June 2020

Category review: Chips

Retail Analytics

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Our 17 year history assures best practice in privacy, security and the ethical use of data

We all have a responsibility to use data for good

Quantium believes in using data for progress, with great care and responsibility. As such please respect the commercial in confidence nature of this document.

Privacy

- We have built our business based on privacy by design principles for the past 17 years
- Quantium has strict protocols around the receipt and storage of personal information
- All information is de-identified using an irreversible tokenisation process with no ability to re-identify individuals.

Security

- We are ISO27001 certified - internationally recognised for our ability to uphold best practice standards across information security
- We use 'bank grade' security to store and process our data
- Comply with 200+ security requirements from NAB, Woolworths and other data partners
- All partner data is held in separate restricted environments
- All access to partner data is limited to essential staff only
- Security environment and processes regularly audited by our data partners.

Ethical use of data

Applies to all facets of our work, from the initiatives we take on, the information we use and how our solutions impact individuals, organisations and society.

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Executive summary

01 Task 1

1.Many poor performing stores are there, we need to find a way to deal with them.

2.New Families contributes less to over total sales for almost every store compared to other Lifestage Customers

3.Dorito corn chips, Smiths and Kettle brands are most valued brands and mostly brought by older singles/couples Lifestage and WW , Sun Bites brands have very Low Sales.

4.Premium Customer spends less than Other Customers which is unexpected and Older Families and Retirees spend more money than New Families and Mid-age Singles.

5.Kettle Brand Outperformed all other brands with large margin. Only 5-6 Brands have nearly 80% share in Total Sales

6.At the end of year the sales has gone at its PEAK in a year. May be Christmas Would be the reason and there a lot of chance to increase more sales .There's downfall of Sales too between 5-6 and 8-9 months

02 Task 2

1.)When the new layout is adopted the monthly sales has risen with increase in new customers for all trail customers

2.)Transactions per customer is not steady.

3.In Trail period, Trail store 77 monthly sales increased with Monthly Unique number of customers, number of transactions .This tells that driven force for increase in sales are increase in unique number of customers

4.Trail Store Sales increases despite decrease in sales for Control Stores. Keeping the new layout to control stores will yield better returns.

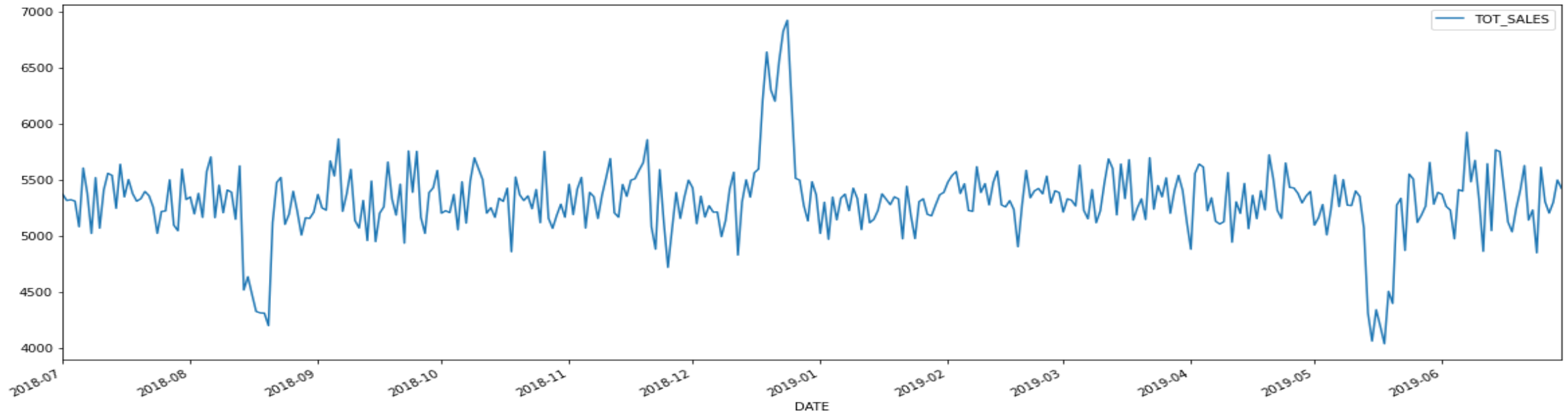5. The above plot shows poor customer retention rate.

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01. Category
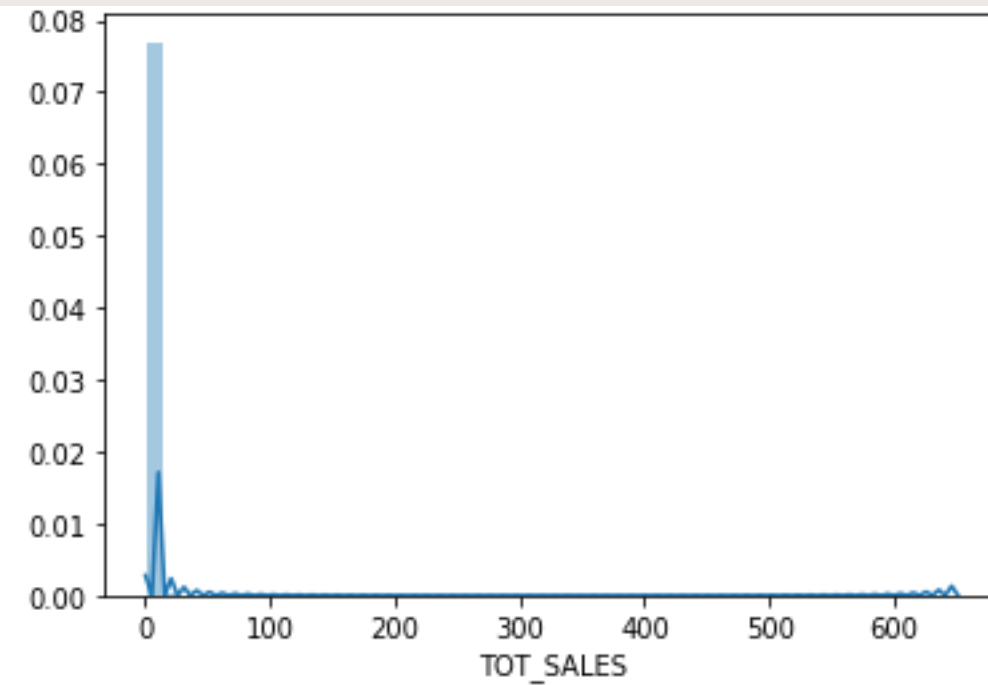
Outliers are Detected from above Distribution Plot

TREATMENT : REMOVAL OF OUTLIERS

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1.1. TOTAL SALES (SUM) OVER THE TIME

INSIGHTS :

1.At the end of year the sales has gone at its PEAK in a year. May be Christmas Would be the reason and there a lot of chance to increase more sales.
2.Theres downfall of Sales too between 5-6 and 8-9 months

RECOMMENDATIONS :

1.By Making a great display outside stores outlet window. Attracting more your customers with the decoration outside while keeping your Interiors decorated too.
2.Appropiate Promotions and offers on old stock would help to increase sales

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1.2. TOTAL SALES grouped by BRAND (SUM)
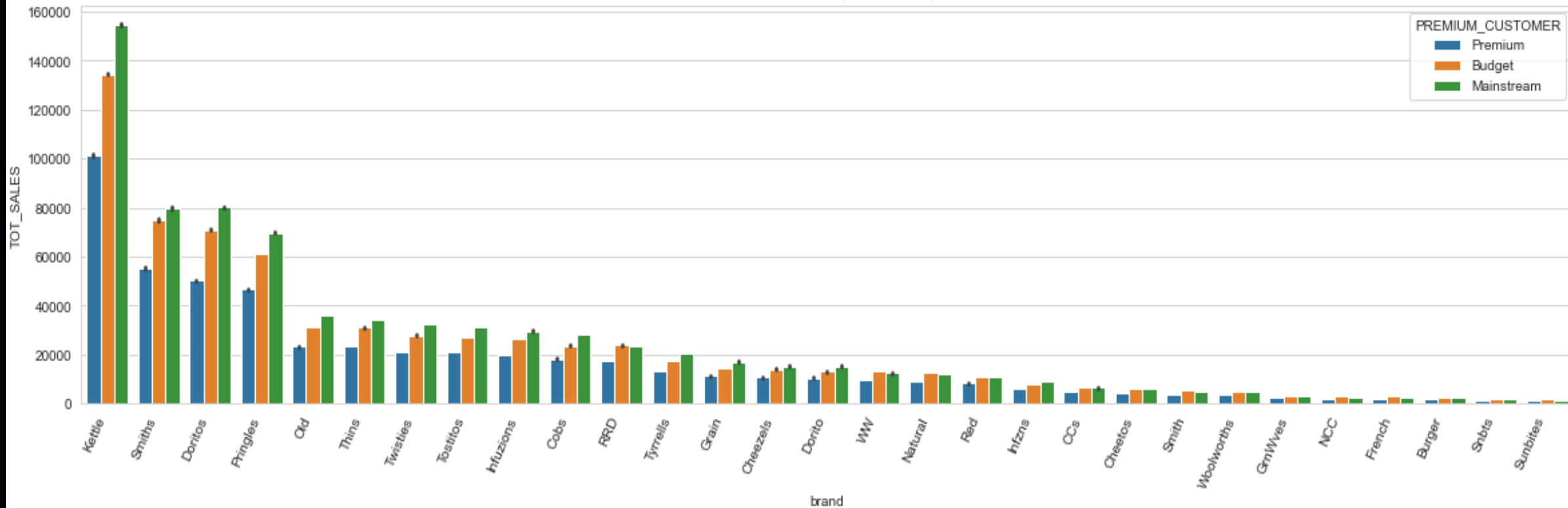
INSIGHTS :

1.Kettle Brand Outperformed all other brands with large margin.
2.Only 5-6 Brands have nearly 80% share in Total Sales

RECOMMENDATIONS :

1.Offers on Bundle Pack of low saleable brand chips packets may result in good sales
2.Optimal Pricing of Best Brand Chips would yield high Amount of sales

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1.3. TOTAL SALES (SUM) grouped by PRODUCT
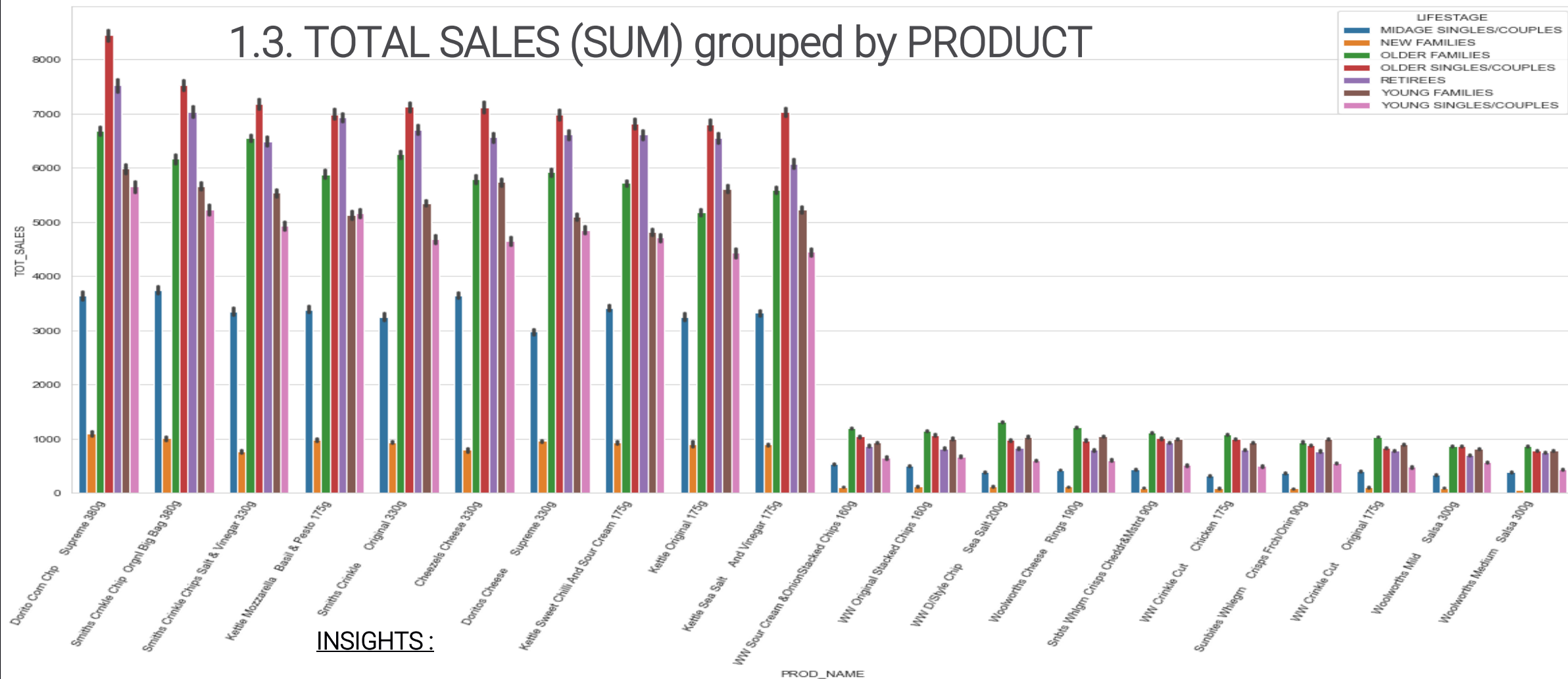
INSIGHTS :

1.Dorito corn chips, Smiths and Kettle brands are most valued and mostly brought by older singles/couples.
2.WW,Sunbites brands have very low sales.

RECOMMENDATIONS :

1.Its better to exclude all these top performing brands in Offers, promotions to gain more profits.
2.Having as much as low stock of poor performing products would be better.

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1.4. PREMIUM CUSTOMERS grouped by LIFESTAGE
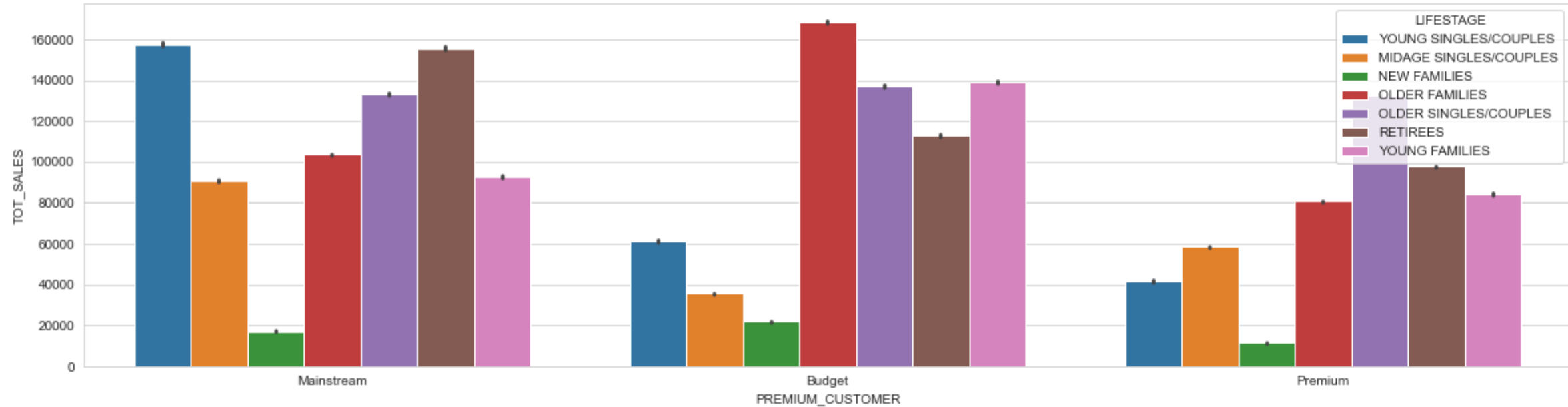
INSIGHTS :
1.Premium Customer spends less than Other Customers which is unexpected and Older Families and Retirees spend more money than
    New Families and Mid-age Singles.

RECOMMENDATIONS :

1.Older Families and Retirees prefers stores near to them, so opening new stores or re-locating low performed Stores near to Old and
 Retirees will definitely yield more sales
2.Couples to less aged customer segment or according to low performed customer segments from above plot will increase customer retention

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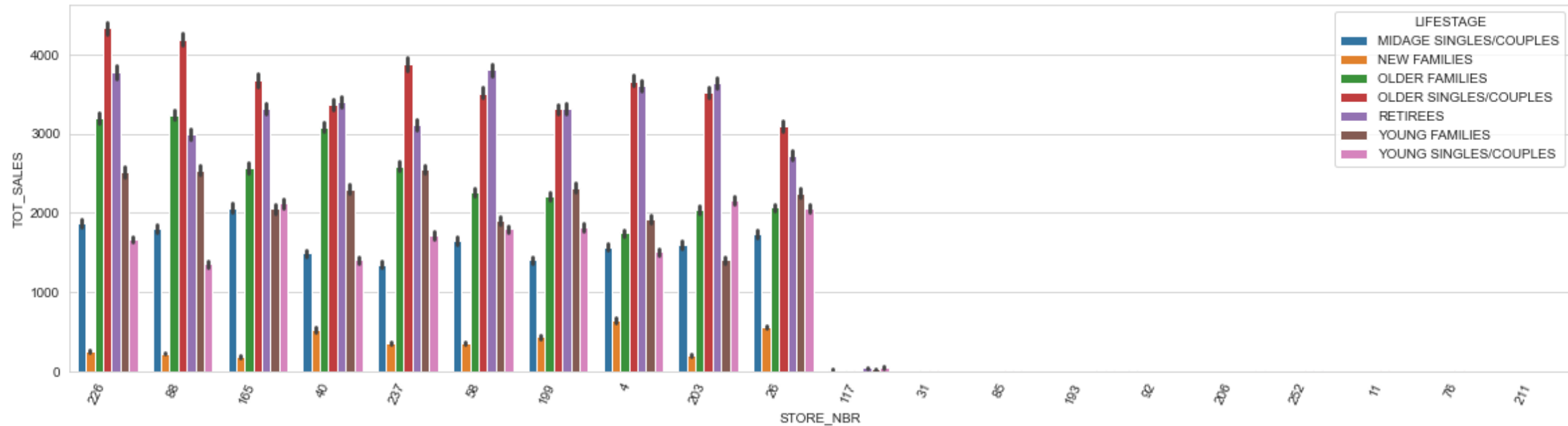
INSIGHTS :

1.Many poor performing stores are there we need to find a way to deal with them.
2.LifeStage Segments are making same proportion almost for every store.

RECOMMENDATIONS :

1.Need to relocate the stores performing worst.

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02. Trial Store Performance

2.1   ALL ABOUT METRICS AND CONTROL STORE SELECTION

Selecting and Ranking Control Store for Each Trail Store

One way to find the nearest metric values for Control Store is using KMEANS clustering algorithm. Fitting these 263 Stores metrics into 263 Clusters and Predicting The trail metric to which cluster it belongs would be very efficient and best match as well as It takes care of Ranking Part but next thing is variation problem, to this we can solve this from plots

The 1st rank Control store is the output of predicted clustering algorithm to our trail store and We can get 2nd Rank of Control Store by removing the 1 ranked control store from the store_metric dataset. Similarly for remaining 3rd,4th and 5th.

METRICS

1.)monthly overall sales revenue :   Average Monthly Sales for Store
2.)monthly number of customers : Monthly number of customers(not distinct) /Transactions
3.)monthly number of transactions per customer : number of transactions per customer for store
4.)nbr_unique_cust :   Monthly number of distinct Customers

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COMPARISION BETWEEN 77,86,88 TRAIL STORES
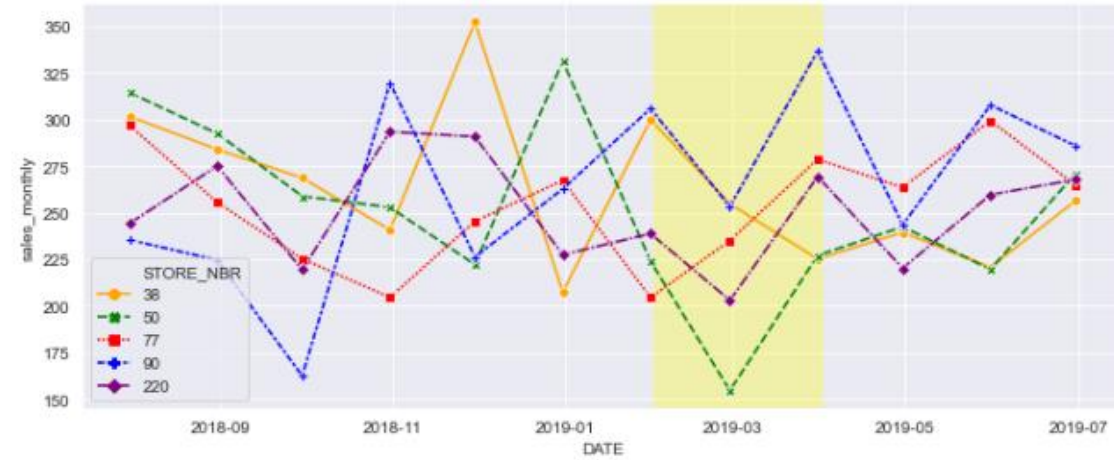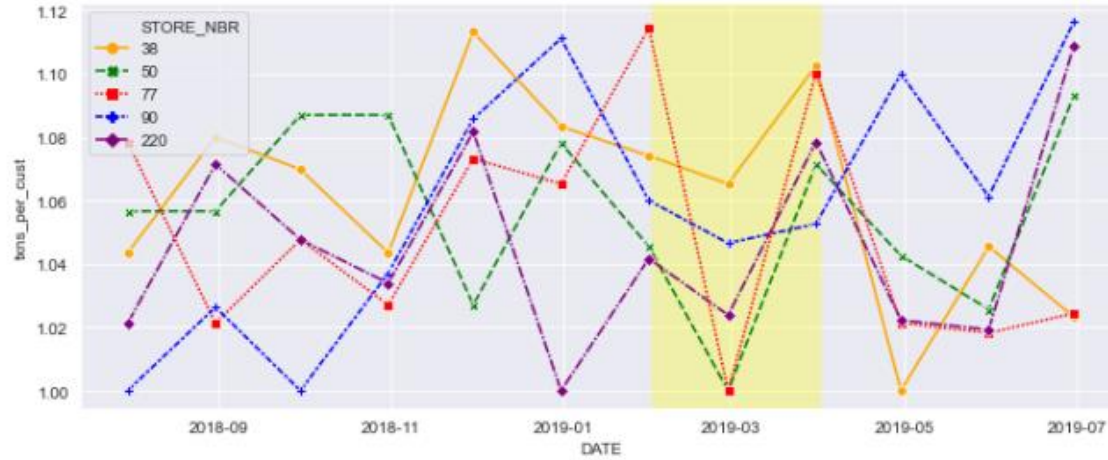
YELLOW REGION depicts TRAIL PERIOD
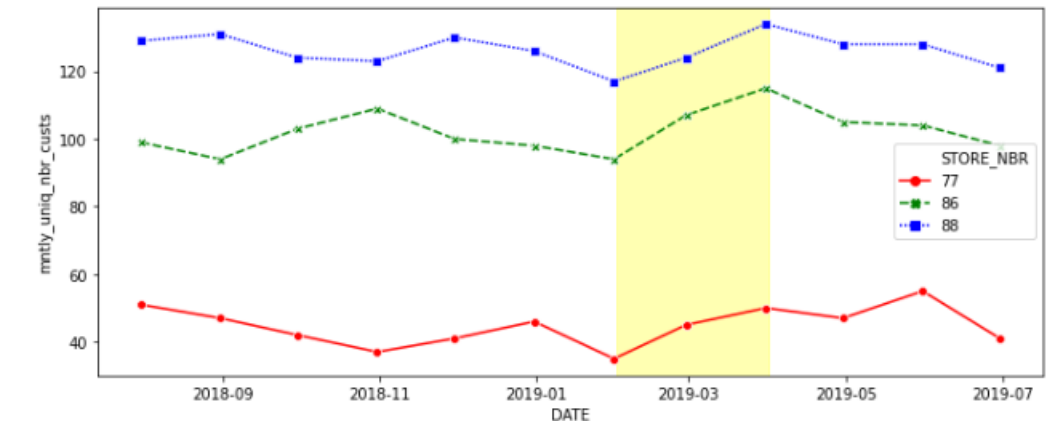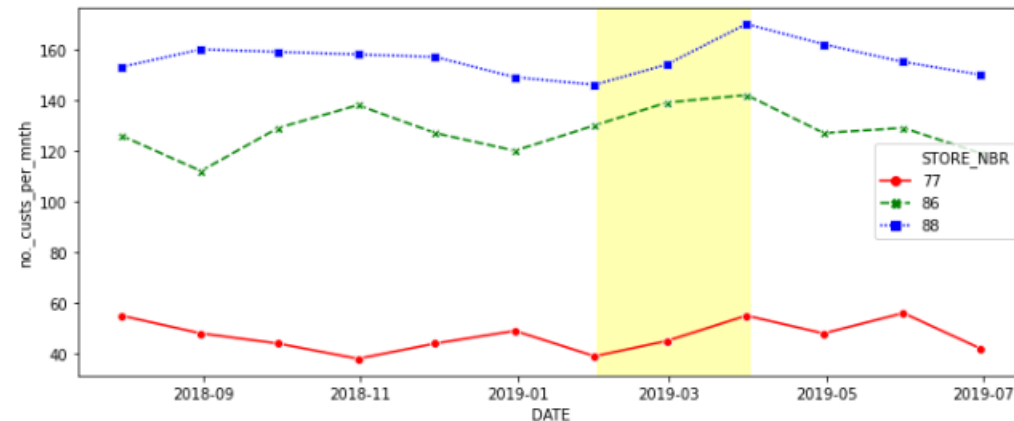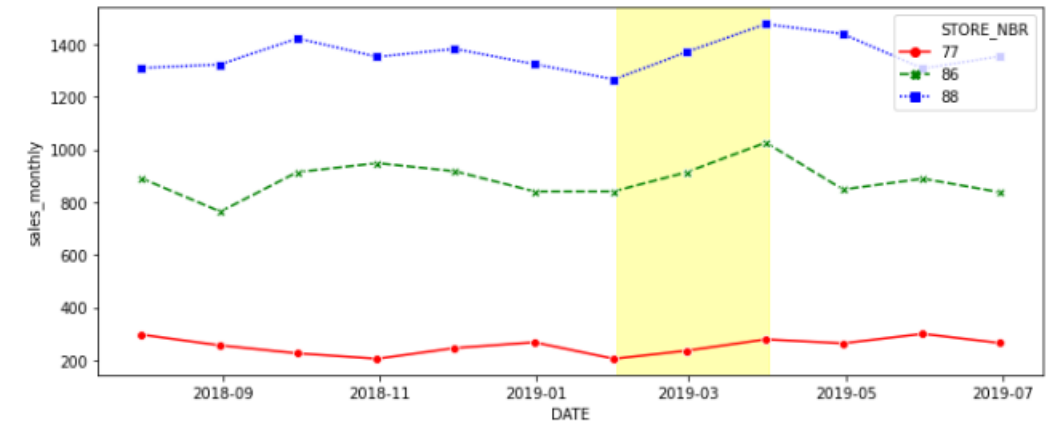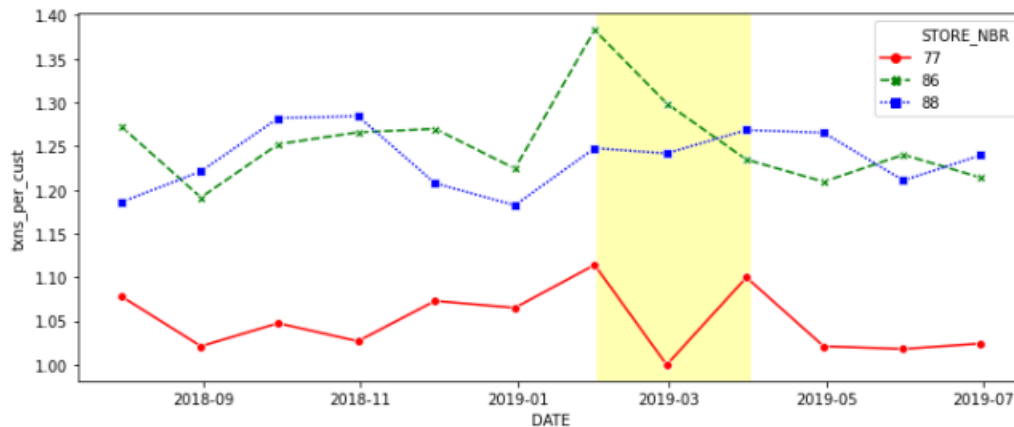
INSIGHTS:
1.)When the new layout is adopted the total monthly sales has raisin with increase in new customers (from plot (0,1),(1,1))
2.)Transactions per customer is not steady.
3.)The Rate of change of sales and customers for New Layout is HIGH, compared to previous rate changes for all 3 Trail Stores.
RECOMMENDATIONS:

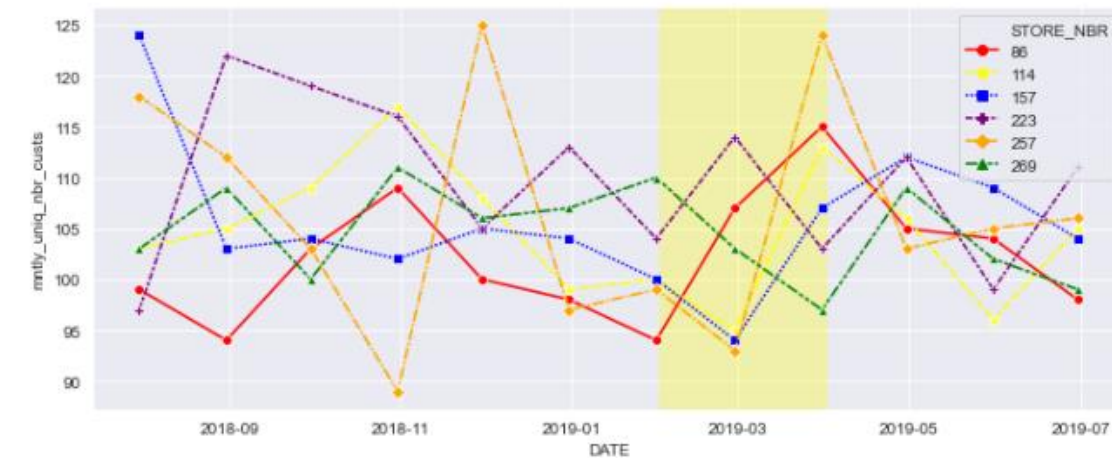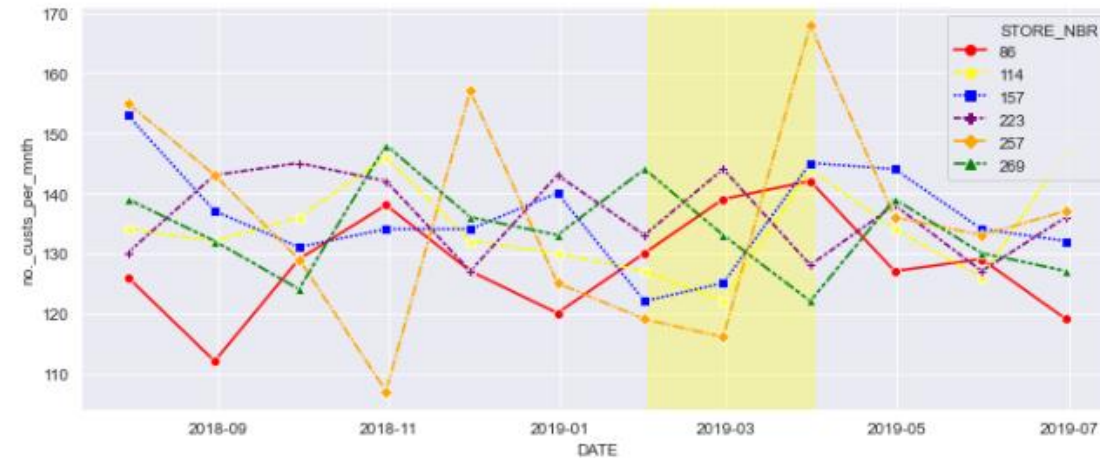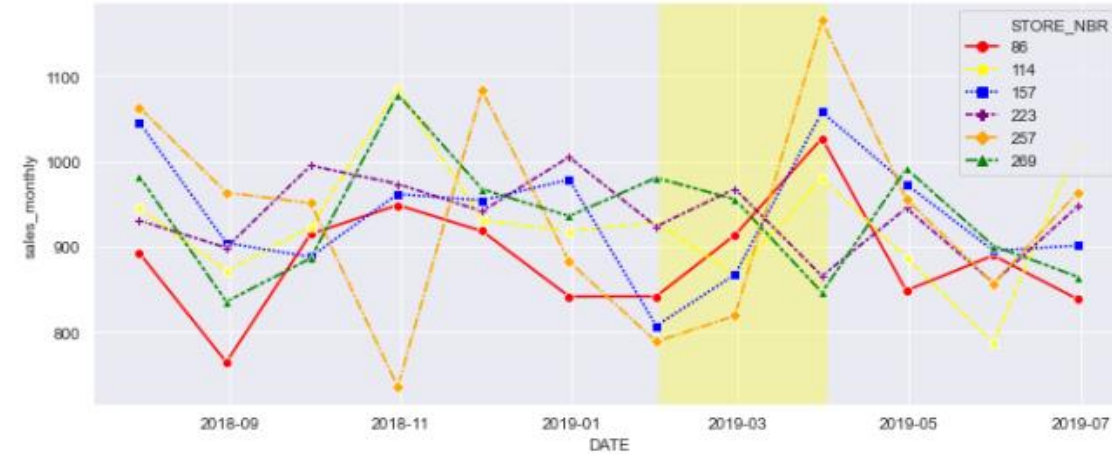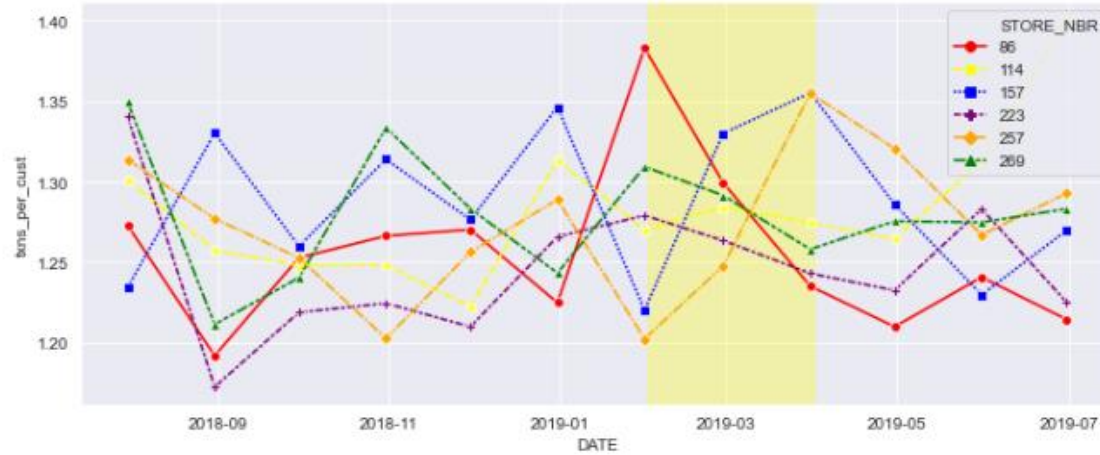1.)Adopting New Layout for all other Stores will yield More Profits

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Red Legends are TRAIL STORE and Other Color Legends are DIFFERENT CONTROL STORES

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Red Legends are TRAIL STORE and Other Color Legends are DIFFERENT CONTROL STORES

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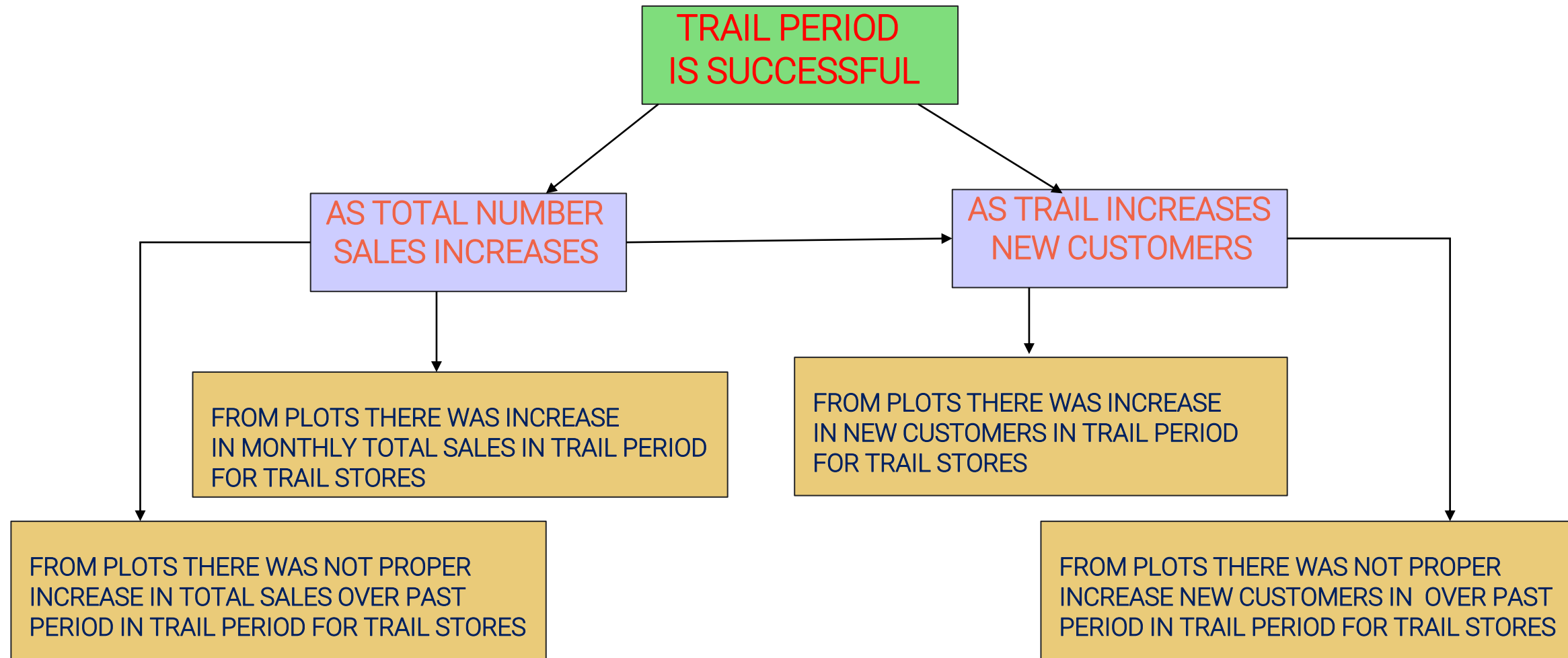
ANALYSIS AND RECOMMENDATIONS

<u>1.)NORMAL PERIOD VS TRAIL PERIOD:</u>

a.) In Trail period, all Trail stores monthly sales increased with Monthly Unique number of customers, number of transactions.

b.) One reason with drop in transactions per customer metric is getting more number of unique customers to trail store.

c.) This tells that driven force for increase in sales are increase in unique number of customers with visiting more number of times than previous ones.

The New Layout attracted more people. The Trail is pretty much Sucessfull

<u>2.)CONTROL STORE VS TRAIL STORE:</u>

All other Control Stores metrics are decreased and then increased in trail time, the old layout didn't performed well. The control stores failed to Attract new customers.

<u>RECOMMENDATIONS :</u>

1.)Adopting new layout to all control stores will yield more Sales and increase in new customers.

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INSIGHTS :

1.)The above plot shows Poor Customer Retention and the count period is 1 year
2.) Only 1.5% buy 12 times in 1 year.

RECOMMENDATIONS :

1.)Encourage loyalty Program.   2.)Accept feedback   3.)Coupons

THANK YOU

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