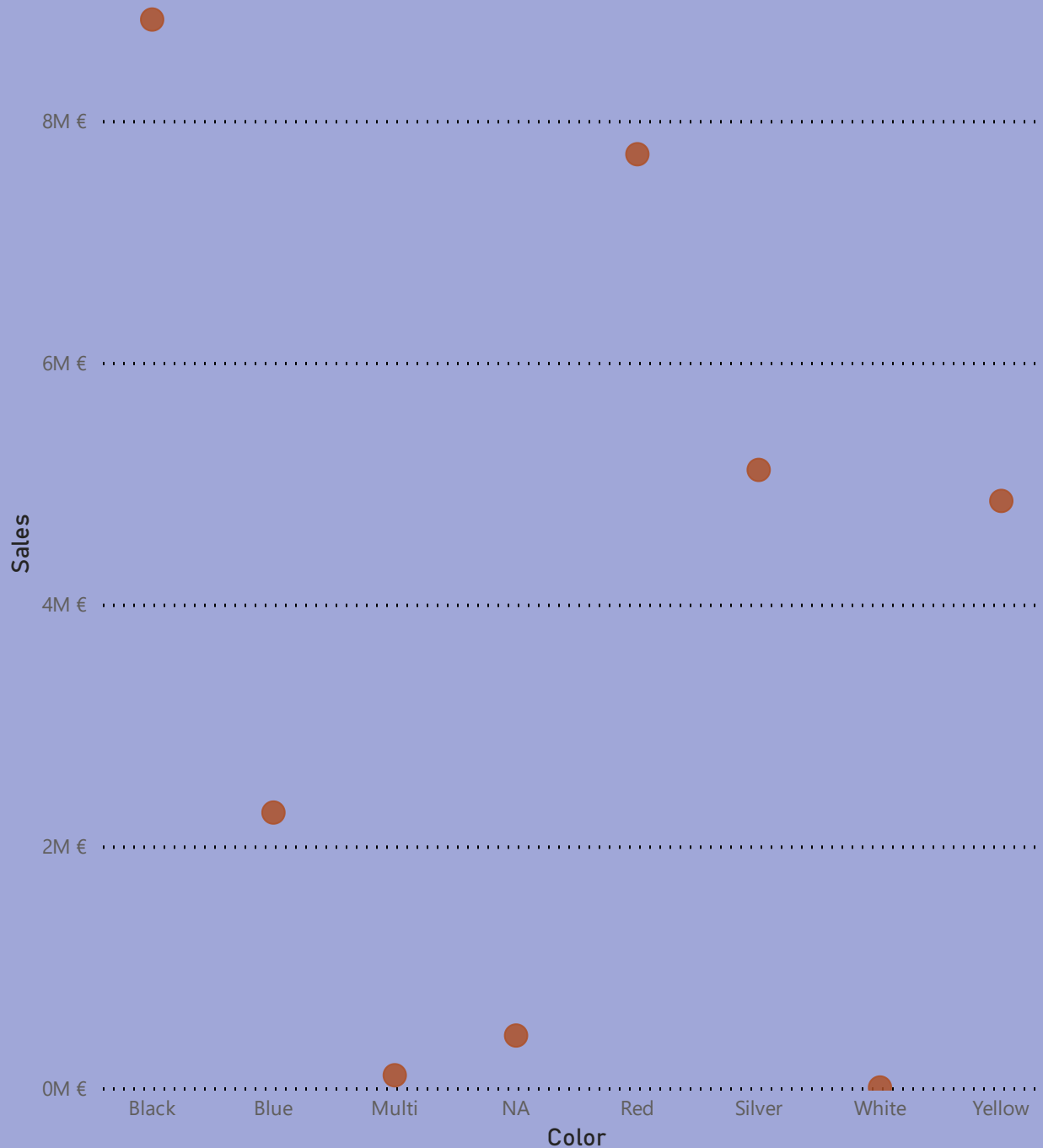
### 3. Fails to reveal assumptions, causes, and effects

The bar graph does not give us any idea about the causes behind the given data. It also does not tell us under what assumptions the data has been collected.

### 4. Not Suitable if there are large number of categories

If there are too many categories to represent then we will need to draw too many bars to represent the data. This can make the diagram very cluttered and unreadable.

Sales by Color



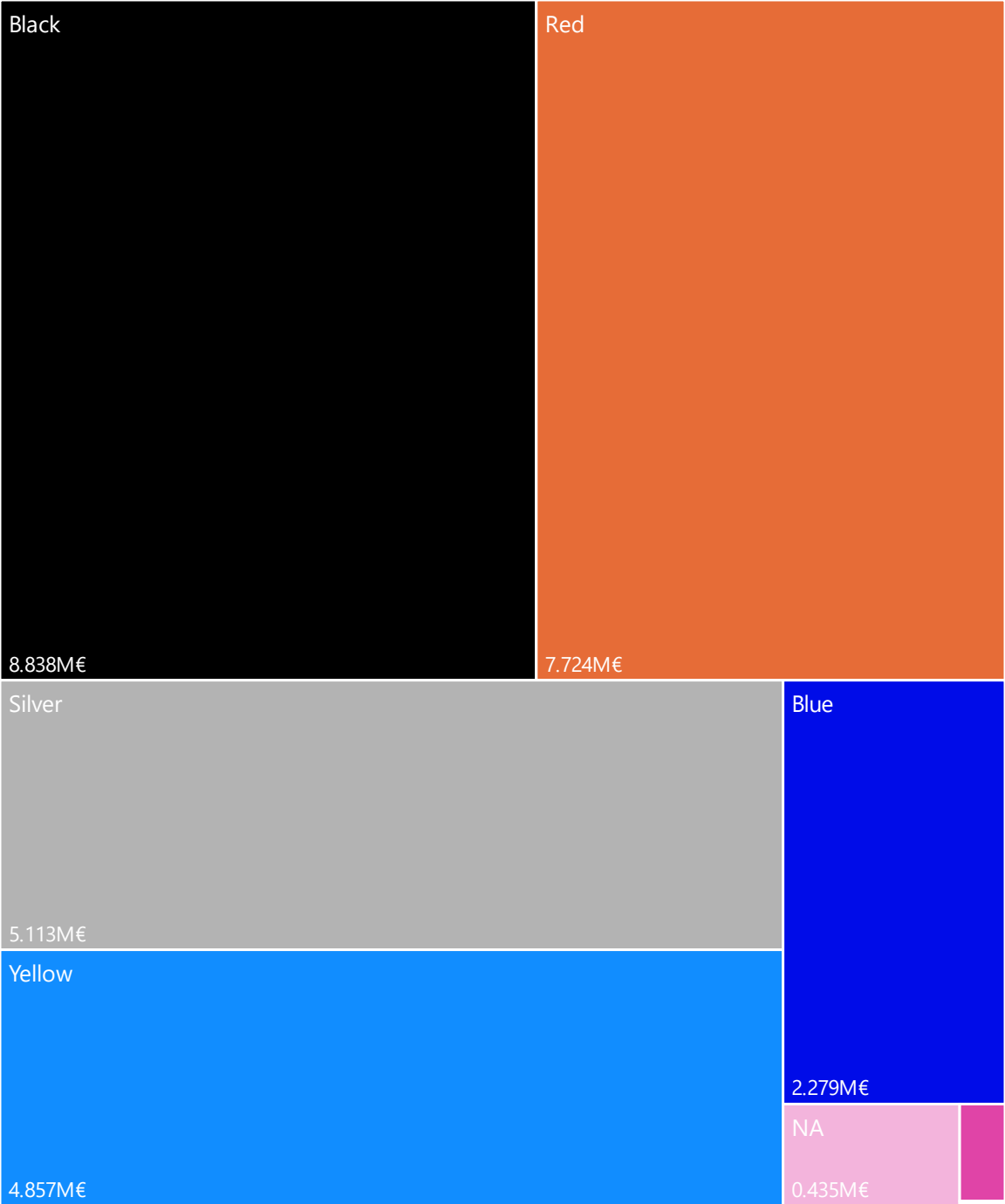
### Advantages of Scatter chart

1. Shows patterns and trends: Scatter charts are useful for identifying patterns and trends in the data, such as positive or negative correlations, clusters of data points, or outliers.
2. Displays relationships: Scatter charts are effective at displaying the relationship between two variables, making it easier to understand the connection between them.
3. Facilitates prediction: Once a pattern or trend has been identified, it can be used to make predictions about future data points.
4. Easy to create: Scatter charts are relatively easy to create and interpret, even for those without advanced data analysis skills.
5. Handles large datasets: Scatter charts are well-suited for handling large datasets, making it easy to visualize a large amount of data in a single chart.
6. Visual appeal: Scatter charts are visually appealing, making it easy to capture the viewer's attention and convey information effectively.
7. Supports comparison: Scatter charts support comparison of the relationship between two variables across different categories or subgroups of data.

### Disadvantages of Scatter chart

1. Limited to two variables: Scatter charts can only display the relationship between two variables, which can be limiting if there are more than two variables that need to be analyzed.
2. Overlapping data points: When the scatter chart has a large number of data points, they may overlap, making it difficult to interpret the relationship between the variables.
3. Biased perception: The use of color and size to represent data can sometimes create a biased perception of the data. For example, if a data point is represented with a larger size and bright color, it may seem more important or significant than it actually is.
4. Limited precision: Scatter charts do not provide exact numerical values, which can be a disadvantage if precise measurements are required.
5. Missing data: Scatter charts may not be able to display missing data, which can be a disadvantage if the missing data is important to the analysis.
6. Misleading trend lines: Trend lines can sometimes be misleading if the data is not linear or if there are outliers.

Sales by Color



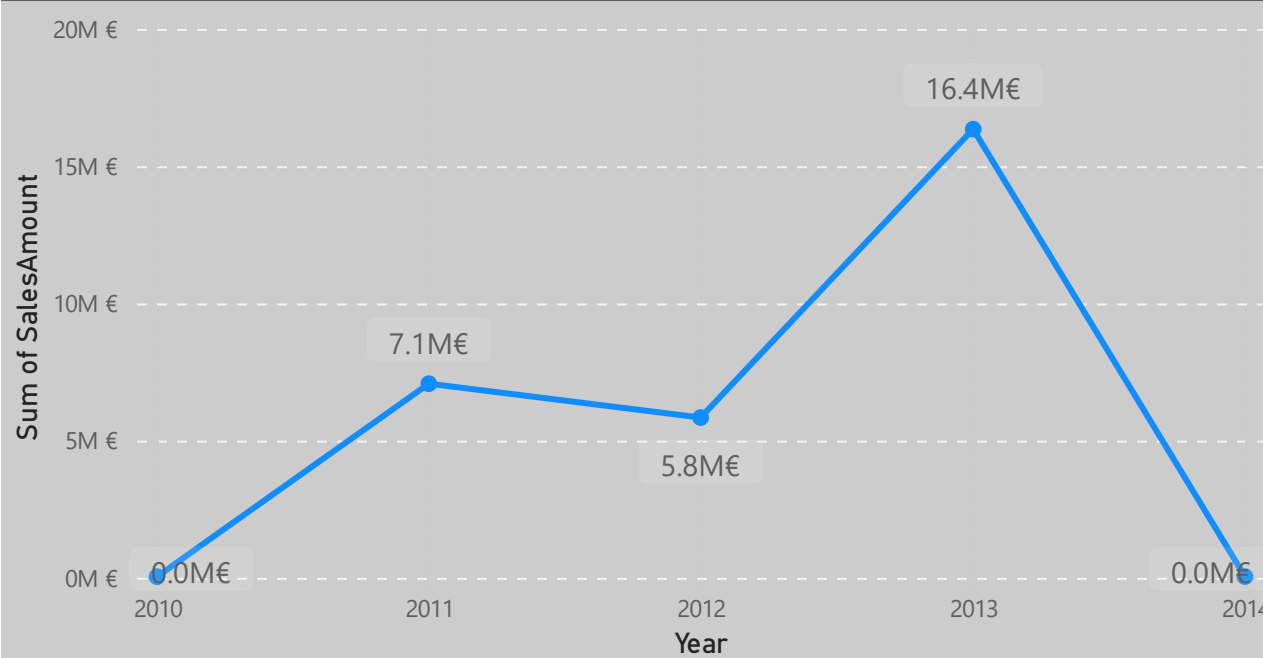
Advantages of Treemap charts

- 1. Easy to Understand: Treemap charts provide a clear and concise representation of complex hierarchical data. Users can quickly grasp the relative sizes of different categories and subcategories, and the relationships between them.
- 2. Space-Efficient: Treemap charts are highly space-efficient. They can display a large amount of data in a small area, making them ideal for visualizing hierarchical data with many categories and subcategories.
- 3. Customizable: Treemap charts are highly customizable, allowing users to change the color, size, and other aspects of the visualization to suit their needs.
- 4. Interactive: Treemap charts can be made interactive, allowing users to zoom in and out, hover over specific categories for more information, and filter the data according to different criteria.
- 5. Comparative Analysis: Treemap charts are useful for comparative analysis, allowing users to compare the size of different categories and subcategories with one another.
- 6. Highlighting Differences: By using color coding and other visual cues, treemap charts can highlight differences between categories and subcategories, making it easy to identify areas where action may be needed.

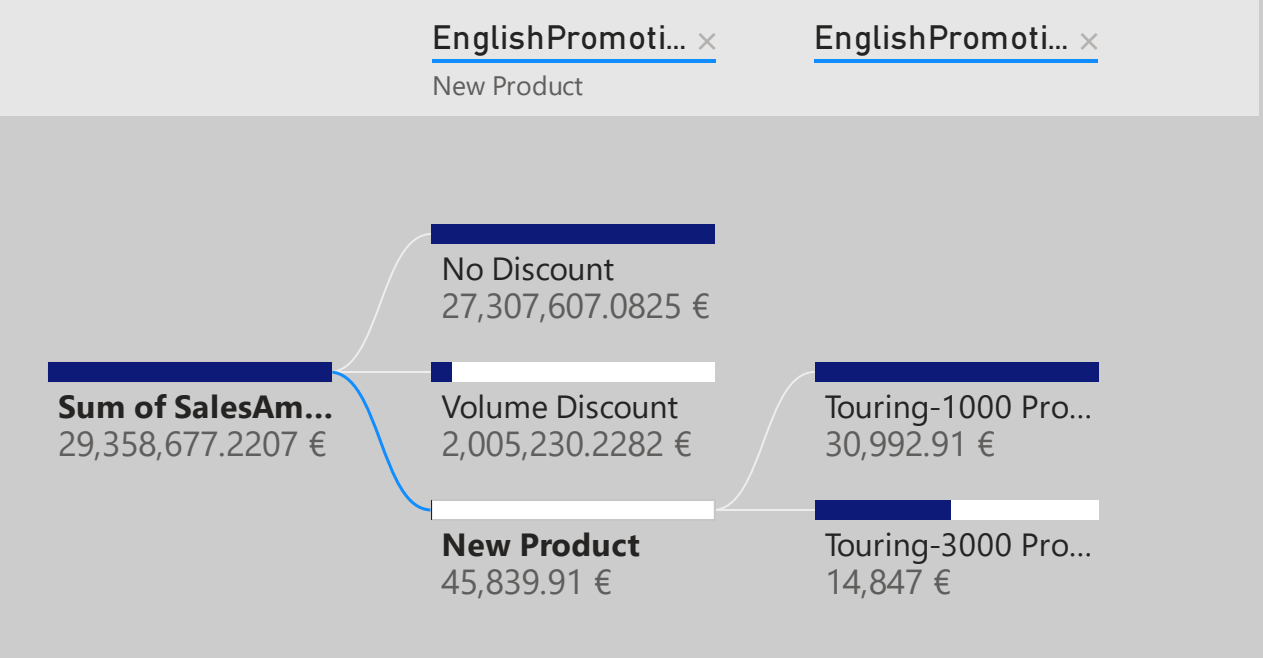
Disadvantages of Treemap charts

- 1. Limited Hierarchy Depth: Treemap charts are not ideal for visualizing hierarchies that have too many levels. If the hierarchy is too deep, the treemap chart can become cluttered and difficult to read.
- 2. Limited Comparison: While treemap charts are good at comparing the sizes of categories, they are not as effective at comparing data points within a single category. This can make it difficult to identify patterns or trends within the data.
- 3. Biased Perception: The use of color and size to represent data can sometimes create a biased perception of the data. For example, if a category is represented with a larger size and bright color, it may seem more important or significant than it actually is.
- 4. Lack of Precision: Treemap charts are not ideal for representing precise numerical values. While they can give a general idea of the relative sizes of categories, they do not provide exact numerical values.
- 5. Overlapping Labels: When the treemap chart has many small categories, the labels of the categories can overlap with each other, making it difficult to read.
- 6. Difficulty in Interpretation: For users who are not familiar with treemap charts, it can be challenging to interpret the chart accurately, which can lead to misunderstandings.

Sum of Sales by Year,Month



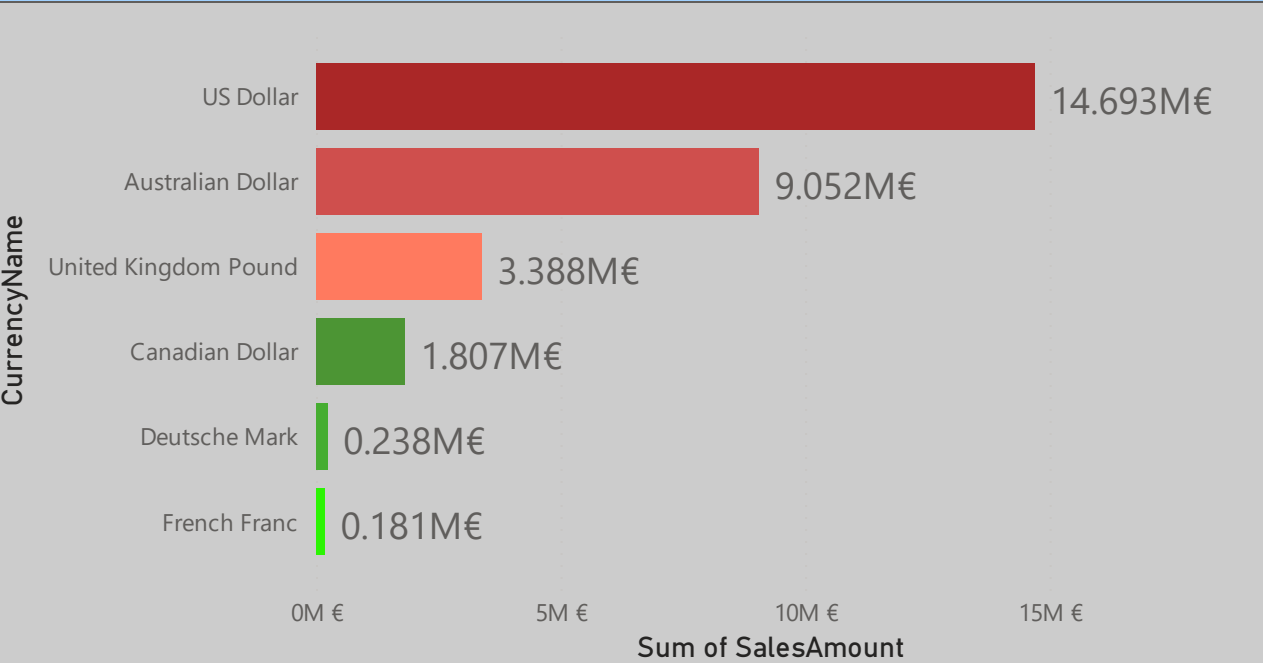
Sum Of Sales Per Promotion



Sum of Sales per Country

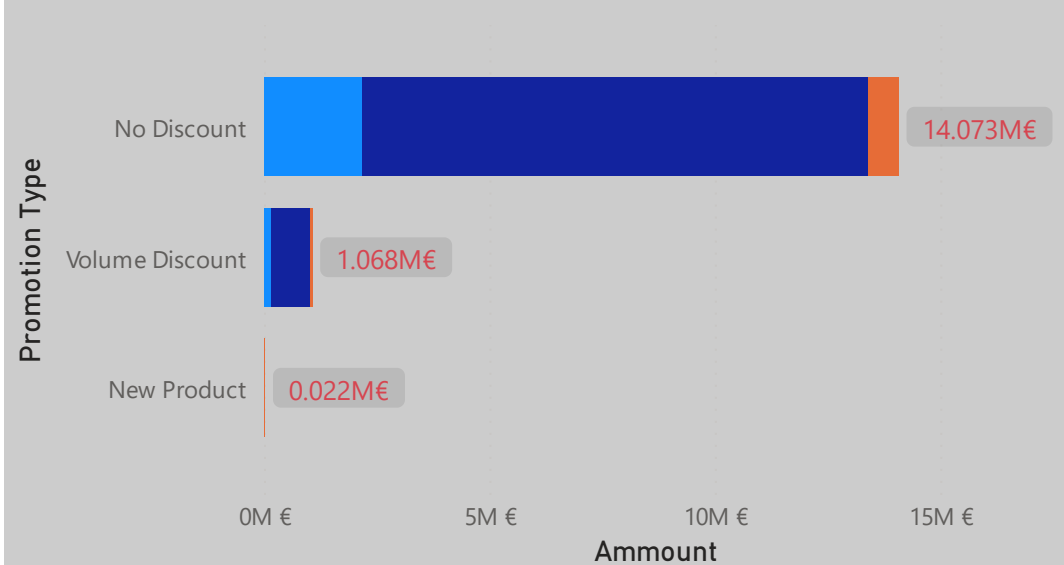


Sum of SalesAmount by CurrencyName



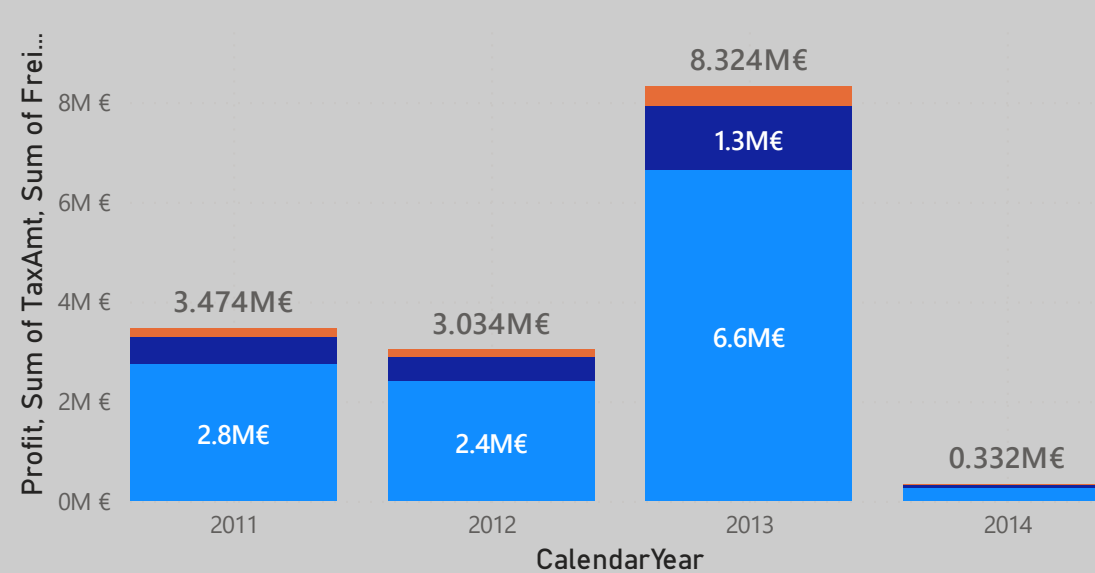
Sum of TaxAmt,Profit,Sum of Freight,Sum of DiscountAmount Per Promotion Type

Sum of TaxAmt Profit Sum of Freight Sum of DiscountAmount



Profit, Sum of TaxAmt, Sum of Freight and Sum of DiscountAmount by CalendarYear

Profit Sum of TaxAmt Sum of Freight Sum of DiscountAmount



Profit

1.492K€

2/9/2014 12:00:00 AM

Freight

66.094 €

2/9/2014 12:00:00 AM

Tax

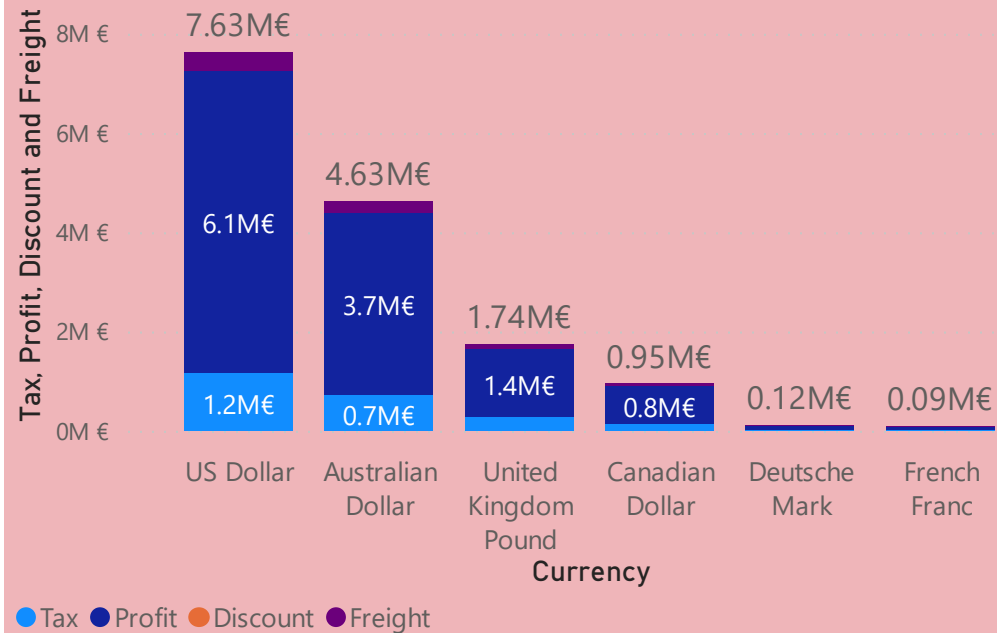
211.489 €

2/9/2014 12:00:00 AM

Discount by DueDate

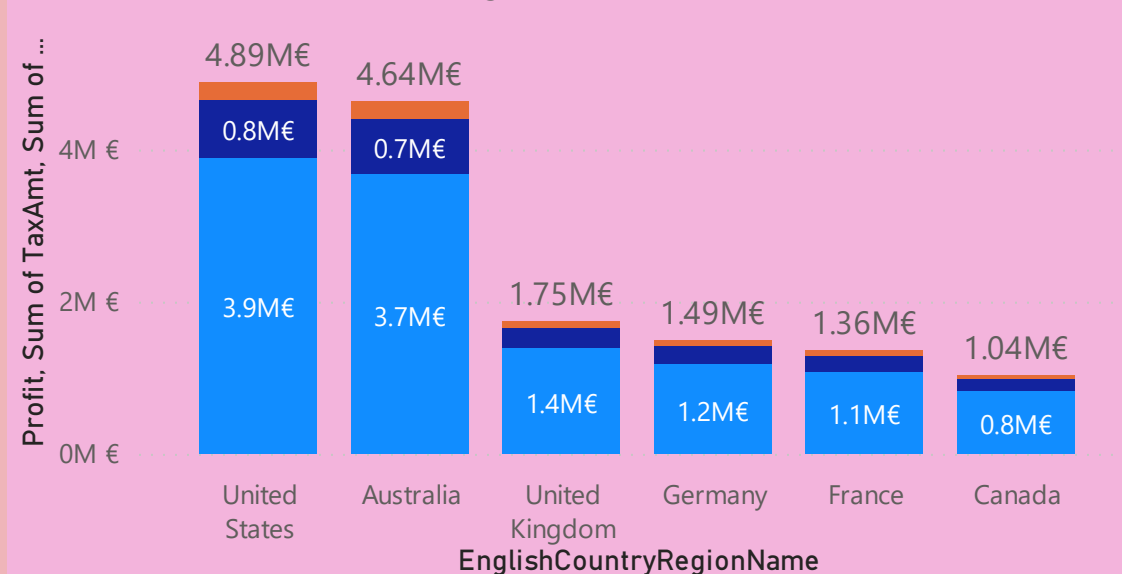
0.00

Tax,Profit,Discount and Freight per Currency



Profit, Sum of TaxAmt, Sum of Freight and Sum of DiscountAmount by EnglishCountryRegionName

Profit Sum of TaxAmt Sum of Freight Sum of DiscountAmount





Date

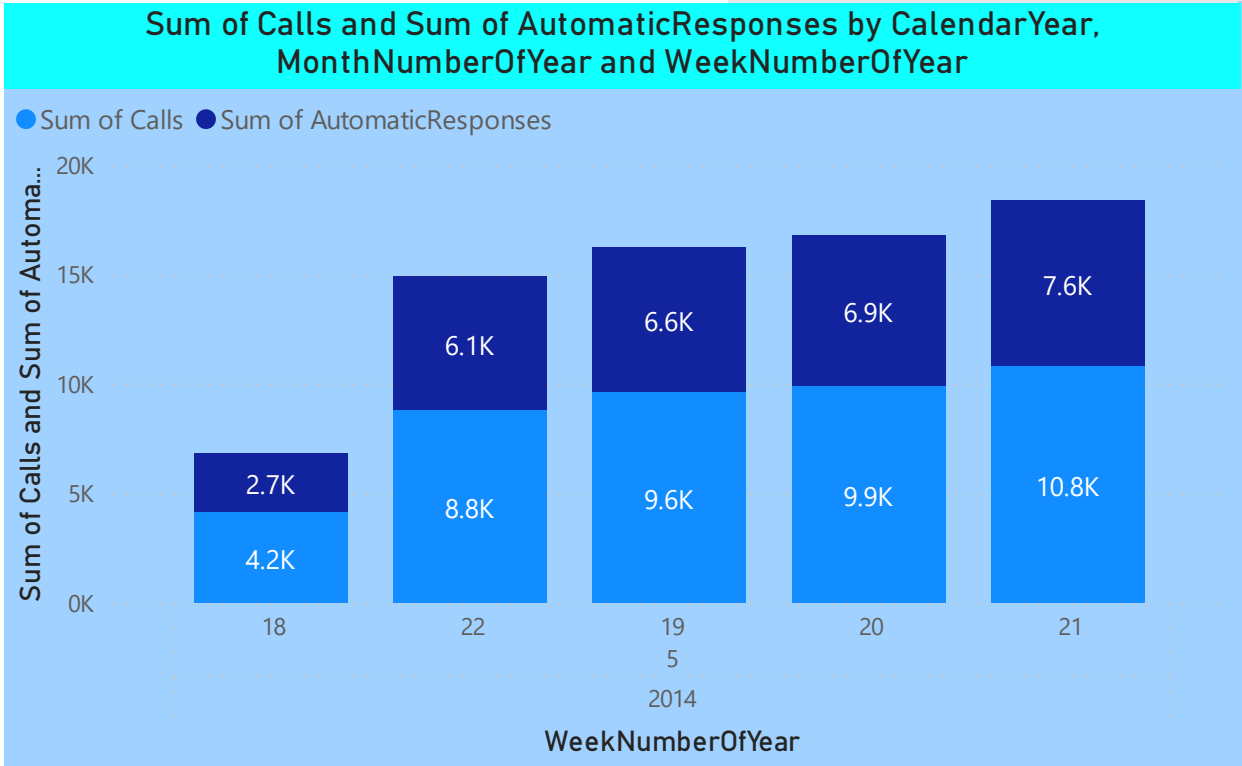
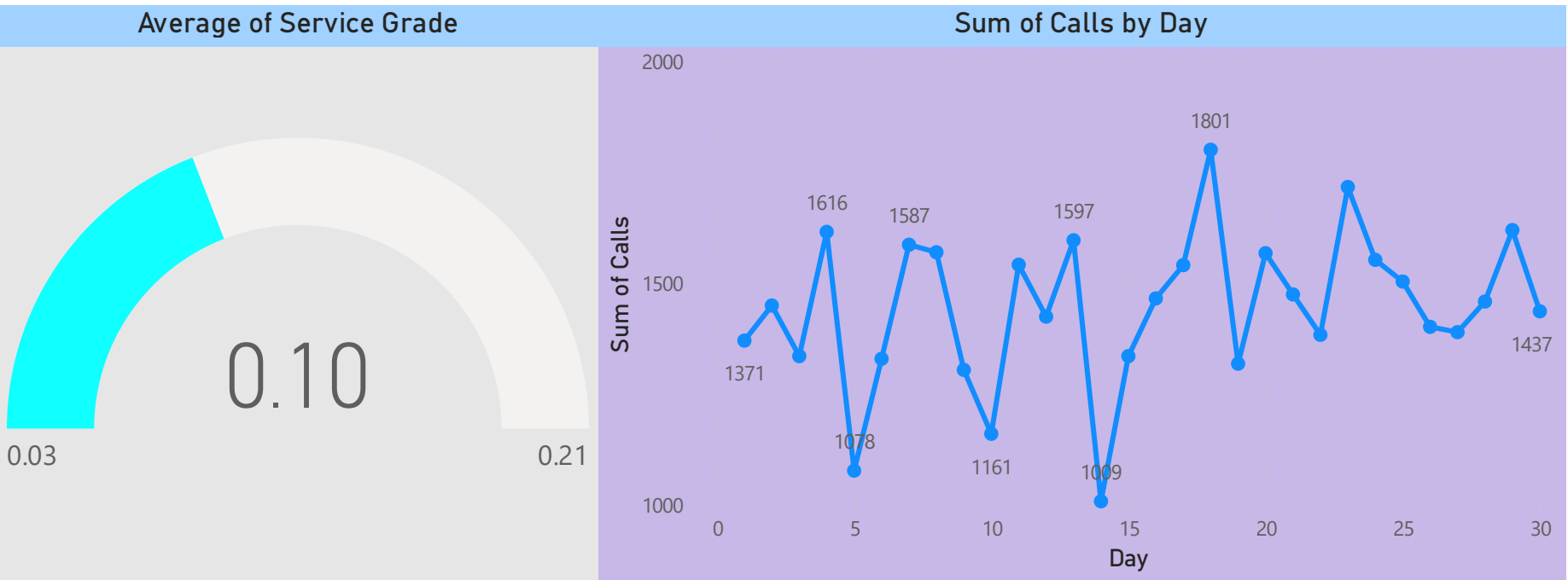
5/1/2014
5/30/2014

0
100

Shift
WageType

☐ AM
☐ holiday
☐ midnight
☐ weekday
☐ PM1
☐ PM2

0.70
orders/calls



Key influencers
Top segments

What influences Orders to

Increase

?

When...
AutomaticResponses goes up 106.88
Sum of TotalOperators goes up 4.91

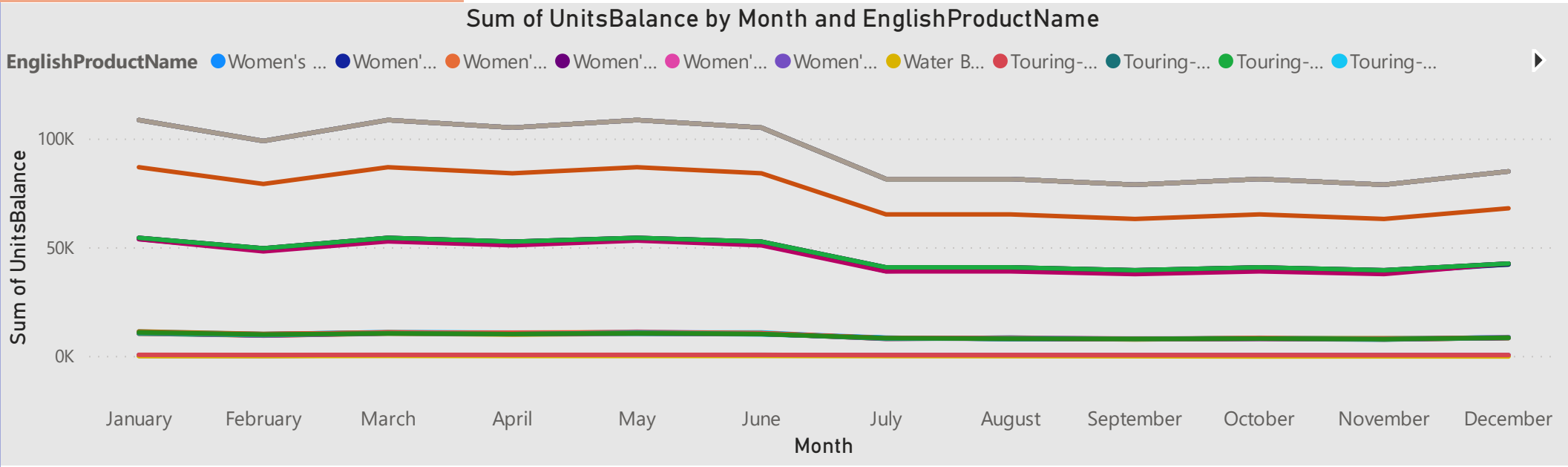
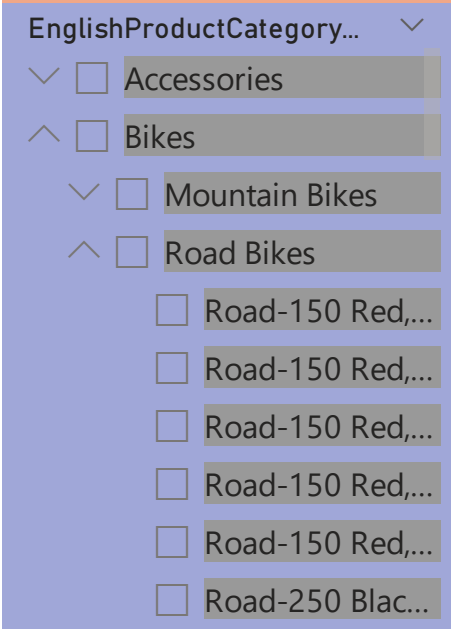
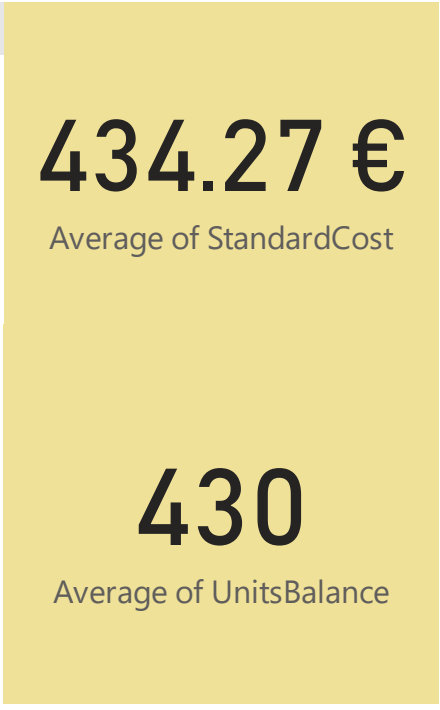
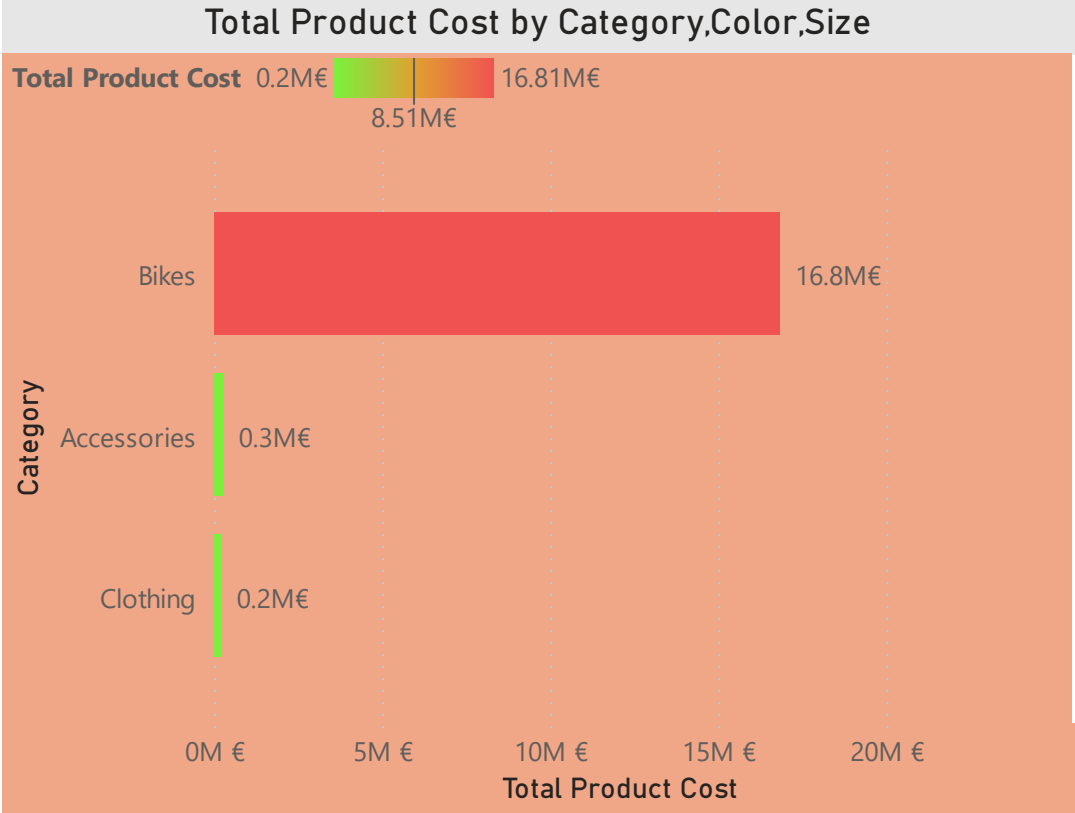
...the average of Orders increases by

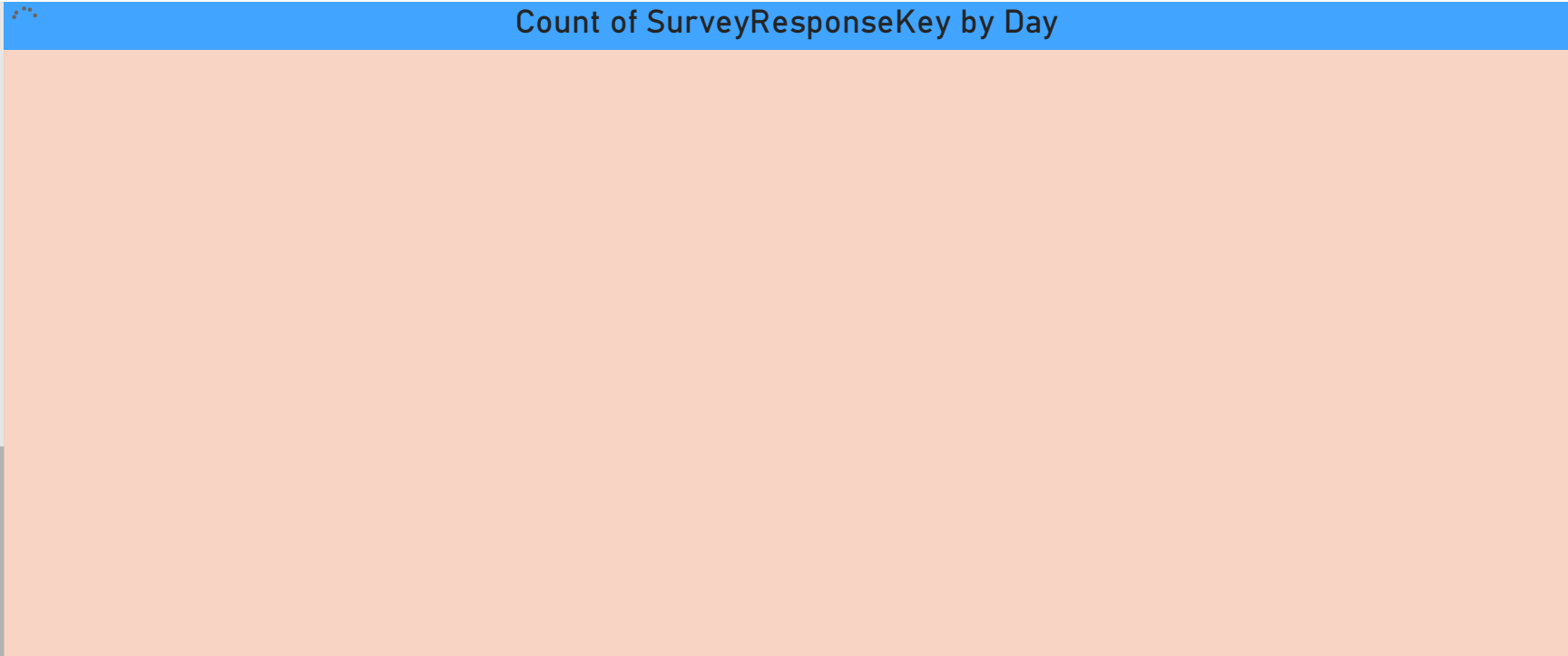
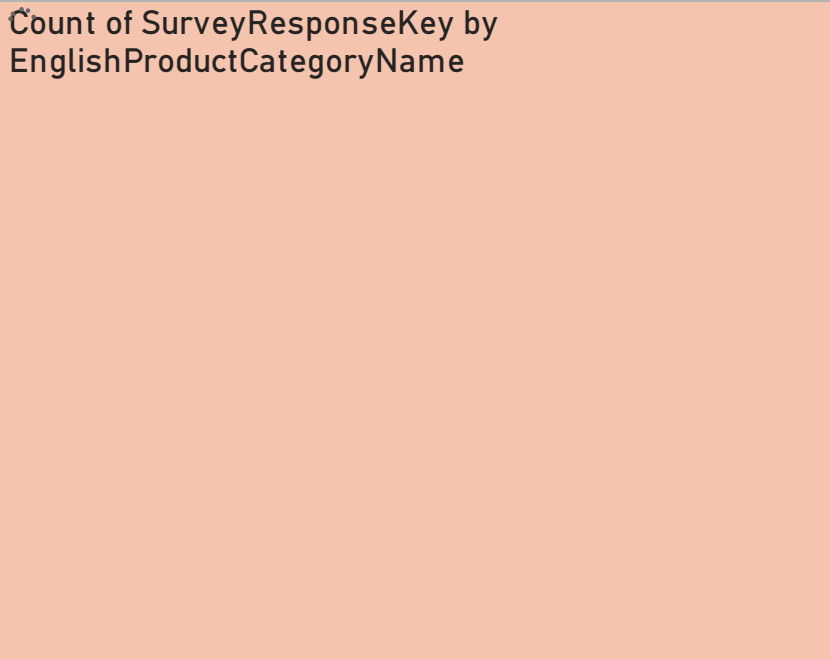
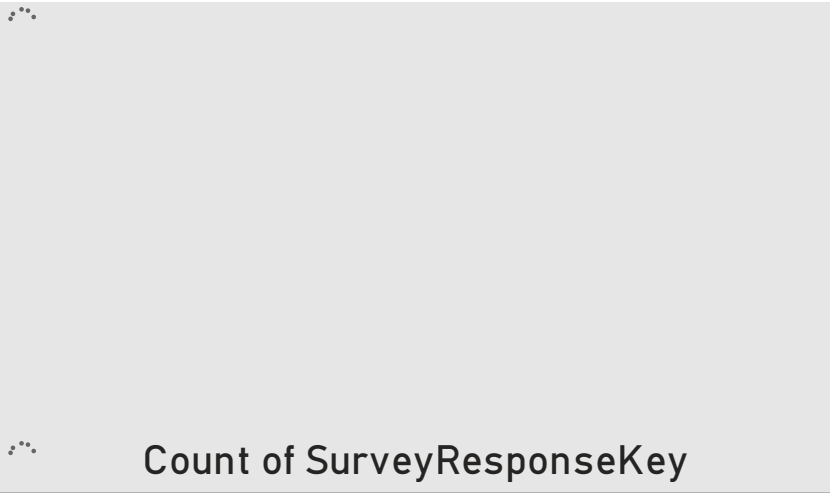
87.81
18.75

On average when AutomaticResponses increases, Orders also increases.

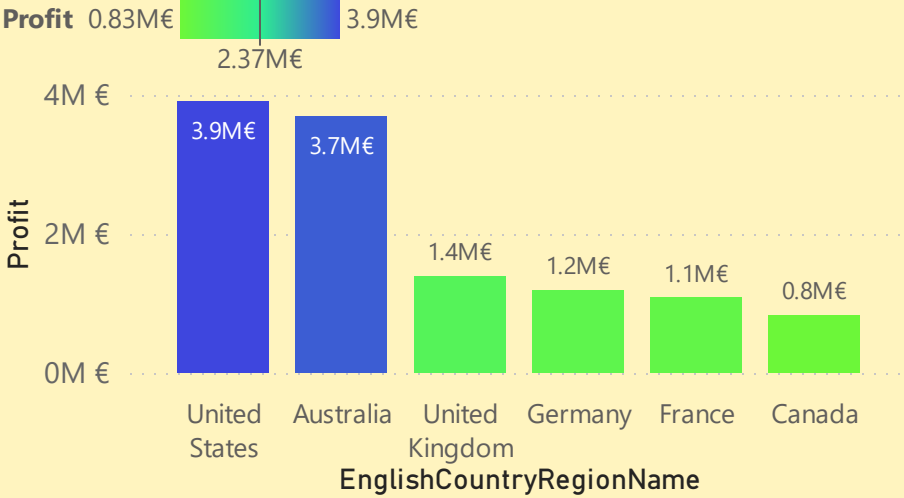
Average of Orders
AutomaticResponses

500
0
0
500





Profit by EnglishCountryRegionName



Summary

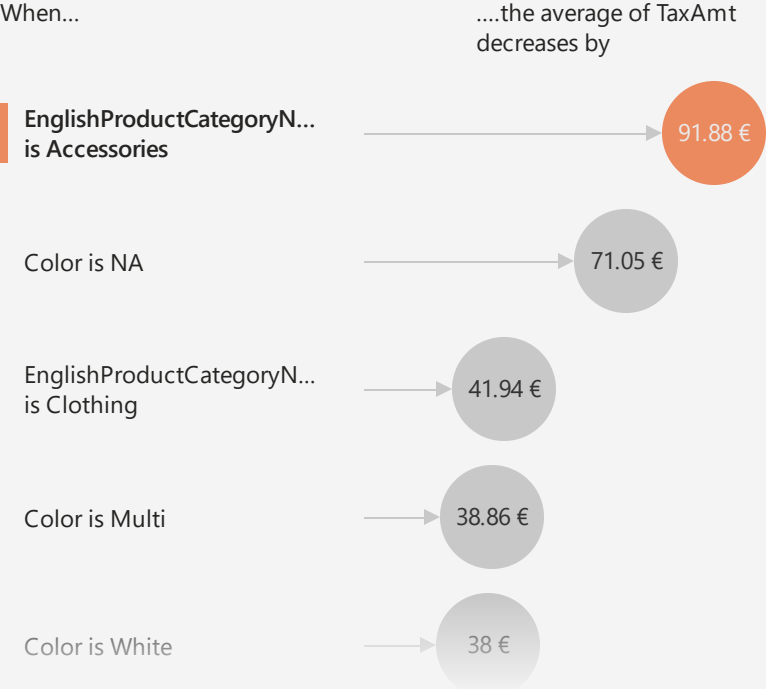
At 3,900,980.8027 €, United States had the highest Profit and was 370.04% higher than Canada, which had the lowest Profit at 829,921.5012000001 €.

United States accounted for 32.29% of Profit.

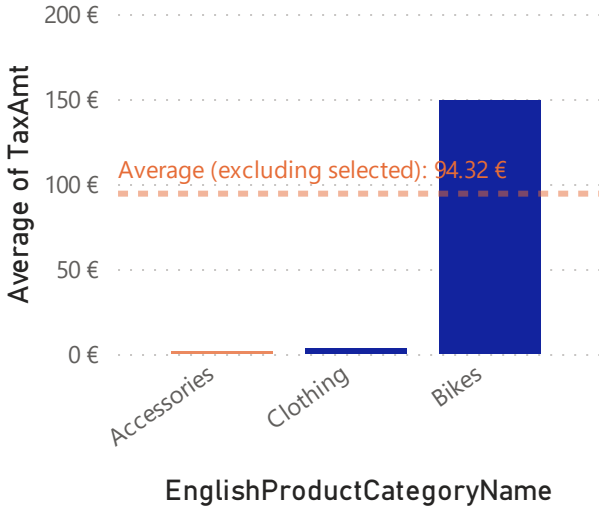
Across all 6 EnglishCountryRegionName, Profit ranged from 829,921.5012000001 € to 3,900,980.8027 €.

Key influencers Top segments

What influences TaxAmt to Decrease ?



← TaxAmt is more likely to decrease when EnglishProductCategoryName is Accessories than otherwise (on average).



☐ Only show values that are influencers

Sum of Freight by Year, Quarter, Month and Day

