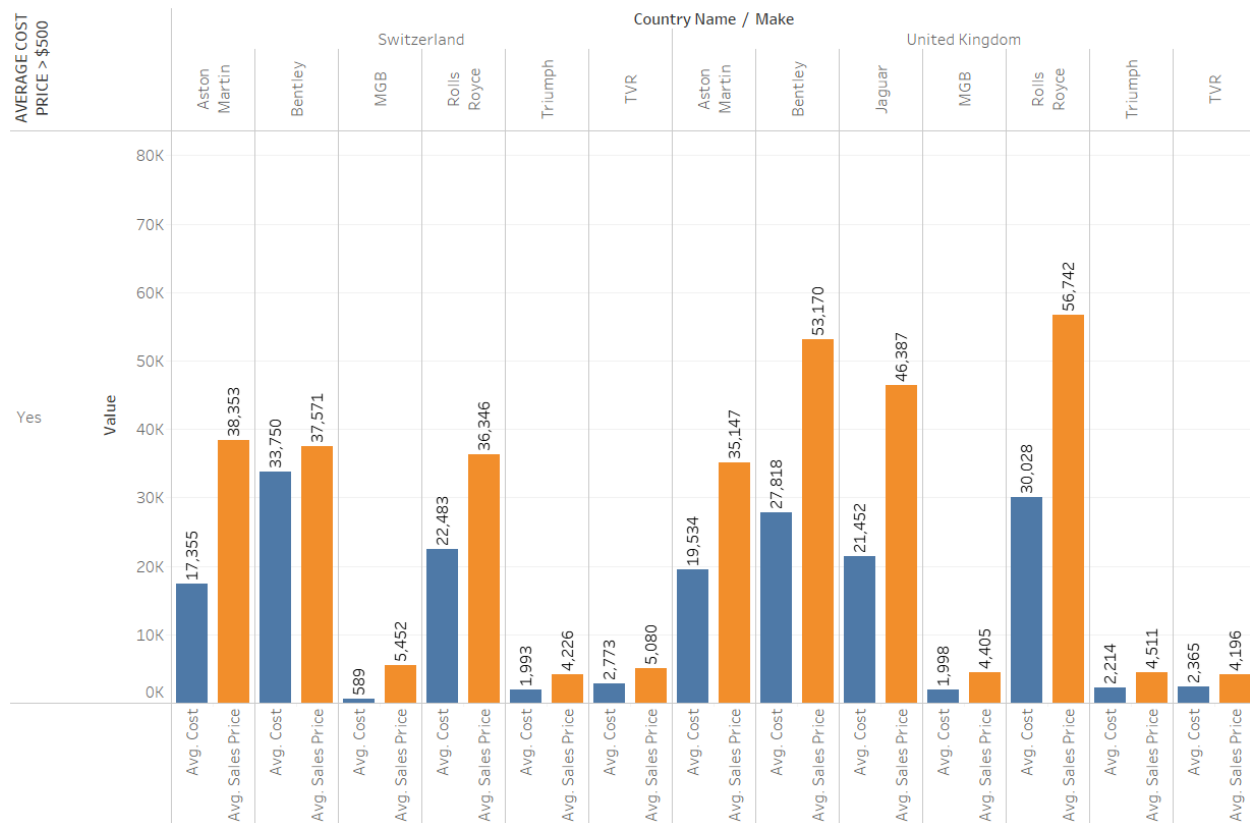


R. Kushal Reddy

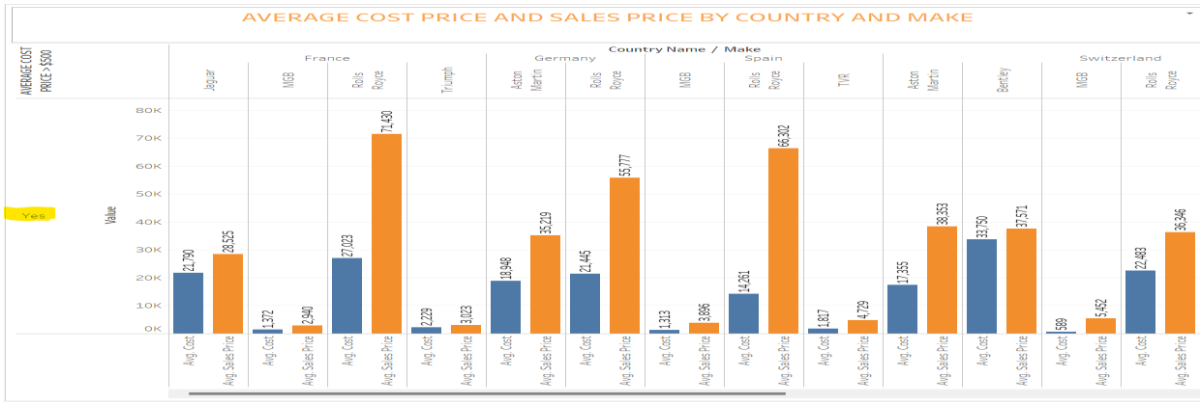
QUESTION 1:-



From the above visualization

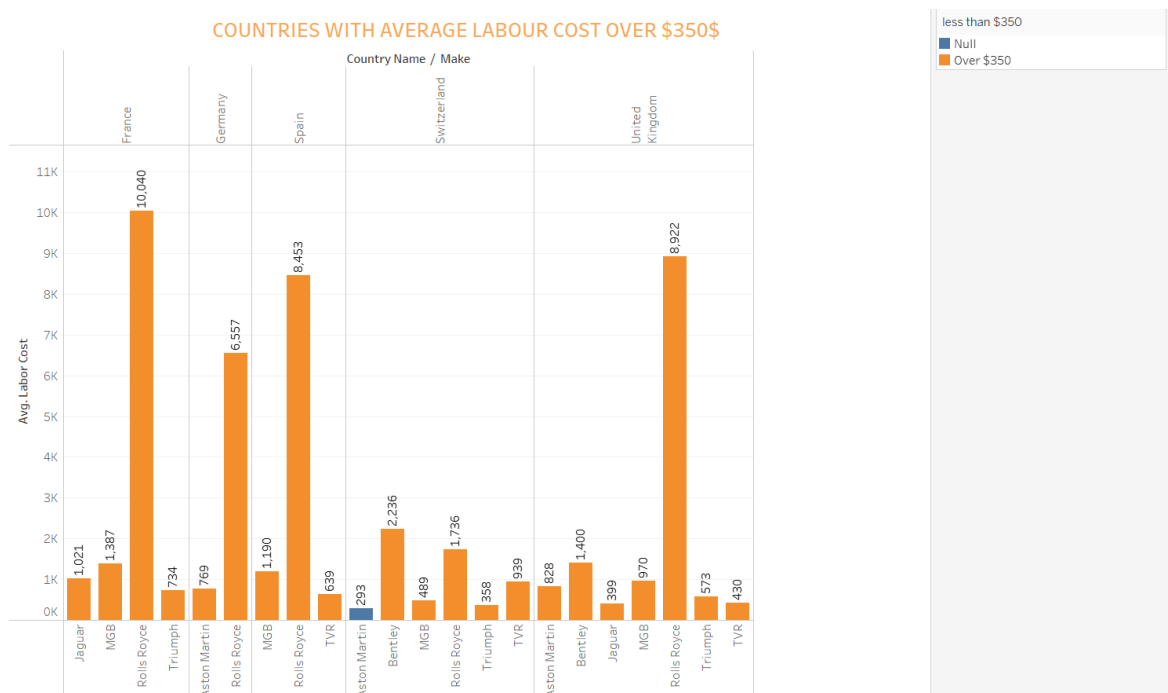
This visualization shows a comparison between countries and manufacturers based on their average cost and sales prices. It reveals that MGB in Switzerland has the lowest average cost price, while MGB in France has the lowest average sales price. The biggest gap between the average cost price and the average sales price is for Rolls Royce in Spain. On the other hand,

Triumph in France has the smallest difference between the average sales price and the average cost price, which is 794.



Upon applying the calculation field, it has become evident that the average cost price for all countries is less than \$500 below the average sales price. This indicates that the companies are generating substantial profits from their makes in these countries. Therefore, it is unnecessary to advise the data owners to cease their business operations as their operations are profitable. This information could be valuable to the data owners as they can use it to make informed business decisions and identify areas where they can focus their efforts to maximize their profits even further.

Question 2:

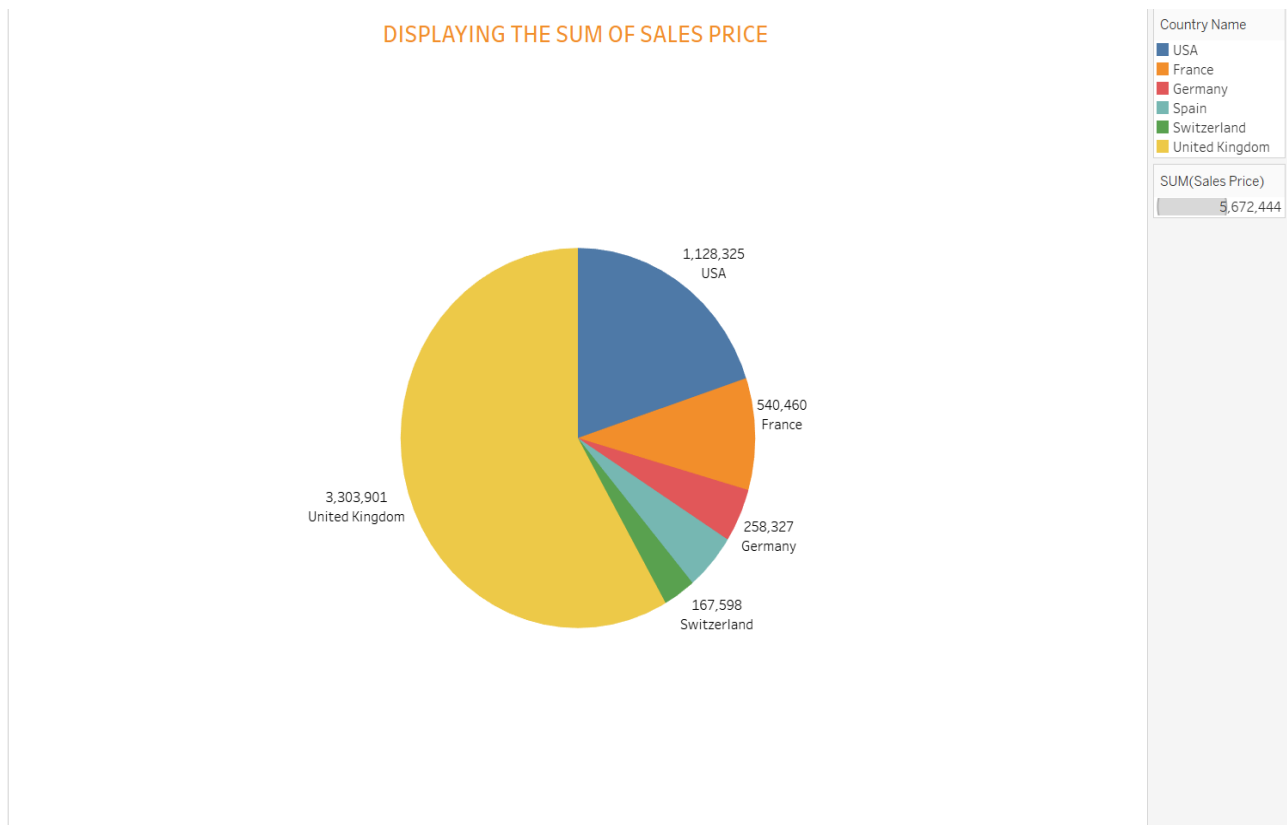


The presented visualization depicts the average labor costs of makers across different countries. It highlights that the make Rolls Royce in France has the highest average labor cost of \$10,040, whereas the make Aston Martin in Switzerland has the lowest average labor cost of \$293. The orange bars display the countries with the labor cost over \$350 and the blue bars display the countries with the labor cost less than \$350.

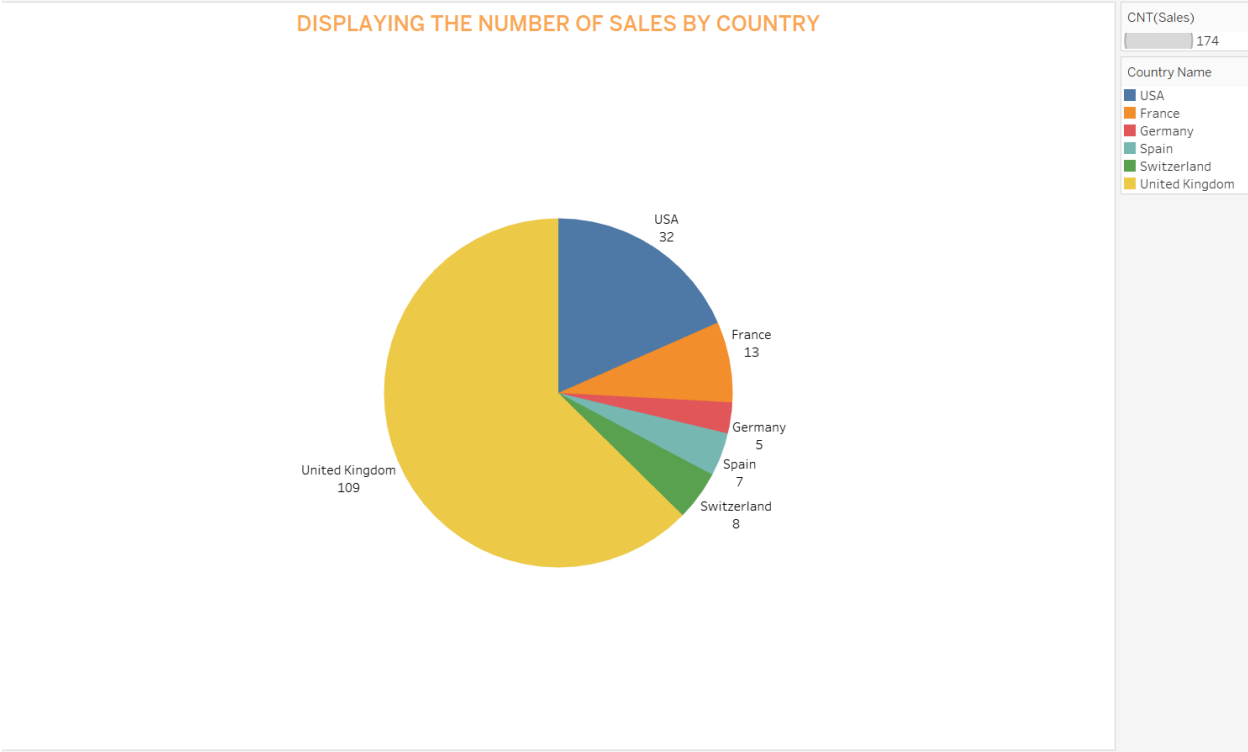
Analyzing this data, it can be inferred that companies should consider outsourcing their operations as the average labor cost exceeds \$350 for most countries. Notably, the average labor cost for the maker Rolls Royce is exceptionally high in countries such as France, Germany,

Spain, Switzerland, and the UK, compared to other makers. This information can be valuable for companies as they can use it to evaluate the cost-effectiveness of their manufacturing operations in different countries and assess the feasibility of outsourcing to optimize their operations and reduce their overall costs.

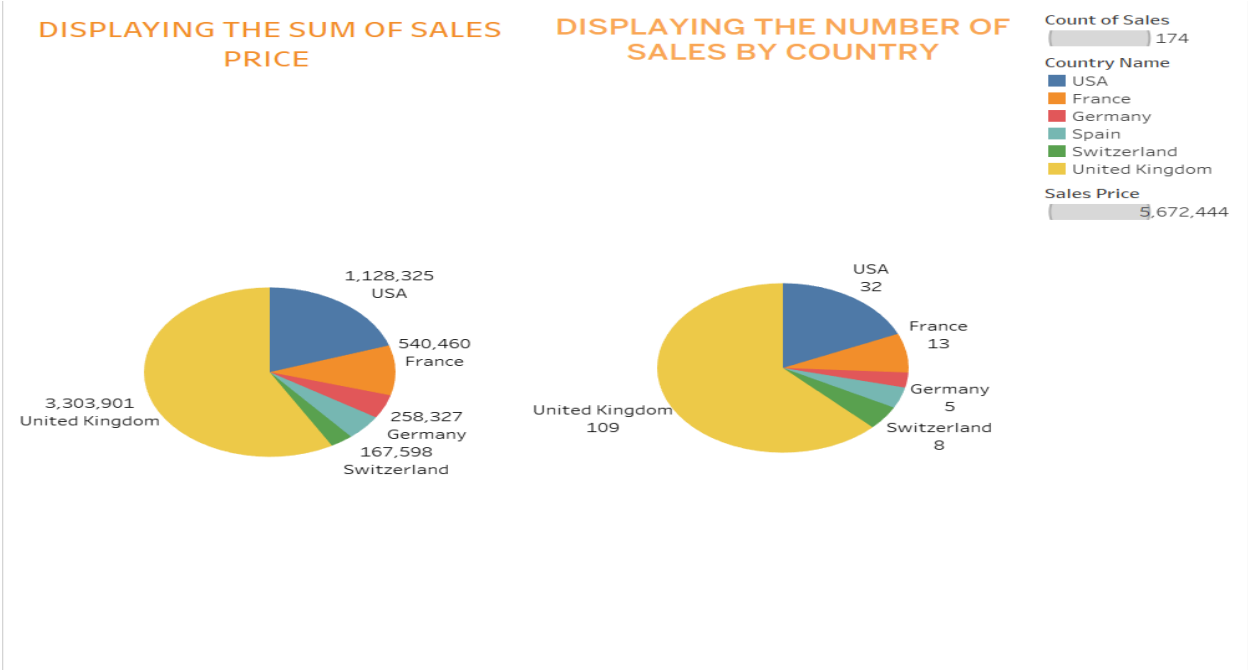
Question – 3:



The presented visualization illustrates the countries with the highest sum of sales prices. The pie chart depicts that makers in the United Kingdom occupy the highest sales price, totaling \$3,303,901, with Rolls Royce being the brand with the highest sum of sales price, which is \$2,269,693. On the other hand, Switzerland has the lowest sum of sales price, which is \$167,598.



The presented chart provides a visual representation of the number of sales occurring in different countries. The data shows that the United Kingdom has the highest number of sales, which is 109, while Germany has the lowest number of sales, which is 5.



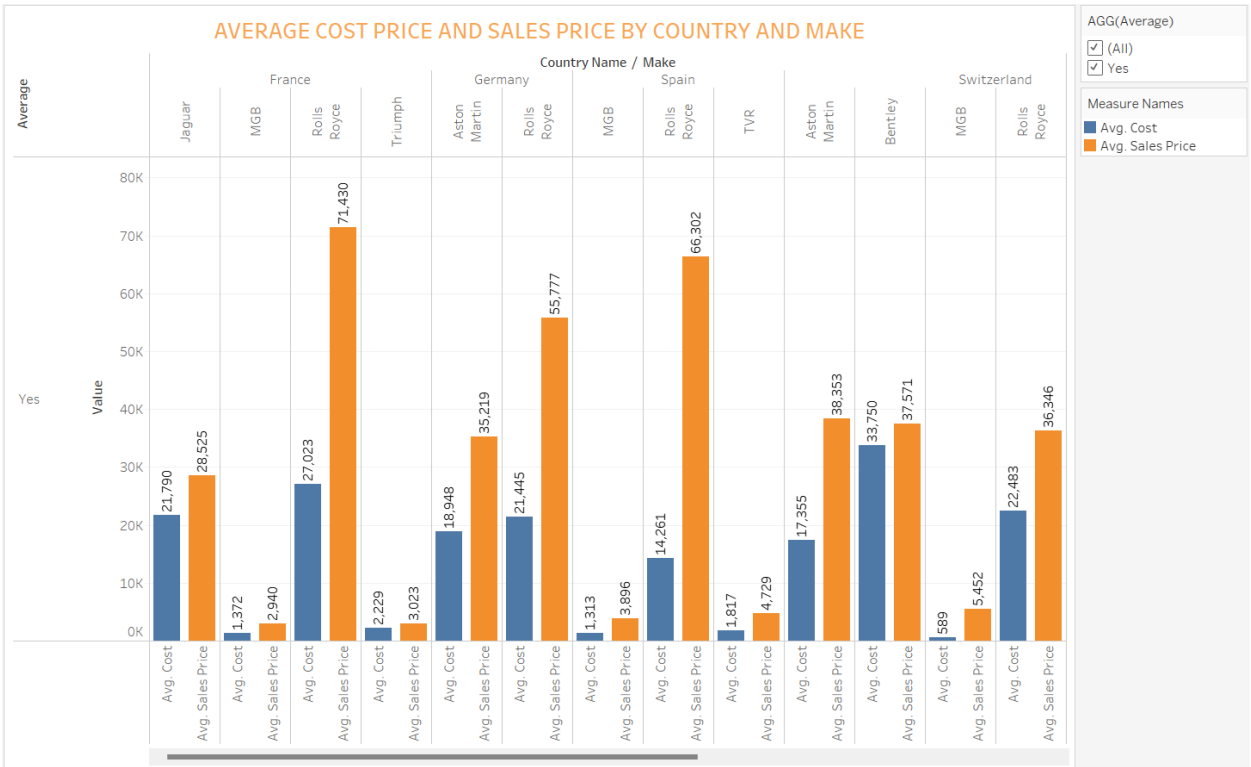
A dashboard has been designed to compare the highest revenue-generating countries and the highest sales occurring in those countries. The data reveals that the United Kingdom has the highest revenue generation and sales, while Germany has the lowest sales and revenue generation.

Based on this data, it may be advisable for the data owners to consider exiting the German market, as there is currently no significant revenue or sales growth occurring. However, before making any final decisions, it's important to conduct a thorough analysis of the market trends and consumer behavior in Germany to identify potential opportunities for growth or strategies to improve sales performance. This dashboard provides a useful starting point for makers to evaluate their performance across different markets and make informed decisions to optimize their business operations.

Question 4;-

Clustered graphs can be an effective way to display the comparison of different variables in a visual and easily understandable way. When comparing the average cost price and average sales price of different makes in various countries, clustered graphs can help to highlight the differences between them.

In this specific scenario, a clustered graph could be used to display whether the average cost price is less than \$500 below the average sales price, and to indicate which makers in which countries are falling below this threshold. This would enable data owners to quickly and easily identify which makers and countries are generating lower profits and where they may need to take action .



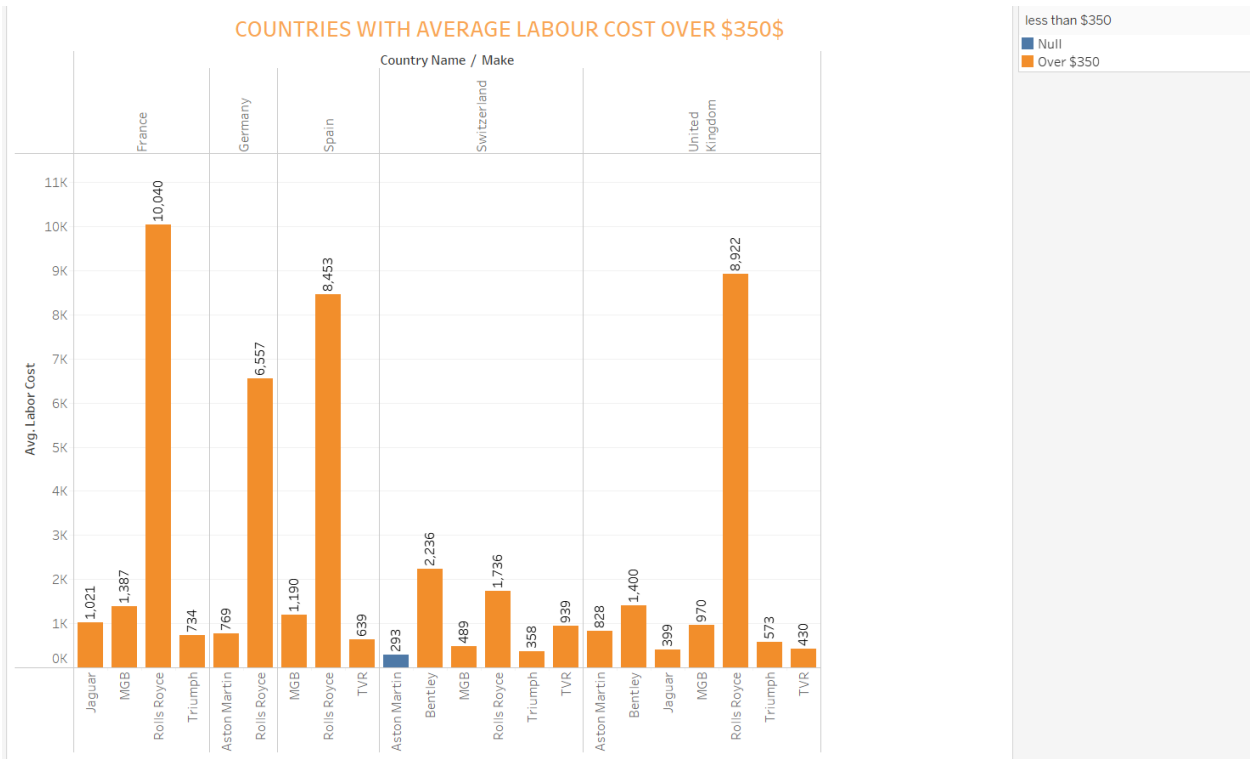
The clustered graph has the values in the y axis and the labels on the X axis . I have used the labels on the top to display the make and country. I have used “IF AVG([Cost]) < (AVG([Sales Price]) - 500) THEN "Yes" ELSE "No" END” in the calculation field . The calculation is comparing the average cost of a product (AVG([Cost])) to the average sales price of that product (AVG([Sales Price])). If the average cost is less than the average sales price minus \$500, then the

calculation returns "Yes". If the average cost is equal to or greater than the average sales price minus \$500, then the calculation returns "No".

Pages	Columns	Country Name	Make	Measure Names
	Rows	AGG(Average)	Measure Values	

I added the "Country" and "Make" hierarchy and placed it in the column shelf. Then, I added the "Average of Cost" and "Average of Sales Price" as measure values in the rows shelf. Lastly, I added the "Average" calculation in the rows shelf to view the output. The filters have been applied to country names to remove the null values.

Question 5:

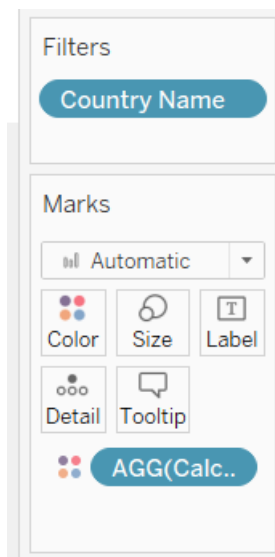


I have used the clustered chart to display the average of labor cost of all the makes and countries. The x axis has the values starting from 0 and the Y axis has the makes name. All the

bars in the orange color displaying the average labor cost higher than the value 350 and the blue color bar to display the charts with value lesser than the 350. I have used the filter 'IF SUM([Labor Cost]) > 350 THEN "Over \$350" END' to display the calculation .

Columns	Country Name	Make
Rows	AVG(Labor Cost)	

In the columns I have used the country and make hierarchy and the avg(labor Cost) in the rows.

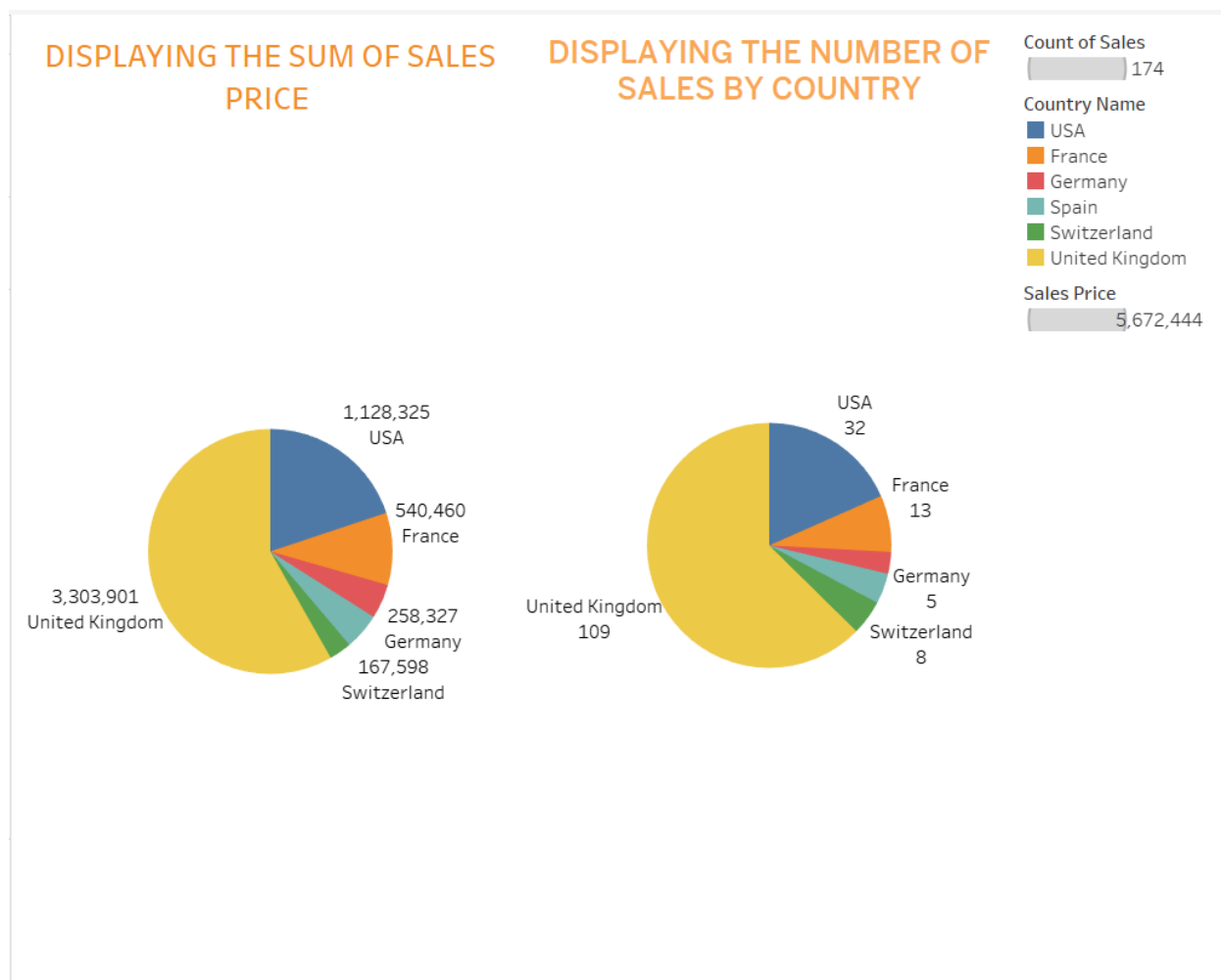


I have applied a filter to country name to remove the null values.

Question 6 : -

In this particular scenario, a pie chart was selected to represent the relationship between the sum of sales price and the number of sales, as there are only a limited number of fields to be visualized. This type of chart is an ideal choice as it provides a clear representation of the proportions of different segments in relation to the whole.

To further enhance the clarity and comprehensibility of the visualization, the sum of sales price has been incorporated into the shapes of the chart. In Visualization 4, the count of sales has been represented using both the size and angle of the chart, which emphasizes its significance. Additionally, data labels have been included to provide viewers with precise information about each segment, thereby facilitating easy interpretation.



Overall, this visualization effectively communicates the relationship between the sum of sales price and the number of sales. The use of a pie chart, along with incorporating data labels and

representing both variables in different ways, results in an easy-to-understand and informative visualization.