



MARKET ANALYSIS REPORT FOR NATIONAL CLOTHING CHAIN

Data Analysis and Visualization with Microsoft Power BI
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1 Interudction

This report helps the business make the necessary conclusions. Below are the answers to the five key questions we addressed.

2 Analysis Questions:

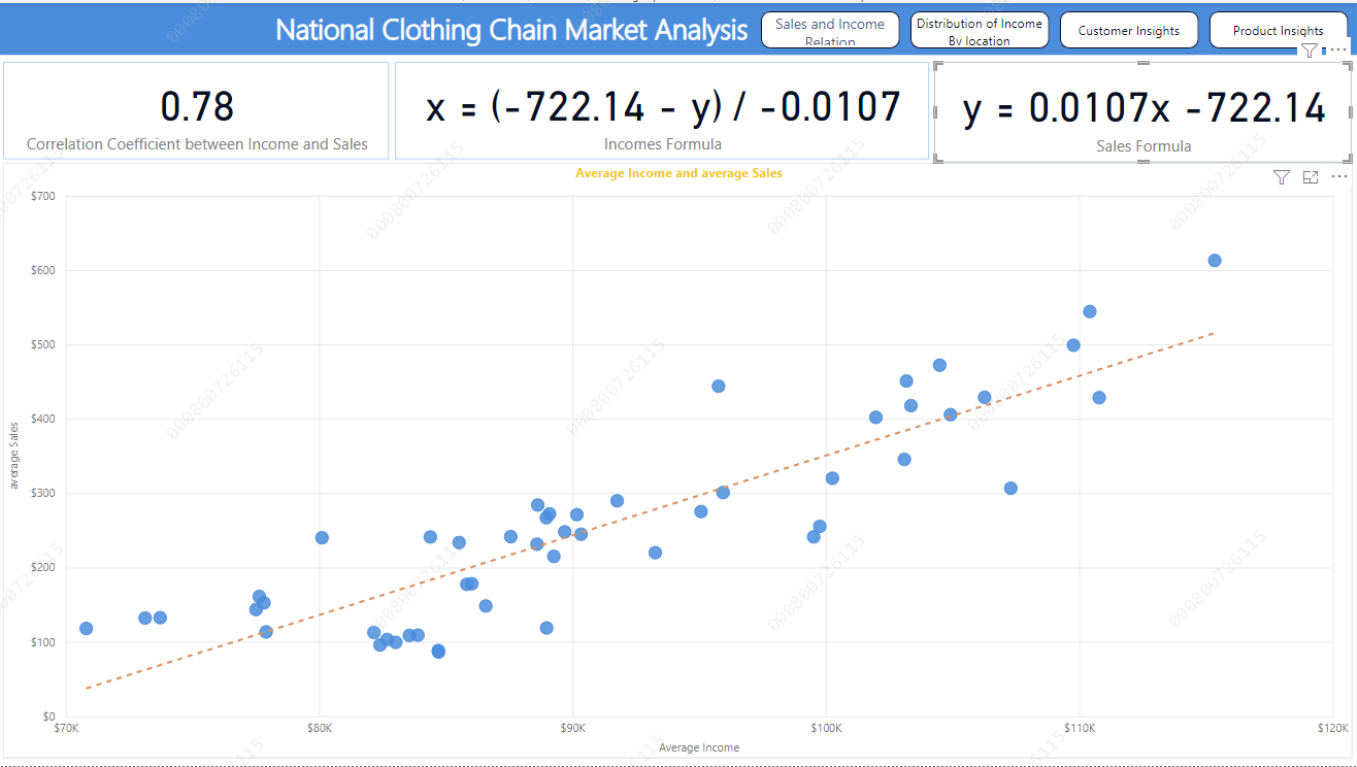


Figure 1

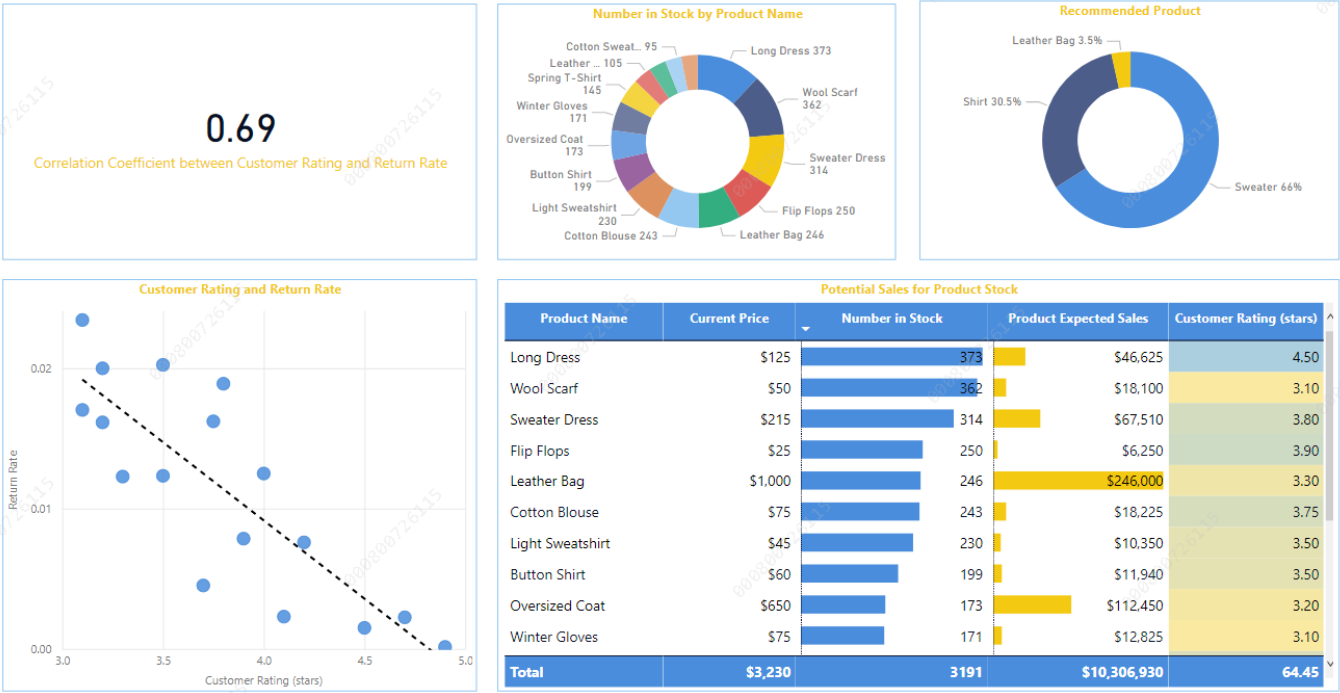
2.1.1 What is the correlation (R2 value) between sales and income?

The correlation coefficient between sales and income is 0.78 which indicates that the relationship is positive strong. The scatter plot in Figure 1 shows the relationship alongside the R².

2.1.2 What are the linear regression formulas to predict customer income from customer sales?

The formula to predict the customer sales defined as follow: $Y = 0.0107x - 722.14$.
The formula to predict the customer Income defined as follow: $x = (-722.14 - y) / -0.0107$.

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Potential Sales for Product Stock

Product Name	Current Price	Number in Stock	Product Expected Sales	Customer Rating (stars)
Long Dress	\$125	373	\$46,625	4.50
Wool Scarf	\$50	362	\$18,100	3.10
Sweater Dress	\$215	314	\$67,510	3.80
Flip Flops	\$25	250	\$6,250	3.90
Leather Bag	\$1,000	246	\$246,000	3.30
Cotton Blouse	\$75	243	\$18,225	3.75
Light Sweatshirt	\$45	230	\$10,350	3.50
Button Shirt	\$60	199	\$11,940	3.50
Oversized Coat	\$650	173	\$112,450	3.20
Winter Gloves	\$75	171	\$12,825	3.10
Total	\$3,230	3191	\$10,306,930	64.45

Figure 2

2.1.3 What is the correlation (R2 value) between customer ratings and product return rate?

The correlation coefficient between customer ratings and product return rate is 0.69 which indicates that the relationship is moderate. The scatter plot in Figure 2 shows the relationship alongside the R2.

2.1.4 Which product will be advertised the most?

The most product will be advertised is the sweater with price \$100 to 66% of the total customers. The product recommendation determined by the sales for each customer.

2.1.5 Which customer do you predict has the highest income?

As observe on Figure 3, Jon Little from Illinois is highest customer in terms of income prediction (\$558,143.93) where he made Last 6 Months Purchases with \$5250.

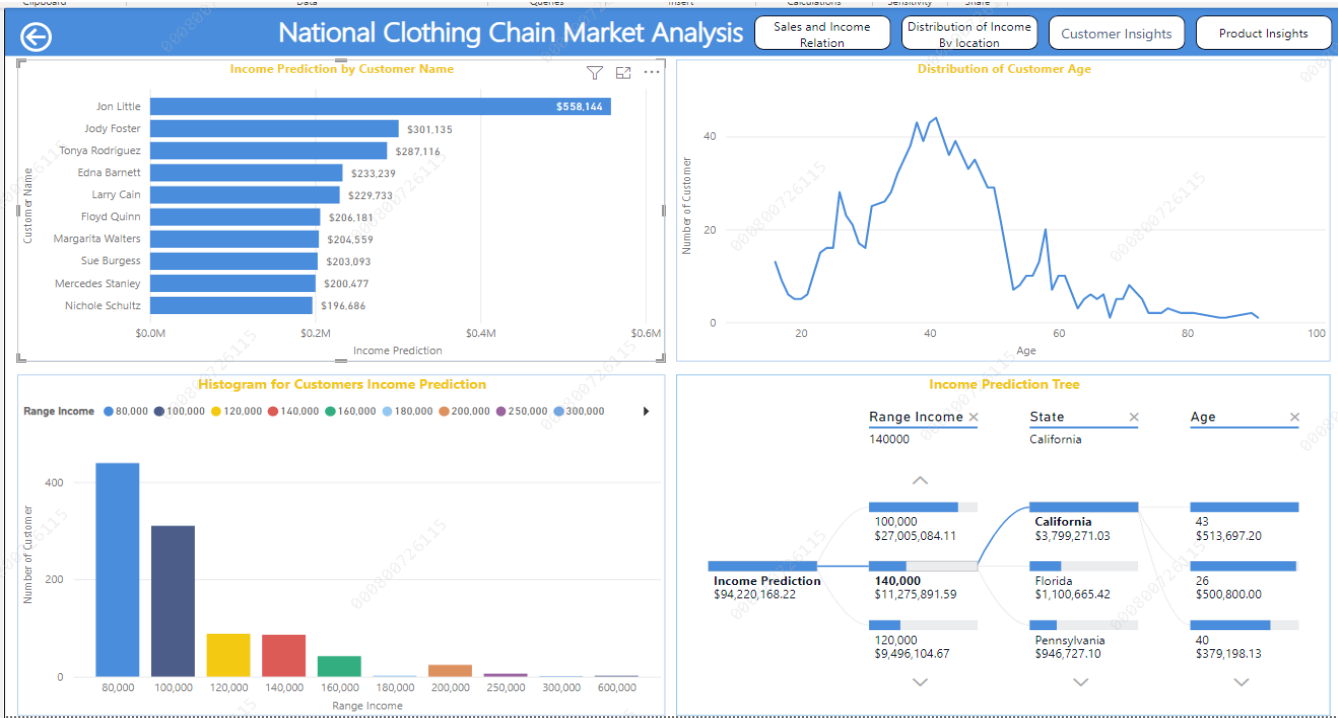


Figure 4