

Course:	Report Production: Tables and Graphs
Project Title:	Business Problem Statement
Project Owner:	Reynan Alarcos
Student ID:	TI 1011247
Instructor:	Raghu Bayya, Data Scientist

PROJECT BACKGROUND

An online retail store wants to review their data and provide insights that would be valuable to the CEO and CMO of the business. The business has been performing well and the management wants to analyze what the major contributing factors are to the revenue so they can strategically plan for next year.

The team is interested in viewing the metrics from both an operations and marketing perspective. Remember, thinking from the perspective of business leaders allows you to analyze the data more effectively and present better insights.

INTRODUCTION

The data set of the retail store was downloaded from GitHub source. Initially, the data set has about 541,909 rows with 8 columns which represents the following:

- Invoice No
- Stock Code
- Description
- Quantity
- Invoice Date
- Unit Price
- Customer ID
- Country

In the process of cleaning the data, there are 10,625 rows or 1.96% of negative values from 'Unit Price' column and 1,178 rows or 0.22% of zero values from the "Quantity" column that have been removed since the product of unit price as it multiplied by Unit Price will remain zero. Hence, both negative and zero values will not directly affect the overall impact of the analysis.

Assumption: It is assumed that the retail store sells each item is sold with an increase of 200% from its base price. The assumption is made to clearly visualize the profit against the budget.

After the data has been thoroughly cleaned, the following questions of interest were formulated:

1. ***What are overall total sales and total sales per year?***
This question will be a great springboard information to see the comparison in terms of total sales from the previous year and current year.
2. ***What are the total sales and profit by month and year?***
This question of interest will further zoom in on the sales performance of the retail store month per month and how it runs over the course of two years.
3. ***Visualize the difference between the sum of profit and sum of unit price.***
This line of interest will show the total budget per month in comparison to the profit made per month. This can help visualize how much profit the retail store gained on a monthly basis.
4. ***What is the performance made by each country and which country contributed most to the growth of the company in terms of total sales and profit?***
This question will determine the country that has the highest sales and profit. Looking at the performance of each country is imperative to look at to project and plan for marketing efforts and any type of possibilities.

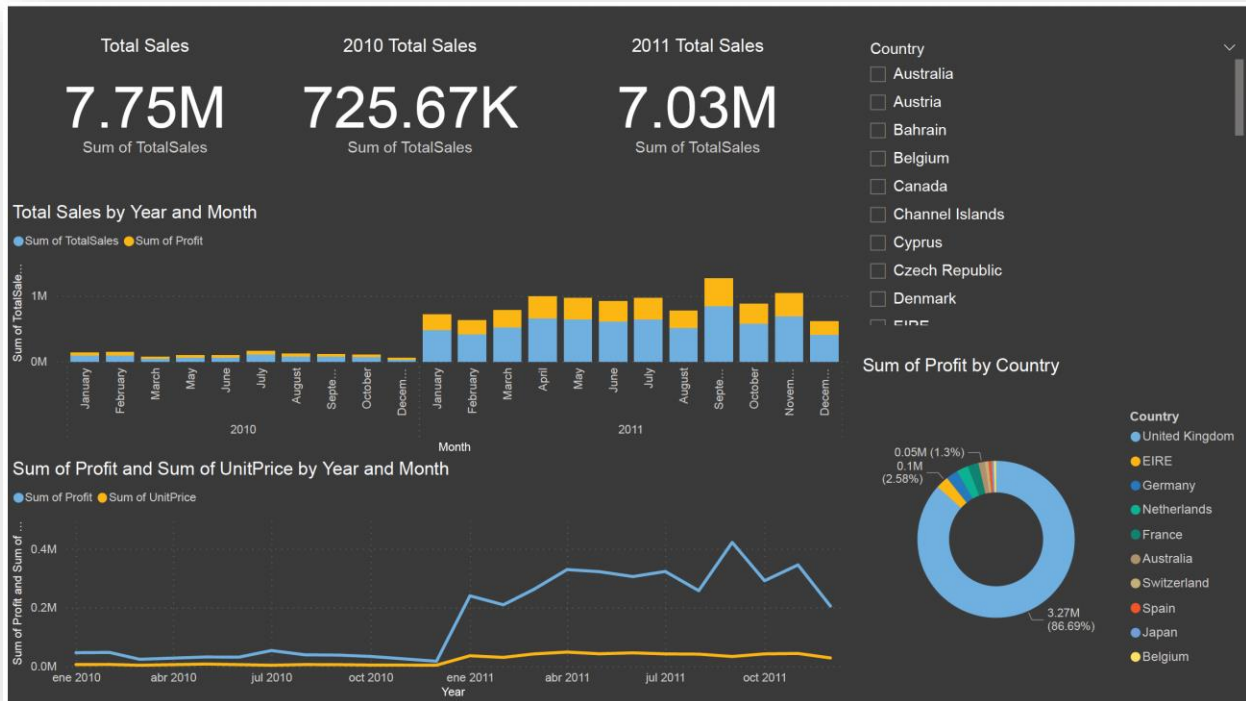
METHODS

When the data set has been cleaned up, it's loaded to Power Bi to generate reports and visualizations. In this process, these are the following visualizations that will be utilized to drill down data and turn it into insightful information.

- **Cards:**
This will be used to display a single fact or single data point such as the total sales.
- **Bar Charts:**
The horizontal bars will be best used for comparing specific values across sales by month, profit by month or year.
- **Line Charts:**
This visualization will be used for looking at a numeric value over time against budget (unit price) and profit.
- **Donut Chart:**
Similar to pie charts; this visual will be used to show the proportion of sectors to a whole in a way that we can see which country contributed most in relation to profit and sales.
- **Slicer:**
This type of filter in the report will help us to be able to look at overall sales metrics and highlight performance for individual countries and different time frames. This is interactive that

will affect the visuals of other reports to be able to see how each district/country performs.

RESULT



CONCLUSION

In conclusion to this analysis, we can easily figure out that 2011 performance ached and rocketed high the sales and profit performance of 2010. Although 2011 ended low but gained the highest during the month of September. United Kingdom earned 3.37 M or 86.69% of share both in sales and profit. It's remained unpredictable to forecast performance because of the huge variance of sales performance of 2010 and 2011. Nevertheless, with the right marketing strategies, sales over the next year could potentially increase from 2011 sales performance.