

Introduction

This report will be analysing the first three months of sales data for 2022 in order to provide recommendations on how to increase our sales and profits for the next quarter. The dataset includes customer/company information, details on their orders and the financial information of each product. Insights that can be gained from this information include which cookies cost the most to make and which generate the highest profits. Businesses and states that produce the most revenue for the company can also be identified. The overall aim for this report is to find key areas of focus through which our profit margin can be improved.

Project plan

The first stage is to define clear aims and objectives of the project. Then the data needs to be cleaned and analysed including the addition of calculated fields. Once graphs and charts have been generated, the findings will be interpreted. The final stage is to provide recommendations for the next steps that can be actioned in order to improve the bottom line of the company. To do this, Excel, Power Query, Power Bi and Microsoft Word will be used.

How you prepared the data

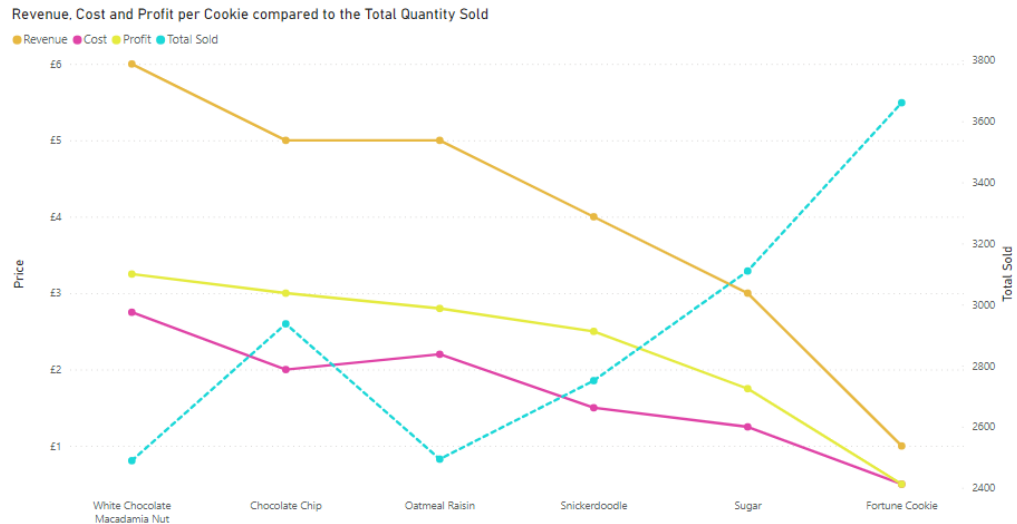
The data was cleaned and prepared using Power Query in Power Bi. This included changing the data types of the columns e.g. dates and currency, correcting spelling mistakes such as 'Shugar' into 'Sugar' and replacing null values with the correct corresponding values such as identifying the city from the company's address. Following this, calculated fields that would be important for this analysis were also added to the data set, including the total sales, total cost, total profit and profit per cookie.

Compliance with data protection regulations

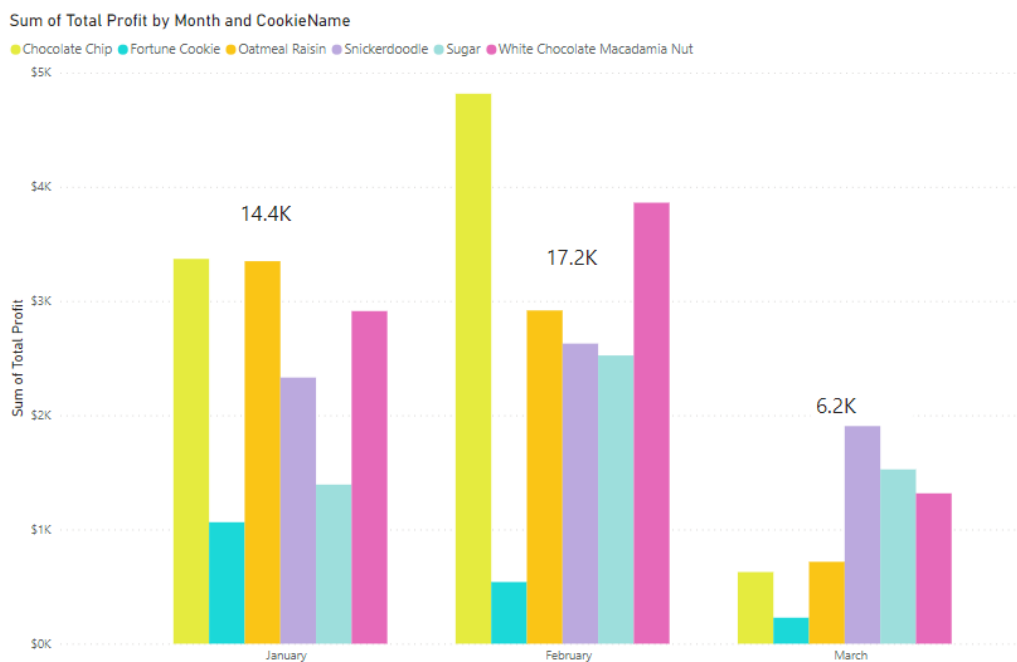
To comply with the various data protection regulations the company abides by, the dataset was stored on the cloud and access was restricted to necessary personnel only via password protection. Any personal information that was not required for the analysis was removed including addresses and phone numbers.

Findings

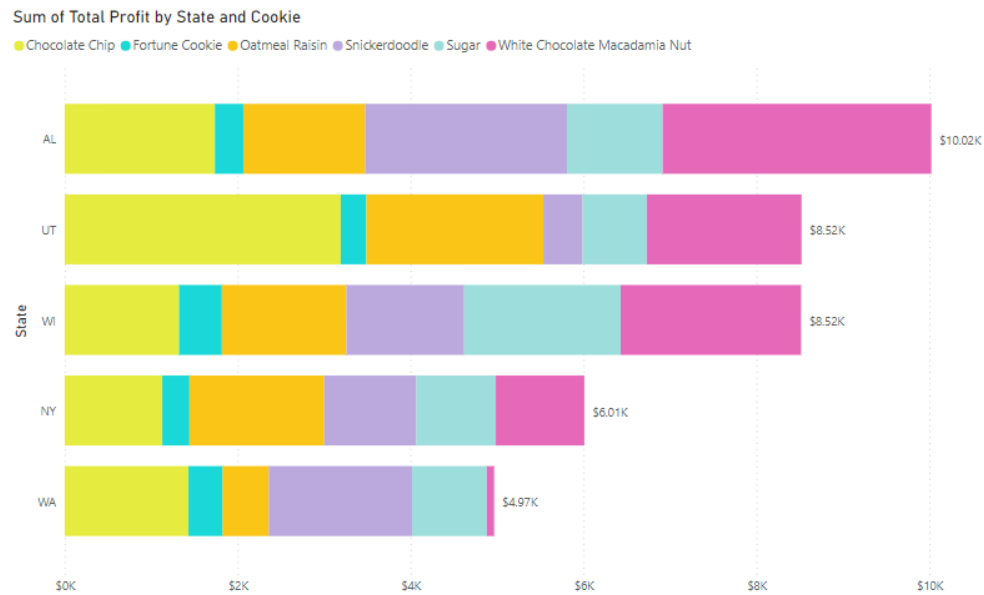
The first graph shows the revenue generated by each cookie, how much they cost to produce and their individual profits. What can be observed quite clearly is that the white chocolate macadamia nut (WCMN) cookies cost the most to make, are the most expensive and make the company the highest profits. On the other end of the scale is the fortune cookie which is incredibly cheap to make and sell but does not generate much profit. Also highlighted in the graphs is the inverse relationship between revenue/cost/profit per cookie and the quantity of cookies sold. While WCMN cookies produce the highest profits, they are the least popular cookies compared to fortune cookies which produce the least amount of profits but are the best-selling cookies. Another cookie of note is the chocolate chip type which is the second most expensive cookie, costs a similar amount to produce as the WCMN cookies and also produces a similar amount of profit however it is the third most popular cookie that is sold.



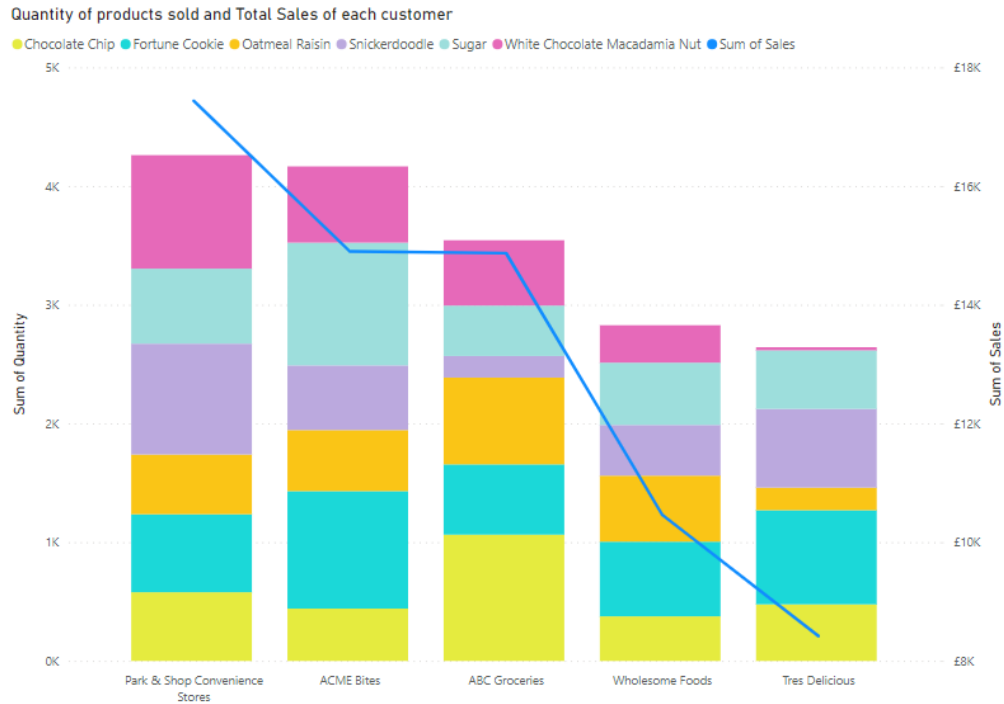
The second graph shows the total profits made by the company each month in the first quarter of 2022. Clearly February was the best month, closely followed by January however, March had significantly lower profits which needs to be addressed. Overall, it can be observed that chocolate chip, oatmeal and WCMN consistently produce high profits in Jan/Feb while Snickerdoodle stands out in March.



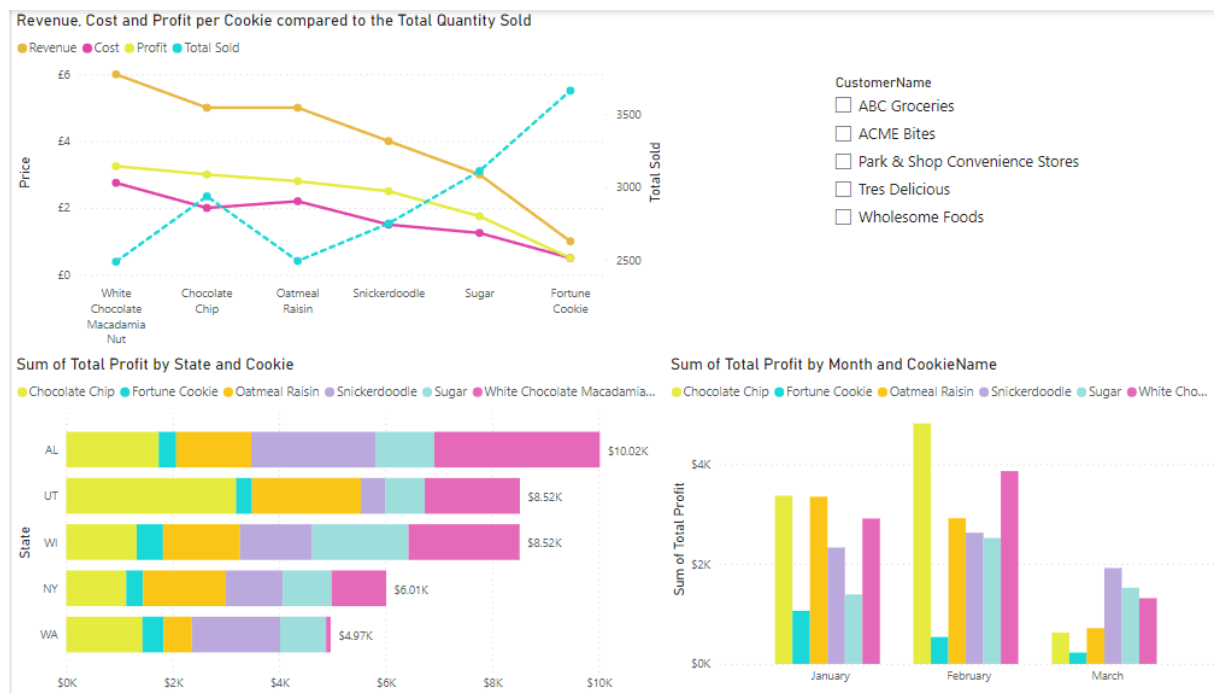
The third graph shows the total profit by region; Alabama produces the highest amount of profit with Utah and Wisconsin in joint second place. Washington is the state with the lowest profitability at only ~\$5000.



The final graph shows the quantity of cookies bought by each customer over this period and the corresponding total sales amount. The top three customers are the Park & Shop convenience store, ACME Bites and ABC Groceries while the lowest is Tres Delicious.



Dashboard



Recommendations

To improve the profits of the individual cookies, the more expensive ones (WCMN and Chocolate Chip) should be put on sale. By reducing the price, customers will be more inclined to buy them and this will increase the sales/profits. As the fortune cookies are our best selling cookies, the company should experiment with new flavours and sell them at a slightly higher price in order to generate more revenue.

When assessing the profits by month, it can be observed that January (\$14,400) and February (\$17,200) have high totals. This could be attributed to stores restocking after a busy festive period and requiring additional stock. The profits in March are particularly low ~\$6200 which is significantly low. The company should create a new marketing campaign around this month to increase visibility and drive up sales.

Regional assessment of profits indicate Alabama, Utah and Wisconsin are the highest grossing and advertisements should be concentrated here. The company should also consider focussing on these states to attract new customers and generate new business where the cookies are already popular. As Washington has the lowest profits by far, the company should approach the existing customers with the possibility of a regional reduction in price in order to generate sales.

The customer assessment of quantity sold and total sales identifies the top three as Park & Shop convenience store, ACME Bites and ABC Groceries. The other two customers, particularly Tres Delicious should be advised to either increase their marketing strategy or a special sale can be offered in order to increase sales.

Conclusion

In summary, the analysis shows WCMN cookies are the most profitable but the least popular, fortune cookies are the least profitable but the most popular. Both of these should be targeted as advised above in order to increase sales and profits. Other key areas to target are the month of March, Washington state and the Tres Delicious company . In-depth marketing campaigns and tailored sales should be used in these areas to improve our overall profit margin.