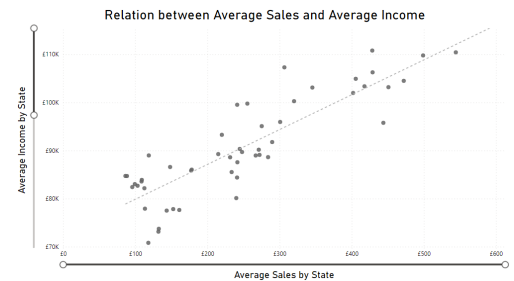# Market Analysis Report for National Clothing Chain

This report presents a detailed summary of findings, conclusions, recommendations of market analysis for National Clothing Chain.

Analysis questions answers:

1- There is a strong positive correlation between customer's income and sales with R-Squared = 0.78.

Relation between Average Sales and Average Income

2- There is a moderate negative correlation between customer ratings and the product return rate with R-Squared = 0.69.

Relation between Customer Rating and Product Return Rate

3- The linear regression formula to predict the customer income from sales is:

$$y = 72.4325032724392x + 72638.2093$$

4- The customer with the highest predicted income is "Jon Little" from Illinois.

Customer ID	State	Date of Birth	Last 6 Months Purchases	Customer Name	Predicted Incomes
JLit30836	Illinois	03 June 1984	£5,250	Jon Little	$452,908.85

5- The product which will be advertised the most is the "Spring T-Shirt".


Recommended Products Distribution
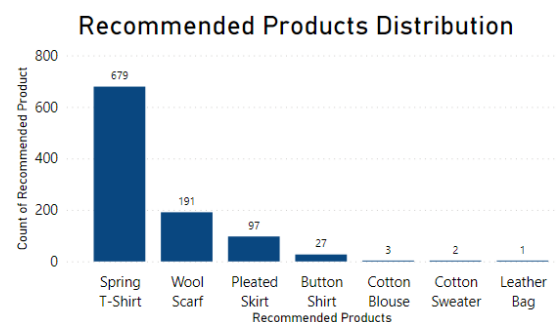
Conclusions:

1- From the first graph, We observed a strong positive relation between customer's income and our sales so I suggest targeting customers with higher incomes which will increase our future sales.

2- As shown in this map, Average household income is higher in the eastern part of the country so I recommend increasing our advertisements in the east.

Average Household Income Across the country
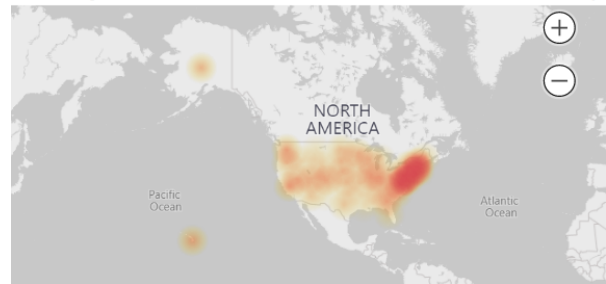
3- As shown in this Line graph, Total Purchases have decreased a lot in the last three months after increasing at the end of the last year which indicates that we have obvious problems in our sales strategy in the last period.

Purchases Over Time
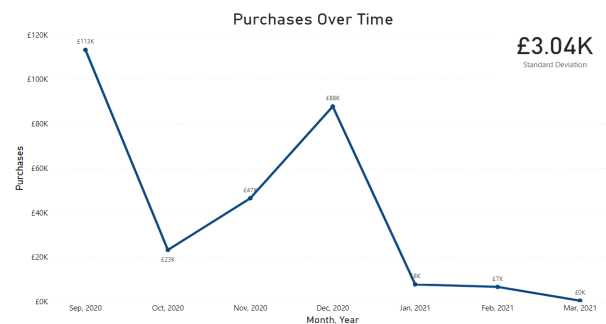
4- From the second scatter plot, We observed a moderate negative relation between customer ratings and the product return rate which means that our products with a low rate have a high probability to be returned which means more loss, so we have to review our customers' reviews on these products to increase its quality and make it more satisfying to our customers.

Here is an online link to my report in case the formatting is damaged offline:

https://docs.google.com/document/d/1elLFy8G1ANzMkjrE4CmiD3PRHqUX5OwiWnpGWqfcdFk/edit?usp=sharing