



IMT 577

Stores 10 & 21

Pod 5

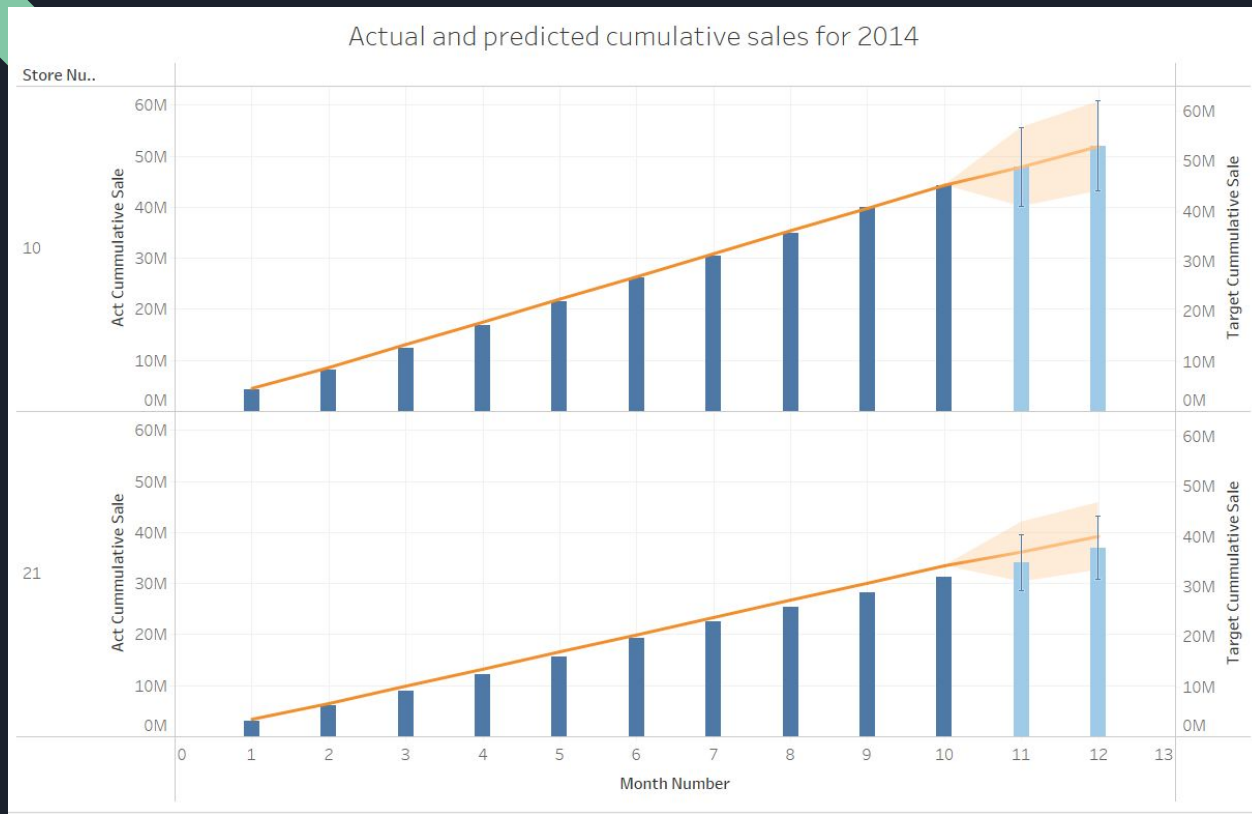
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Problem Statement

- Creating a Business Intelligence system that answers the questions posed to us for the stores 10 and 21.
- Creating data visualizations to help in picturing the key point of takeaways from the data given.
- Giving data-backed recommendations to the stores for enhancing their overall performance.

Q1.a. How are both stores performing according to target?

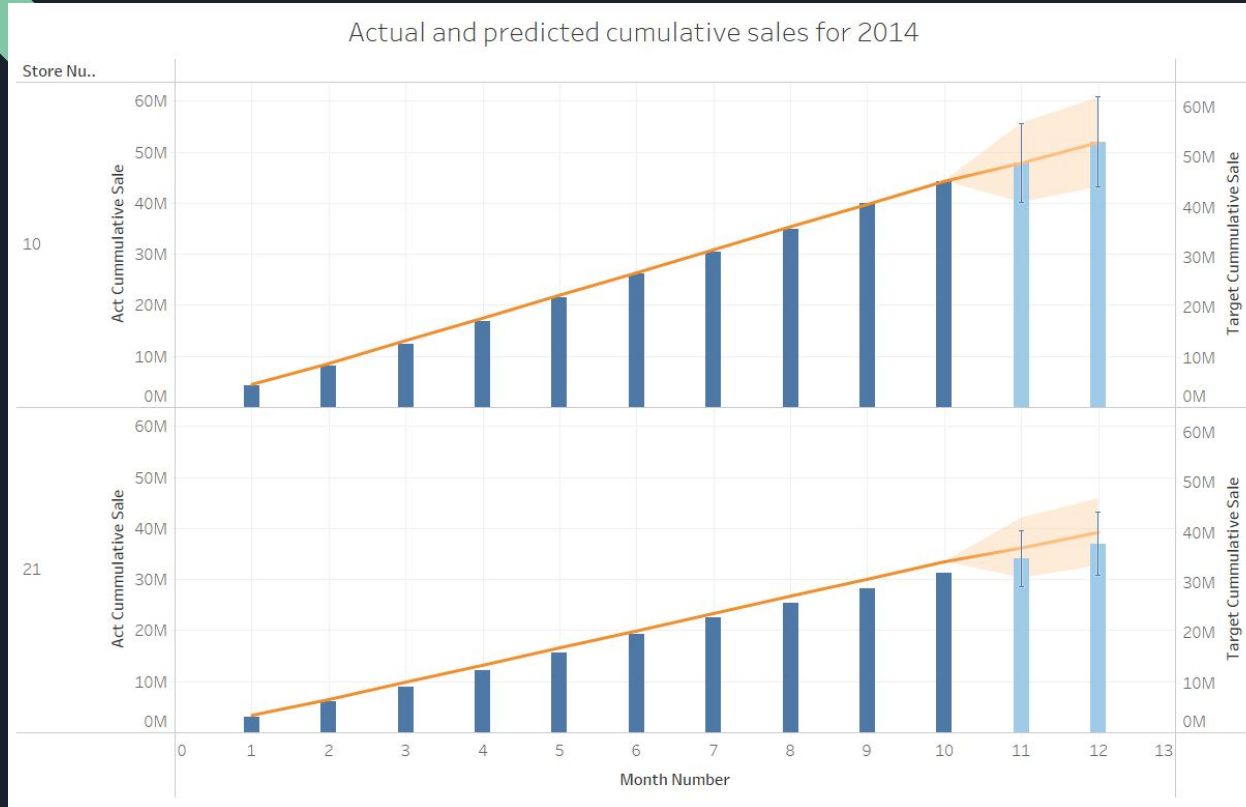


Measure Names, ATTR(...)

- Act Cumulative Sale..
- Act Cumulative Sale..
- Target Cumulative S..
- Target Cumulative S..

Details :
The plot displays actual and targeted sales for 2014 for both stores 10 and 21 for the months of January to October. Based on their performance during this period, we build predictions for the sales during the months of November and December.

Q1.a. How are both stores performing according to target?

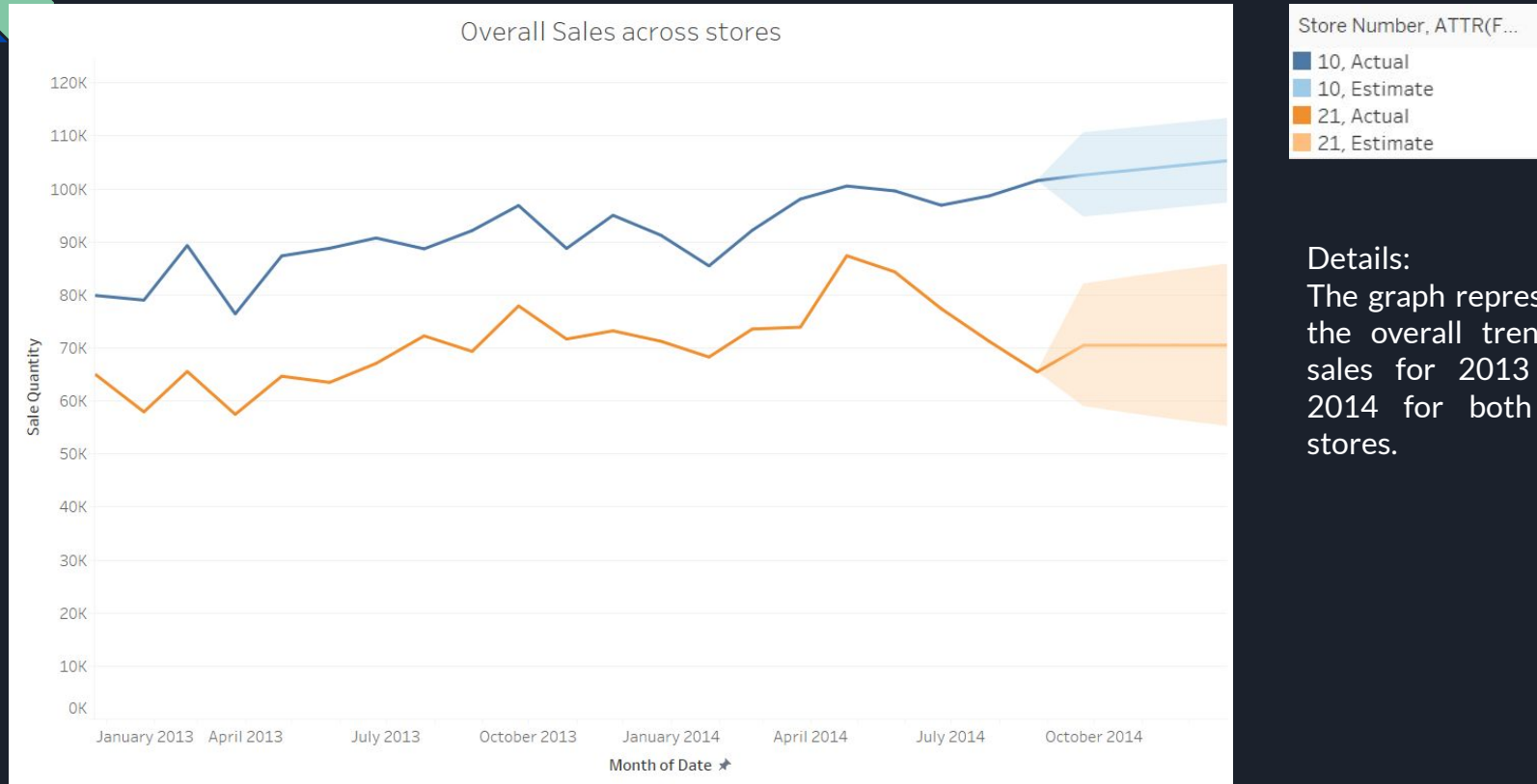


Measure Names, ATTR(...)

- Act Cumulative Sale..
- Act Cumulative Sale..
- Target Cumulative S..
- Target Cumulative S..

Analysis :
From the graph, we can say that store 10 performs better than store 21 in terms of achieving their targeted sales amount.

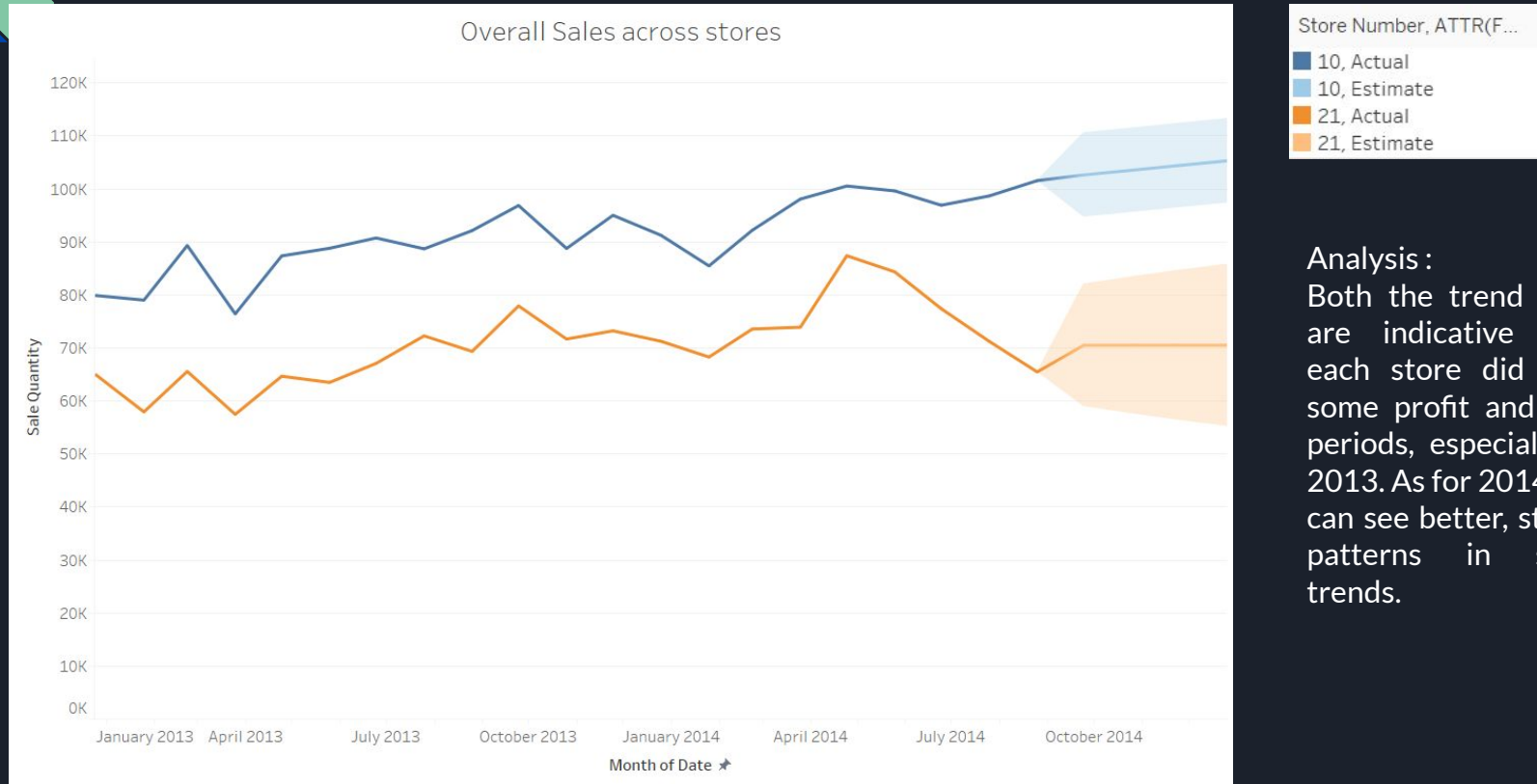
Q1.b. Should either store be closed?



Details:

The graph represents the overall trend in sales for 2013 and 2014 for both the stores.

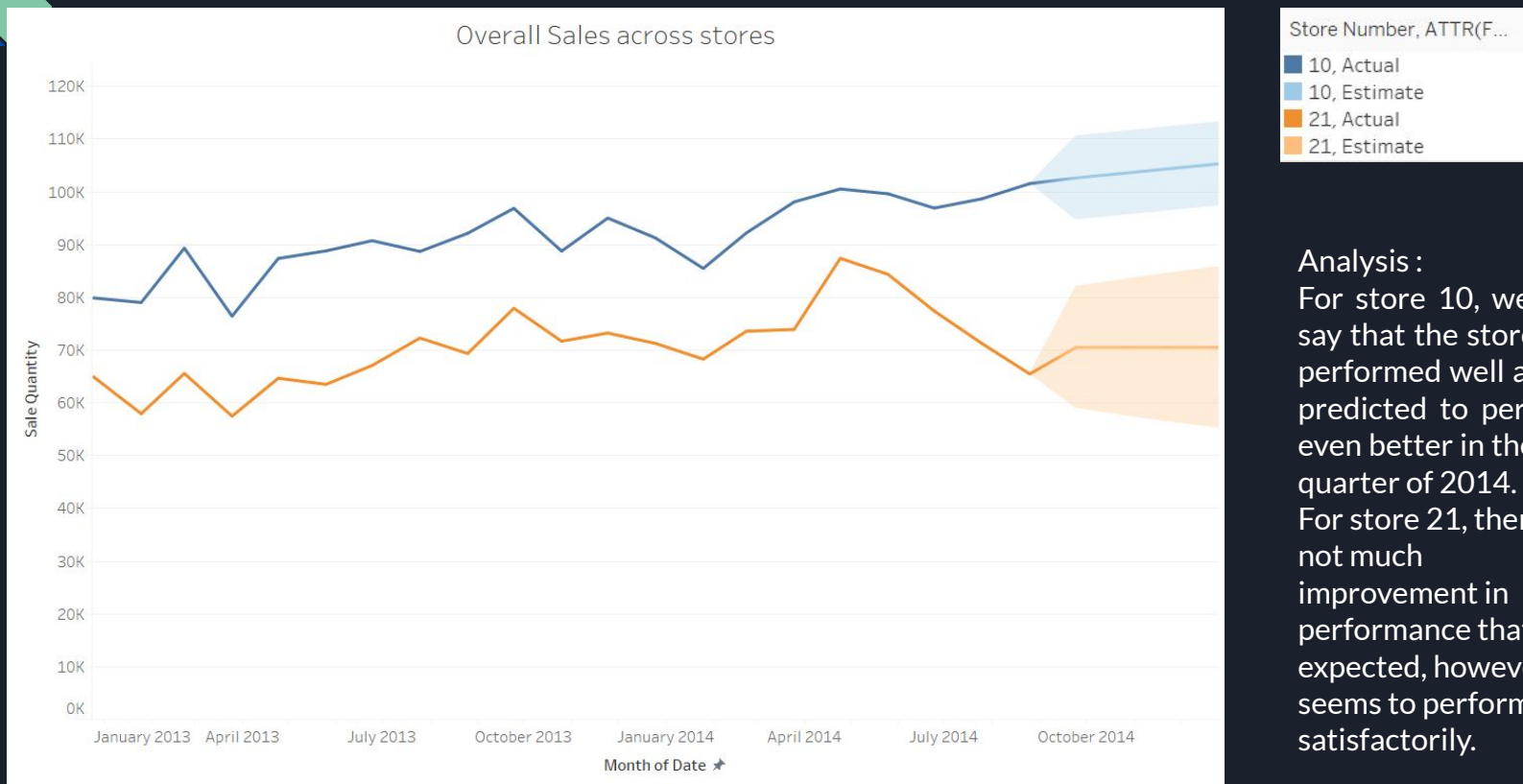
Q1.b. Should either store be closed?



Analysis :

Both the trend lines are indicative that each store did face some profit and loss periods, especially in 2013. As for 2014, we can see better, stable patterns in sales trends.

Q1.b. Should either store be closed?



Q1.c. What should be done in the next year to maximize profits?

Sales across product types			
Product Type		Store Number (Vw Dim Sto..	
		10	21
Women's Formal		38,800,620	15,155,316
Women's Casual		14,992,710	19,991,617
Men's Formal		14,810,118	7,344,057
Women's Eveningw..		8,102,962	6,648,406
Men's Casual		4,446,297	6,053,185
Jewelry		5,801,715	4,570,168
Cosmetics		2,218,614	1,689,119
Kids 7-14		1,701,612	1,295,530
Kids 2-6		857,982	715,329
Baby 0-2		409,972	340,160

Product Category

- Accessories
- Children's Apparel
- Men's Apparel
- Women's Apparel

Details :

The graph shows the most selling products across different product types and grouping them into product categories, in a decreasing order.

Q1.c. What should be done in the next year to maximize profits?

Sales across product types

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	10	21
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Product Category

- Accessories
- Children's Apparel
- Men's Apparel
- Women's Apparel

Analysis :

We can see from the graph that women's apparel is the product category generating the most revenue at both stores 10 and 21.

Recommendation :

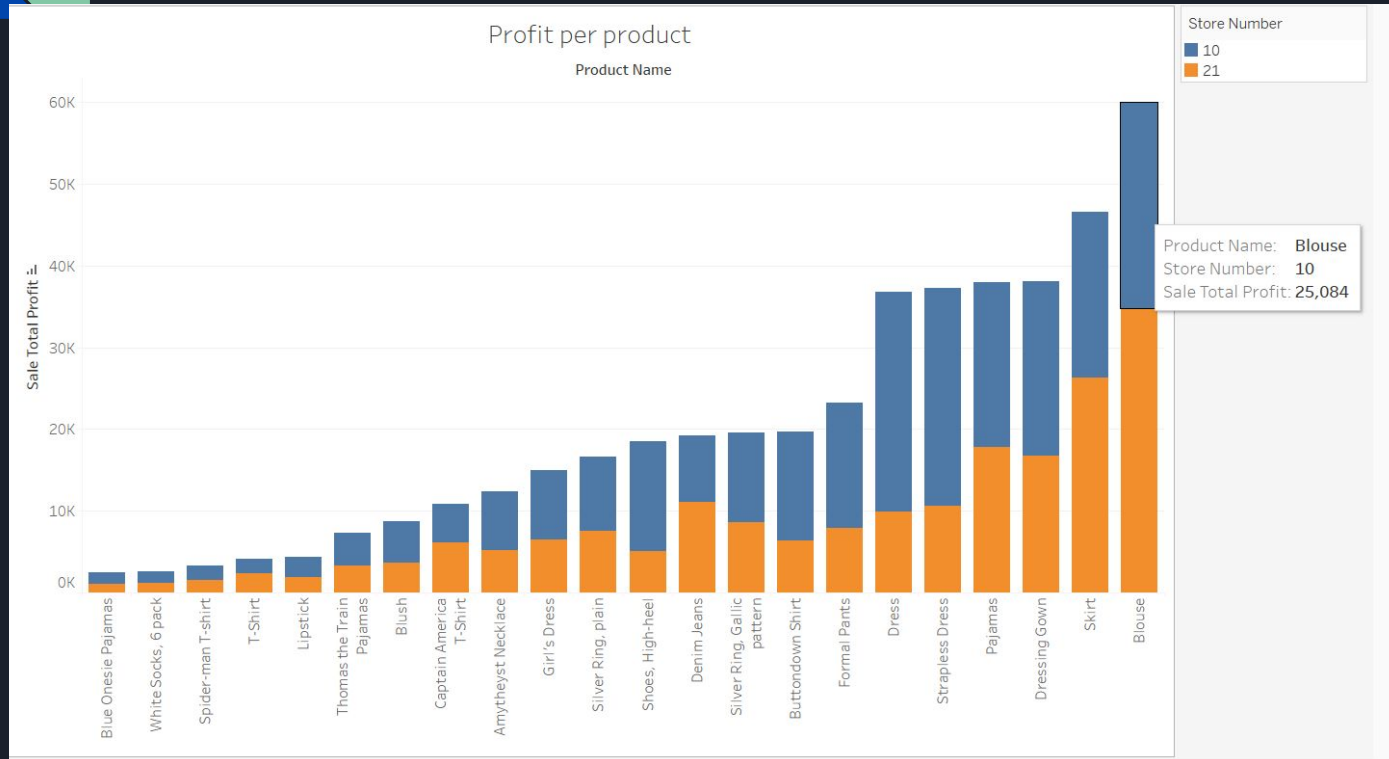
We recommend that both the stores increase product sales in the women's apparel category.i.e. Women's formal and women's casual.

Q1.c. What should be done in the next year to maximize profits?



Details :
The graph displays the most profitable products in increasing order, across the two stores.

Q1.c. What should be done in the next year to maximize profits?

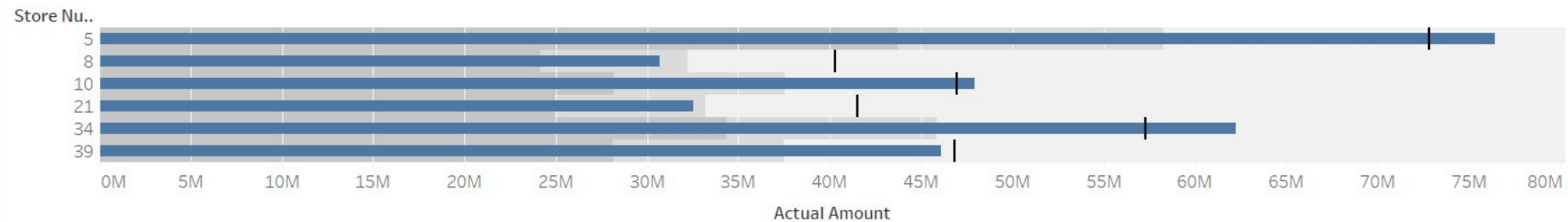


Analysis :
We identify which products are the most profitable in each store. For example, for store 10, blouses have the highest profit in comparison to all other products in the same store.

Recommendation :
Increases the sales of the top 5 most profitable products.

Q2. Recommend 2013 bonus amounts for each store if the total bonus pool is \$2,000,000 using a comparison of 2013 actual sales vs. 2013 sales targets as the basis for the recommendation.

Target Amount vs Sales Amount for 2013




Stores meeting the Target sales amount:

- Store 5
- Store 10
- Store 34

Stores not meeting the Target sales amount:

- Store 8
- Store 21
- Store 39



Q2. Recommend 2013 bonus amounts for each store if the total bonus pool is \$2,000,000 using a comparison of 2013 actual sales vs. 2013 sales targets as the basis for the recommendation.

Percentage Target reached

Store Nu..	
5	104.97
8	76.16
10	102.10
21	78.37
34	108.62
39	98.45

Details:

Percentage of the Target sales amount reached by the stores

Analysis:

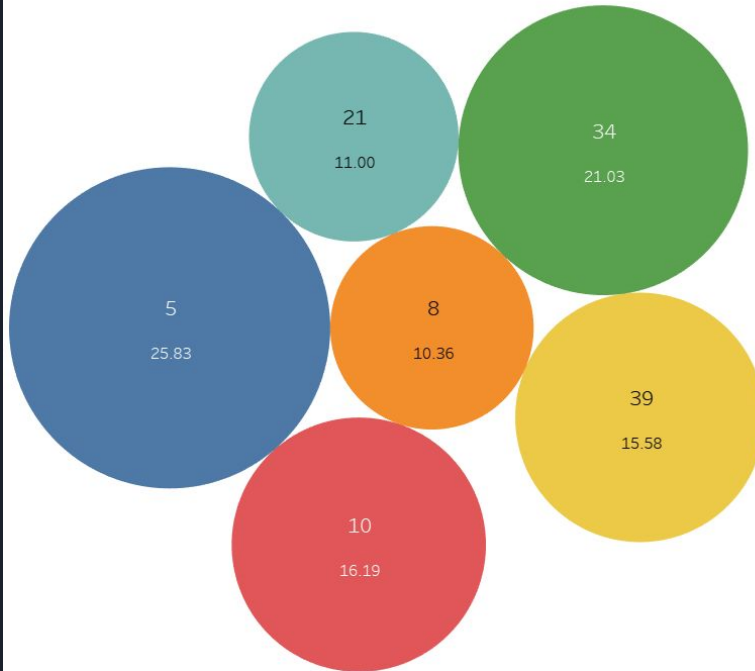
It is observed that Stores 5, 10 and 34 reach the target

Store 39 is very close to the target

Stores 8 and 21 do not perform very well

Q2. Recommend 2013 bonus amounts for each store if the total bonus pool is \$2,000,000 using a comparison of 2013 actual sales vs. 2013 sales targets as the basis for the recommendation.

Percentage of revenue of contributed by each store



Details:

This graph shows the percentage of revenue generated by each store in the year 2013

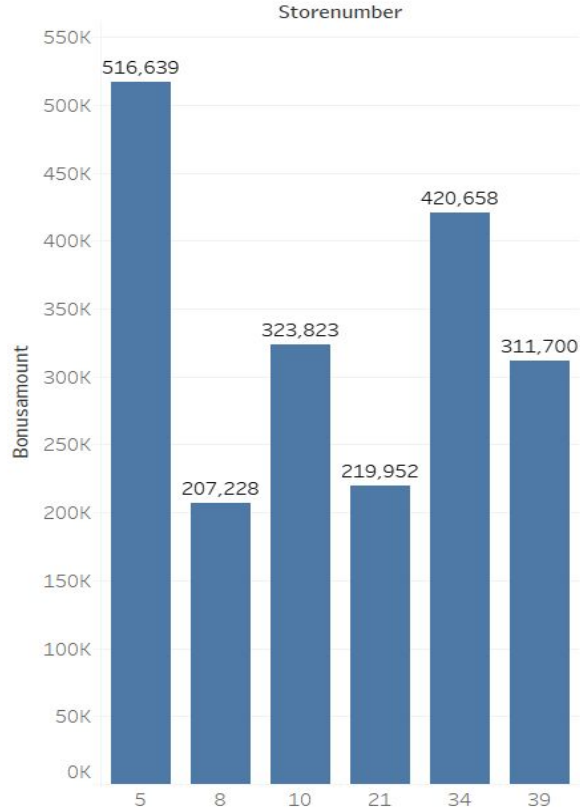
Analysis:

Among the stores that meet the target, Stores 5 and 34 contribute a significant amount to the overall revenue.

Store 10 also contributes 16% to the overall revenue.

The other stores which do not meet the target have a contribution of 36.96% to the overall revenue.

Bonus amount distribution for each store



Q2. Recommend 2013 bonus amounts for each store if the total bonus pool is \$2,000,000 using a comparison of 2013 actual sales vs. 2013 sales targets as the basis for the recommendation.

Details:

Based on the revenue percentage generated by each store in 2013, we divided the bonus of \$2,000,000 among the stores for the year 2013.

Analysis:

As the stores meeting the target contribute 63% to the overall revenue, we would be dividing the bonus based on the percentage that each store contributes to the entire revenue.

Q3. Assess product sales by day of the week at stores 10 and 21.

Day wise product sales for each product

Product Name	Day Name						
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Amytheyst Necklace	362,798	347,379	324,649	342,114	345,208	291,042	376,570
Blouse	2,921,243	2,724,361	2,812,828	2,843,834	2,593,759	3,007,750	2,827,036
Blue Onesie Pajamas	36,605	29,974	38,096	30,279	34,233	38,576	30,872
Blush	379,105	388,033	418,221	355,083	398,538	344,523	332,582
Buttondown Shirt	1,337,606	1,620,012	1,371,324	1,398,889	1,421,461	1,202,135	1,484,862
Captain America T-Shirt	340,447	347,828	404,147	423,618	382,182	371,549	440,656
Denim Jeans	1,006,573	1,057,540	887,870	1,202,083	1,049,845	793,488	842,555
Dress	3,081,480	3,008,886	3,196,749	2,229,167	2,976,769	3,033,304	3,548,167
Dressing Gown	1,314,801	1,090,558	1,016,291	1,055,524	1,107,955	1,275,447	1,132,071
Formal Pants	1,769,746	1,621,026	1,619,676	1,809,888	1,986,353	1,893,971	1,617,226
Girl's Dress	378,387	412,781	421,427	386,689	433,424	404,000	384,244
Lipstick	204,513	189,674	187,164	189,205	166,509	180,132	174,449
Pajamas	927,119	1,018,828	927,071	1,074,976	1,061,827	951,162	797,738
Shoes, High-heel	1,535,053	1,395,413	1,618,733	1,794,037	1,572,109	1,516,670	1,691,568
Silver Ring, Gallic pattern	588,447	659,162	610,158	643,868	571,086	776,201	556,363
Silver Ring, plain	559,835	572,047	474,174	471,192	589,123	408,534	501,935
Skirt	2,181,568	2,426,613	1,986,547	2,188,647	2,180,860	2,248,935	2,040,346
Spider-man T-shirt	141,121	139,499	131,824	133,614	120,158	159,645	145,462
Strapless Dress	3,419,940	3,337,111	2,700,201	3,106,205	3,153,873	3,023,376	3,017,122
T-Shirt	134,432	140,883	139,744	128,204	144,204	125,946	135,690
Thomas the Train Pajamas	149,590	173,298	162,585	155,152	136,927	146,219	149,427
White Socks, 6 pack	31,811	31,612	32,161	26,567	30,199	34,007	30,120

Details:

This graph shows the day wise sales amount for each product for both, stores 10 and 21

Analysis:

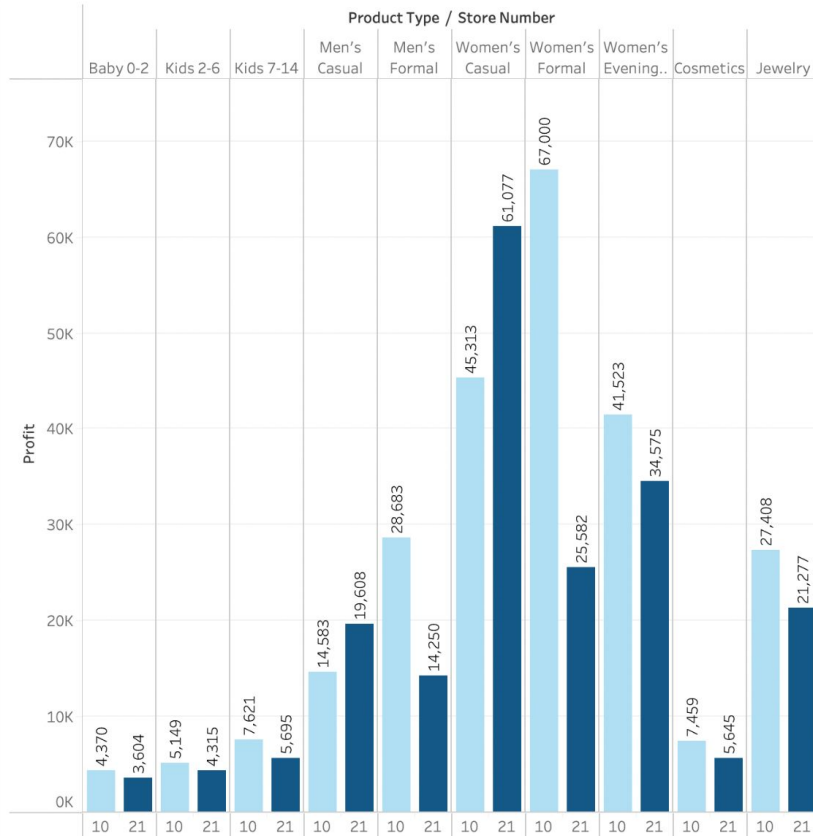
Blouses, Dresses, Skirts and Strapless dresses seem to be the most popular choices among customers.

The product that has the most sales is **Dresses with \$3,548,167 on Sunday**

Recommendation:

Bringing in variations to the following low selling products -
Blue Onesie Pajamas
White Socks, 6 pack

Store-wise profits for each product type



Details:

This graph shows the store-wise profits for each product type.

Analysis:

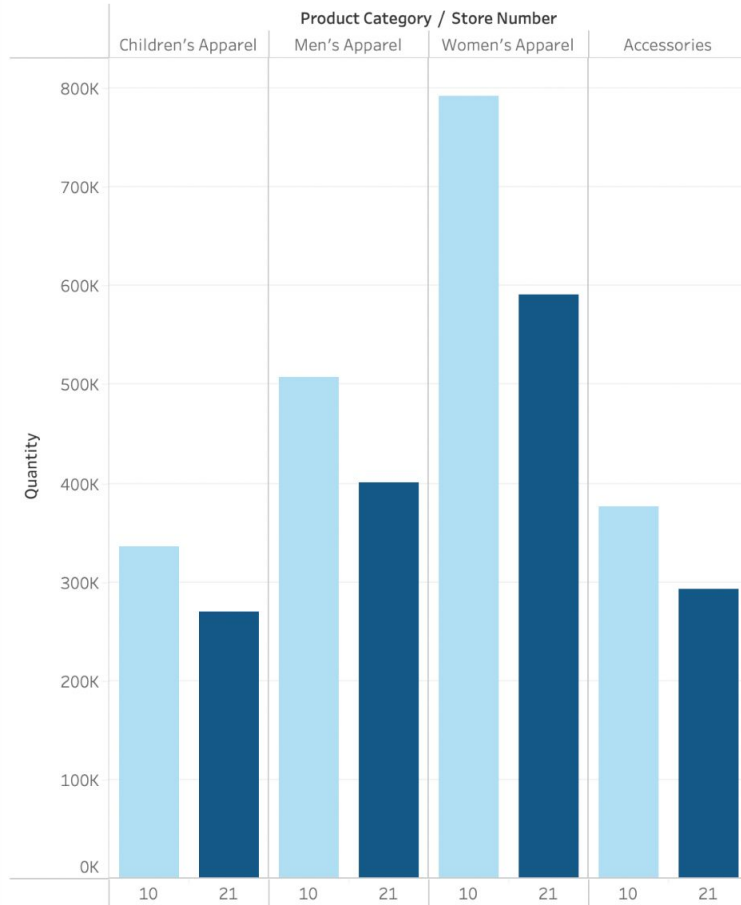
Here we can see that for most product types, store 10 has a higher profit collection compared to store 21.

Store 21 has collected more profit in product types - Men's casual and Women's casual.

Recommendation:

Try transitioning Store 21 to a casual wear store in apparels category for enabling the store to meet its target.

Quantity for each product category



Details:

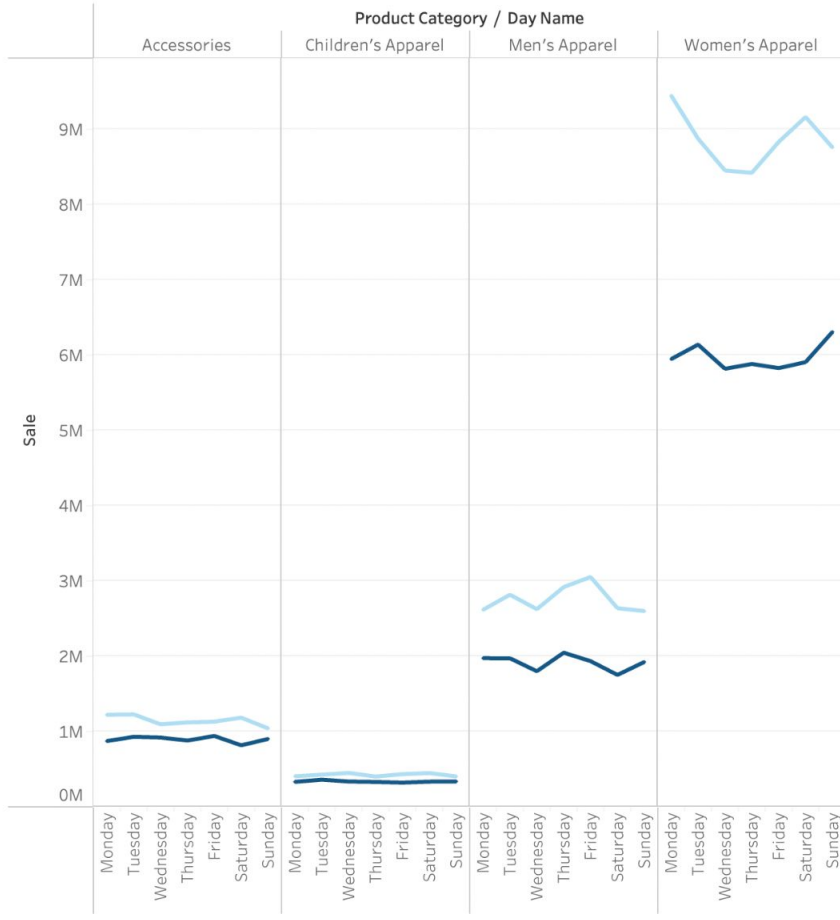
This graph shows the store-wise quantity sold for each product category.

Analysis:

Each store also sells a lot more Women's apparel than other product categories. Sales and profit, therefore, need to be proportionately measured.

Point to note: Missouri, where store 10 is located, is a more populated state than Arkansas, where store 21 is located.

Day-wise sales for each product category



Details:

This line chart shows the day-wise sales of each product category for each store.

Analysis:

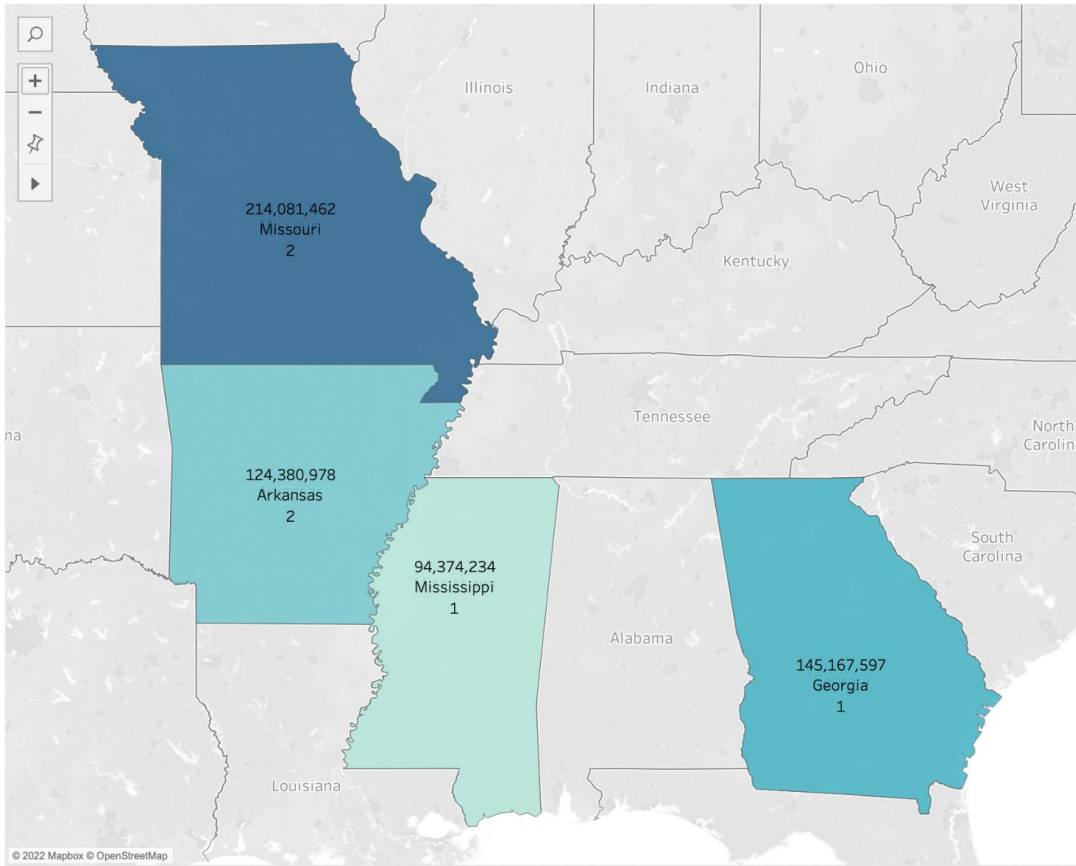
As an overall trend we can see that Store 10 has collected more sales than Store 21.

Moreover, we can clearly see the cumulative sales for each day of the week. It is interesting to note each product category for each store peaks its sales on different days. For example, **Women's Apparel**, sales are maximum on **Mondays for Store 10** and **Sunday for Store 21**.

Recommendation: Have offers that tie a low performing product category with a high performing category for particular days of the week.

Should any new stores be opened?

State-wise sales and store count



Details:

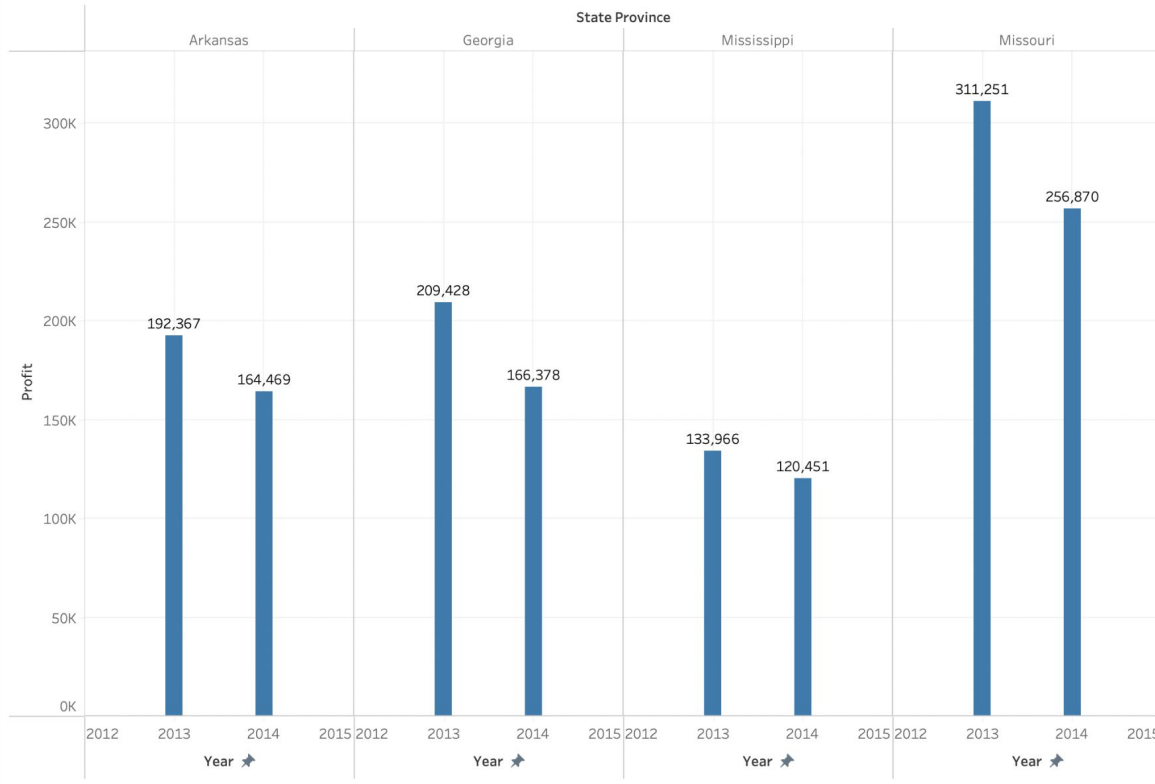
This graph shows the state-wise sales along with the number of stores in that state. This is excluding the channels and resellers.

Analysis:

As we can see that even though Arkansas has two stores, Georgia is collecting a larger sales amount.

Therefore, having more stores is not always benefitting the sales in the state.

State-wise profits for the years 2013 and 2014



Details:

This graph shows the profits each state made for the years 2013 and 2014.

Analysis:

All the states made lesser profit in 2014 than they did in 2013. This shows that the profits are not increasing.

Recommendation:

Instead of opening up new stores, it would be better to focus resources on identifying which products are selling better in which stores. Once all the stores consecutively meet their targets for 3 years, the ideation phase for opening new stores could begin.

Thank you!

