

April 2023

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Category review: Chips

Retail Analytics



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

Privacy

- We have built our business based on privacy by design principles for the past 17 years
- Quantum 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.

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

Executive summary

01

Task 1

1. The sales increase in the month of December before the Christmas (except the day itself). So, these are the crucial times.
2. Kettle is the most popular brand followed by Smiths, Doritos and Pringles. So, they need to be in stock. Also 175 gram packets are the most sold.
3. Mainstream young singles/couples, retirees are the most common customers and also account for a great share of chips sale.
4. Budget older families have the maximum contribution to sales.

02

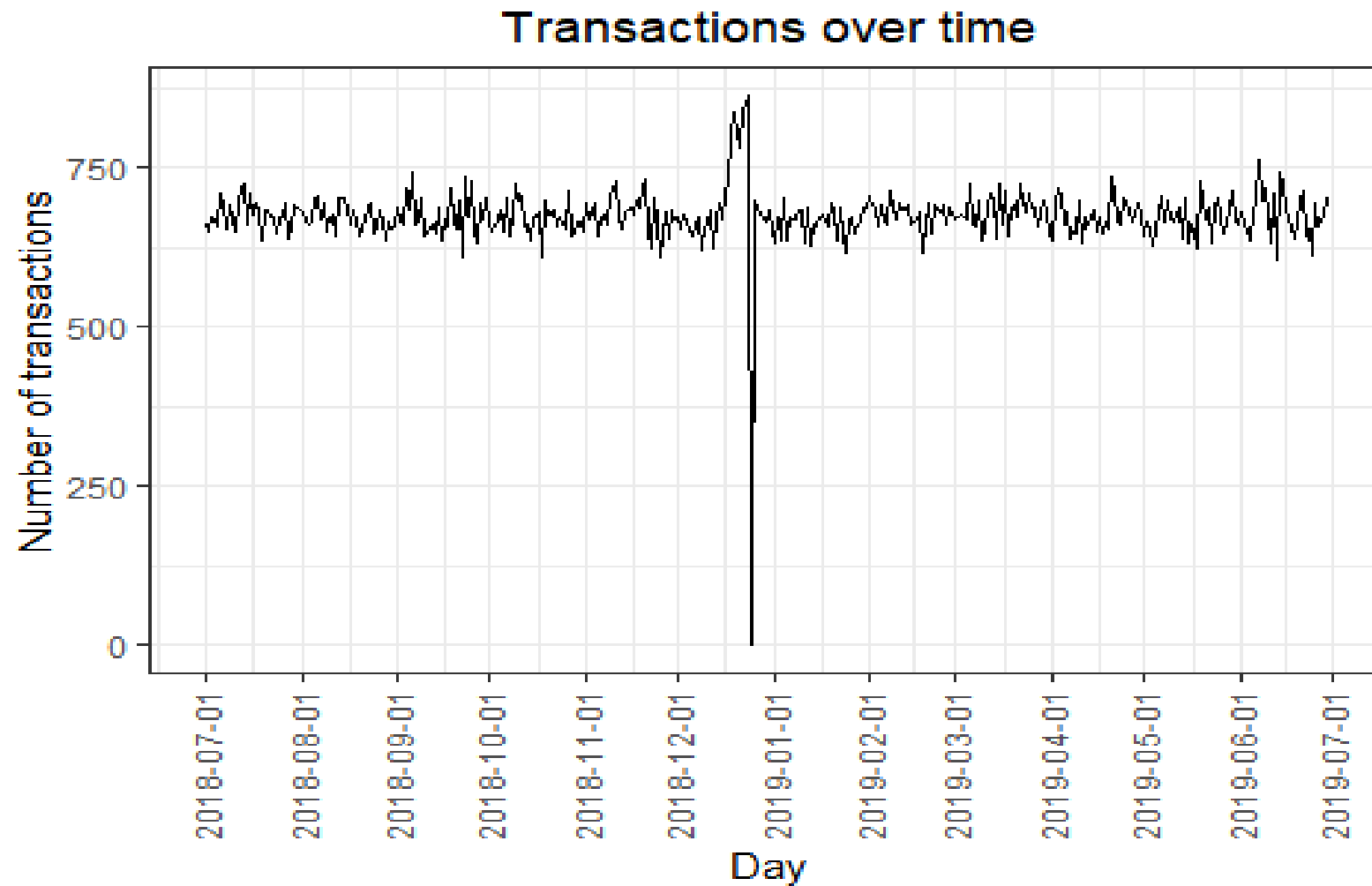
Task 2

1. One control store was selected for each trial store and the values of metrics were compared in trial and pre trial period.
2. The results for trial stores 77 and 88 during the trial period show a significant difference in at least two of the three trial months but this is not the case for trial store 86.

01

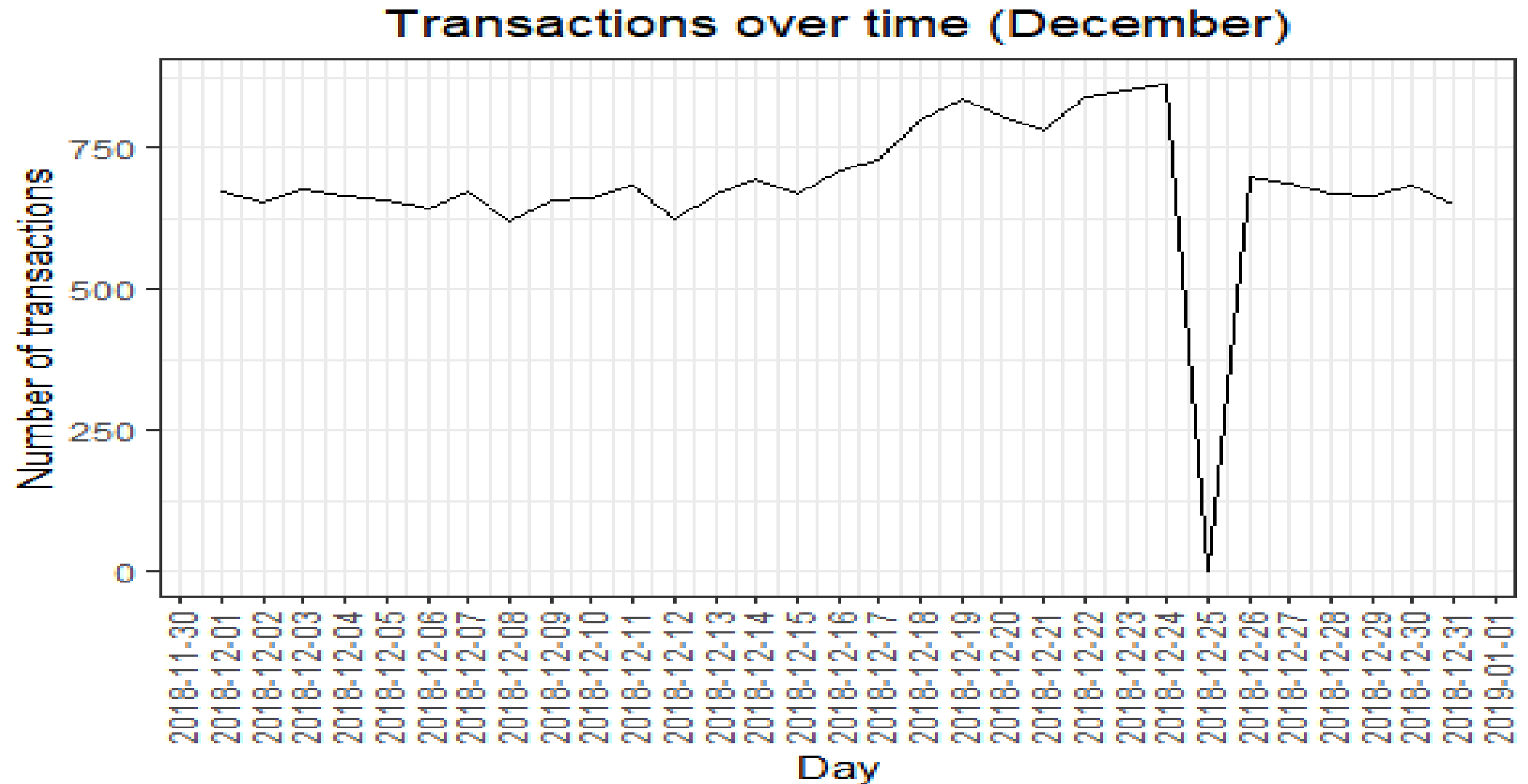
Customer Analysis

Sales distribution

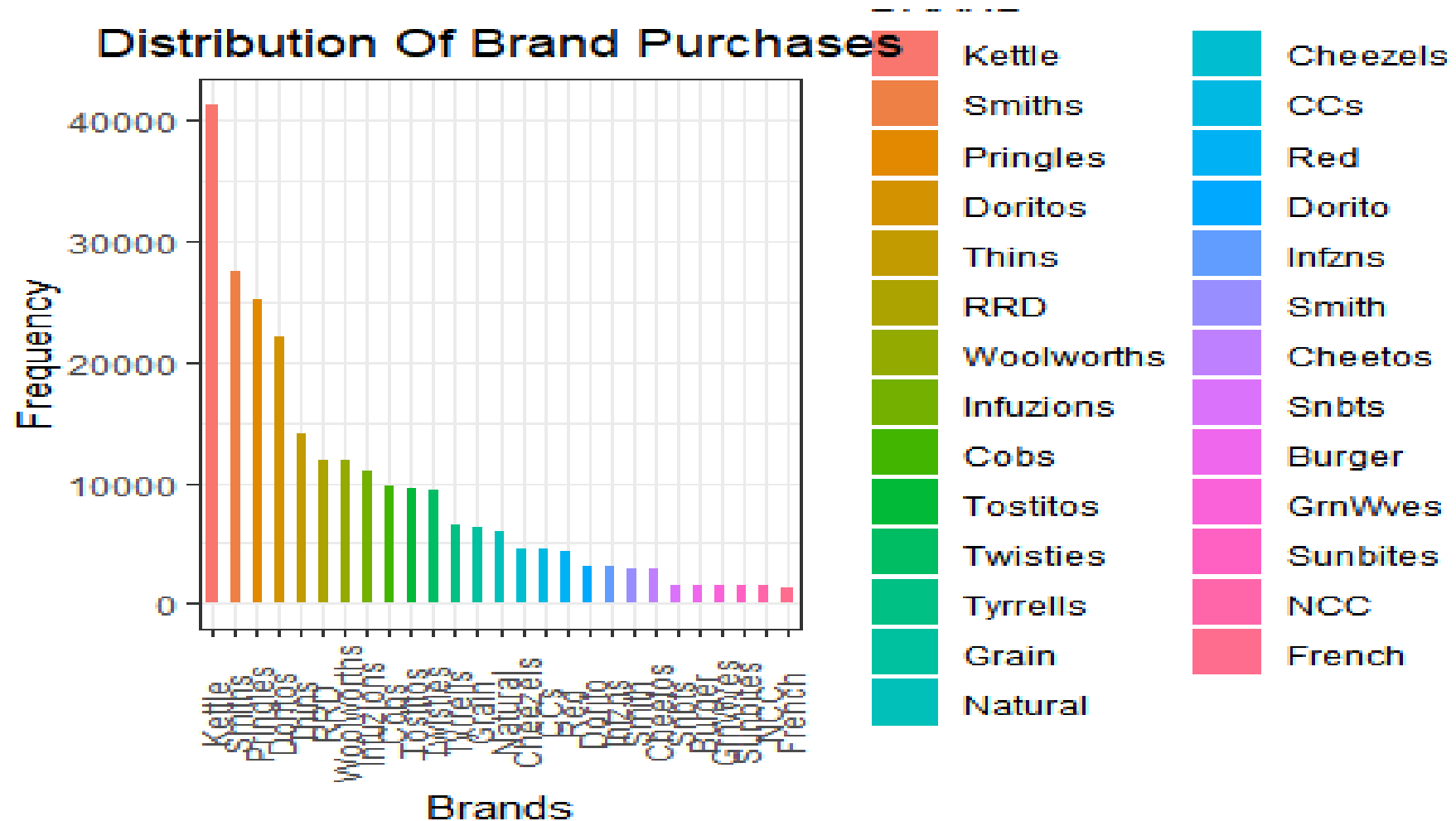


We notice a sudden hike in the number of transactions per day towards the beginning of December and then transactions drastically drop close to January.

Transactions per Day in December



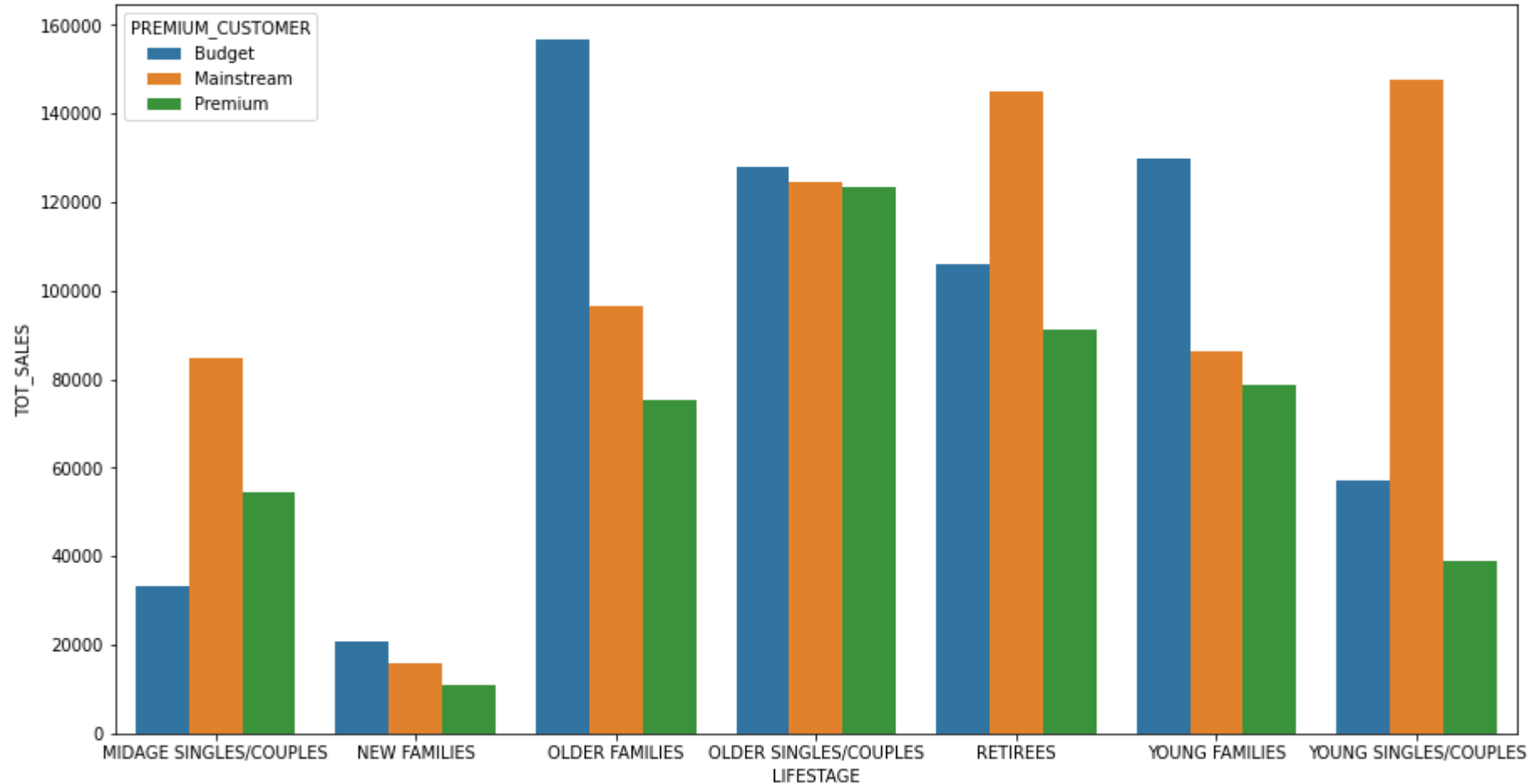
Distribution of Brands of Chips being purchased



Affluence and its effect on consumer buying for the category of chips

1. Kettle is the most popular brand followed by Smiths, Doritos and Pringles.
2. Mainstream young singles/couples, retirees are the most common customers and also account for a great share of chips sale.
3. Budget older families have the maximum contribution to sales.
4. Mainstream young singles/couples and mid-age single/couples pay more per packet than any other group.

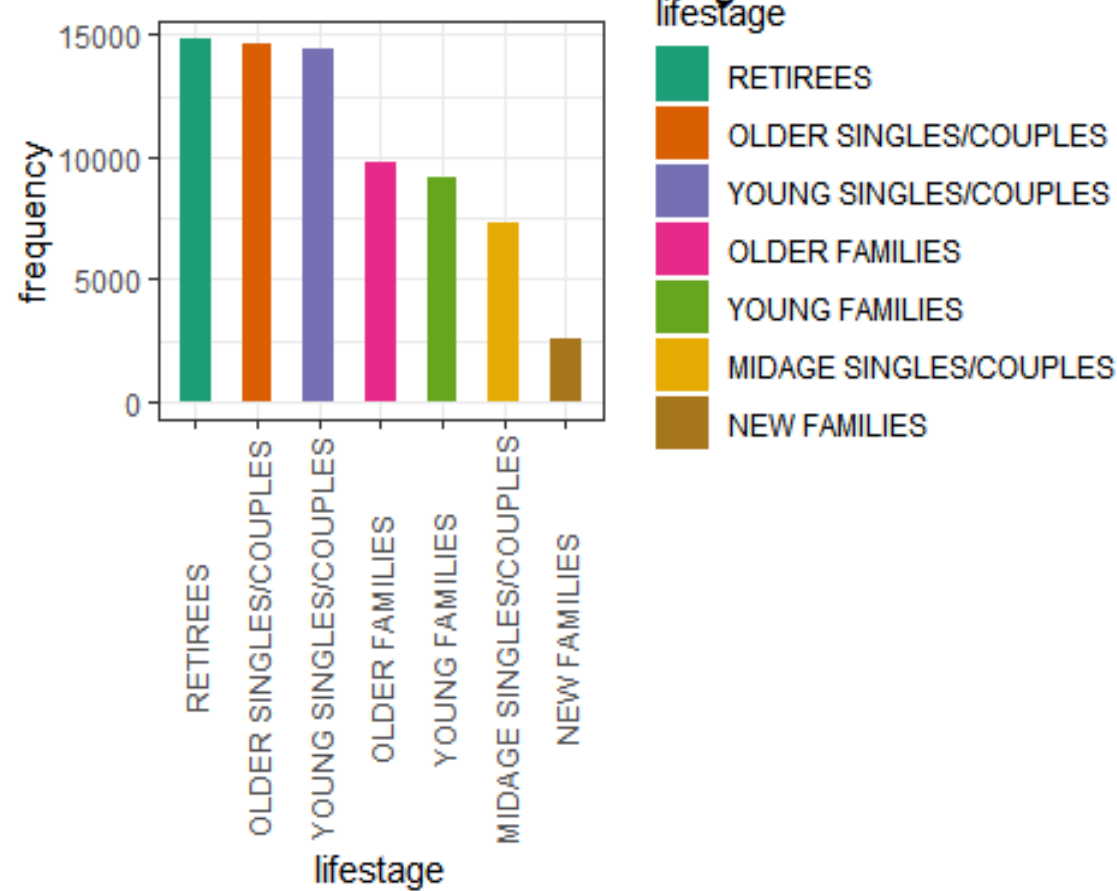
Visualising the proportion of customers by affluence and life stage on this slide



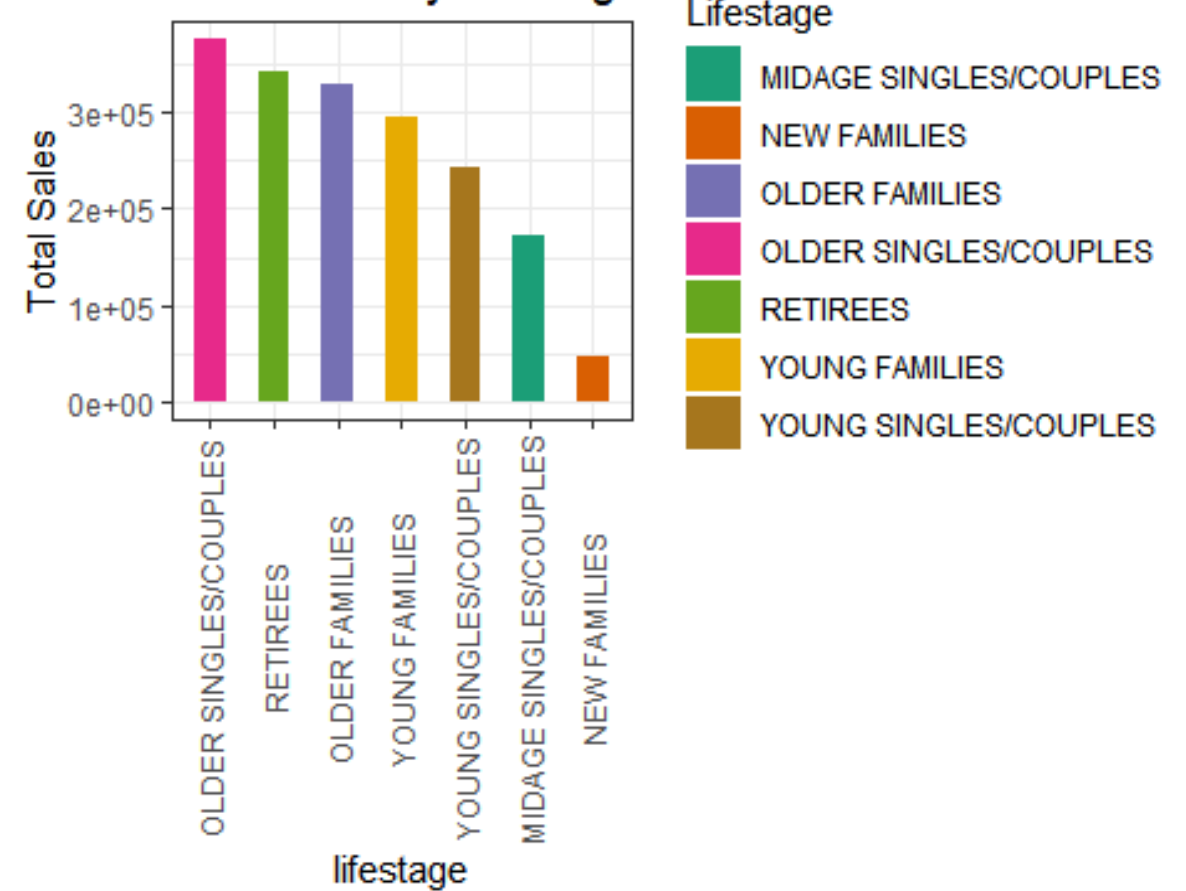
It can be clearly visualized that mainstream young singles/couples, retirees are customers contributing the most

Distribution of Life Stage of customers and their Total Sales

Distribution Of Customers Over Lifestages



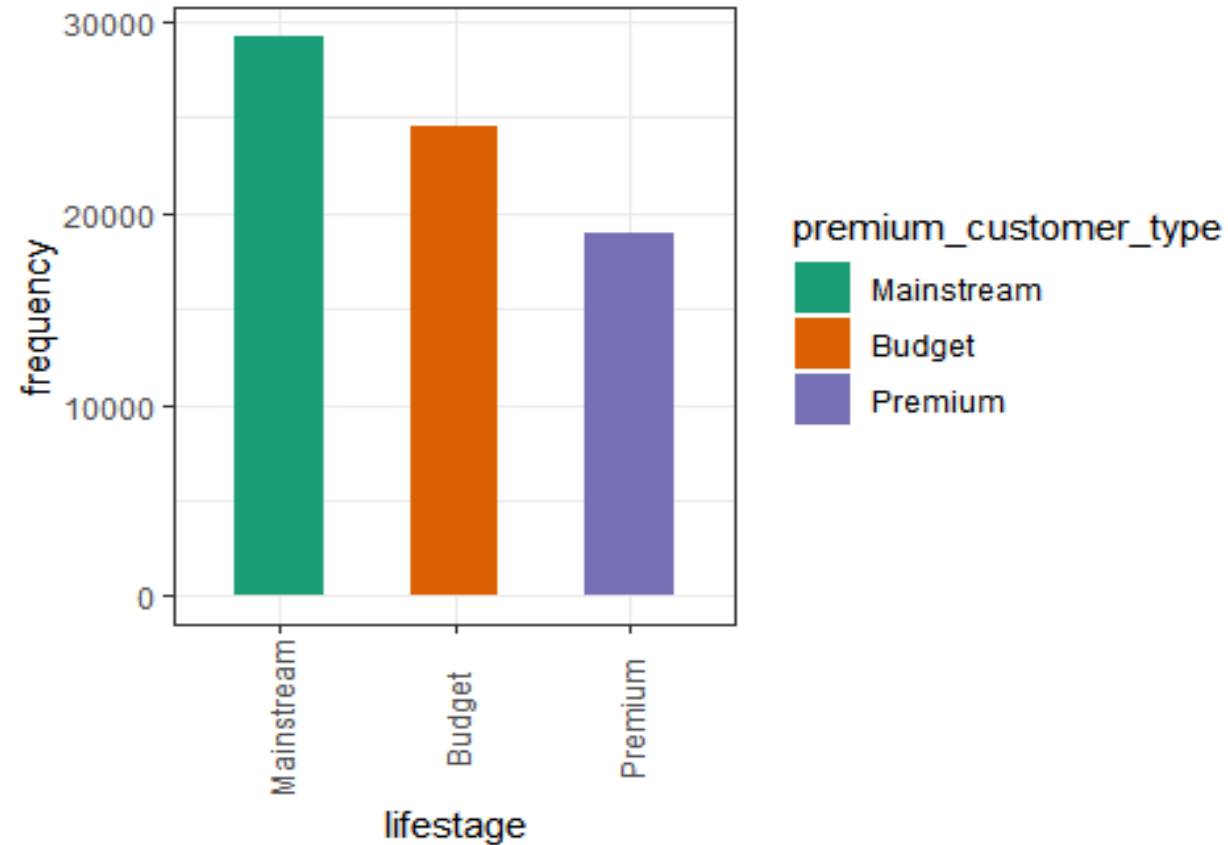
Total Sales By Lifestage



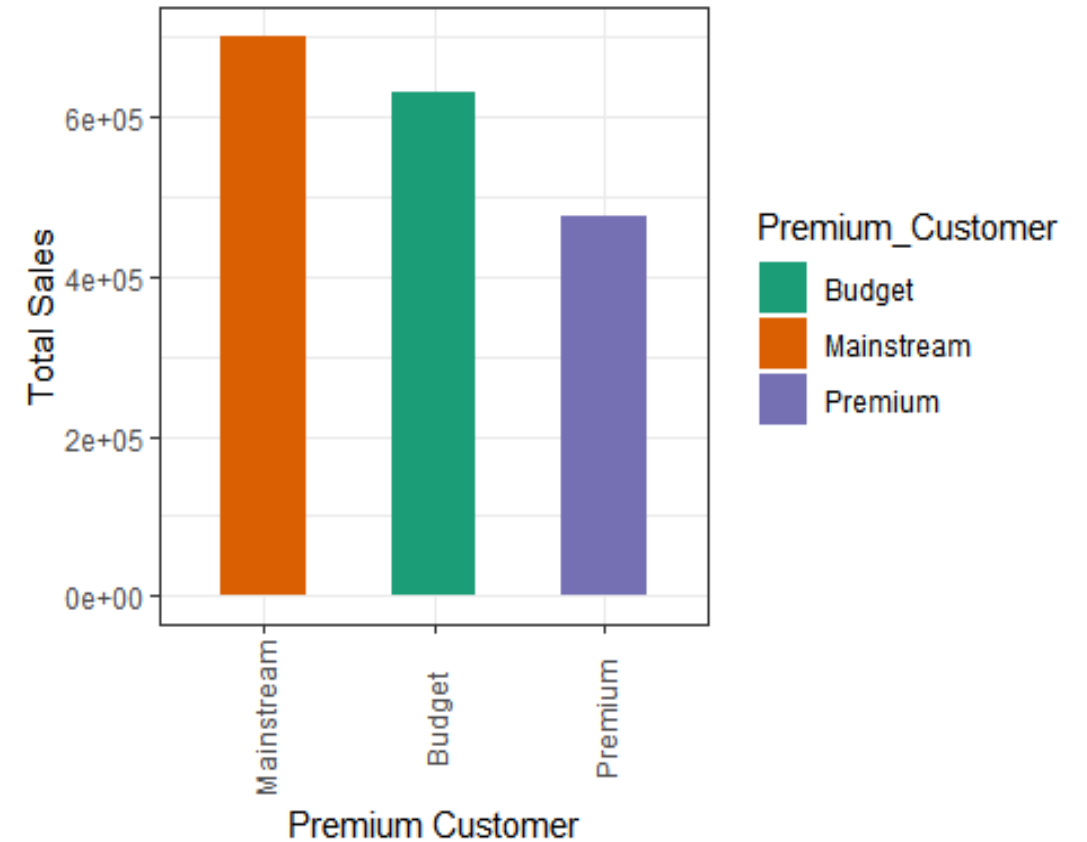
It can be seen that retirees, young singles/couples, retirees are the most common customers

Distribution of Customers over Premium Types and their Total sales

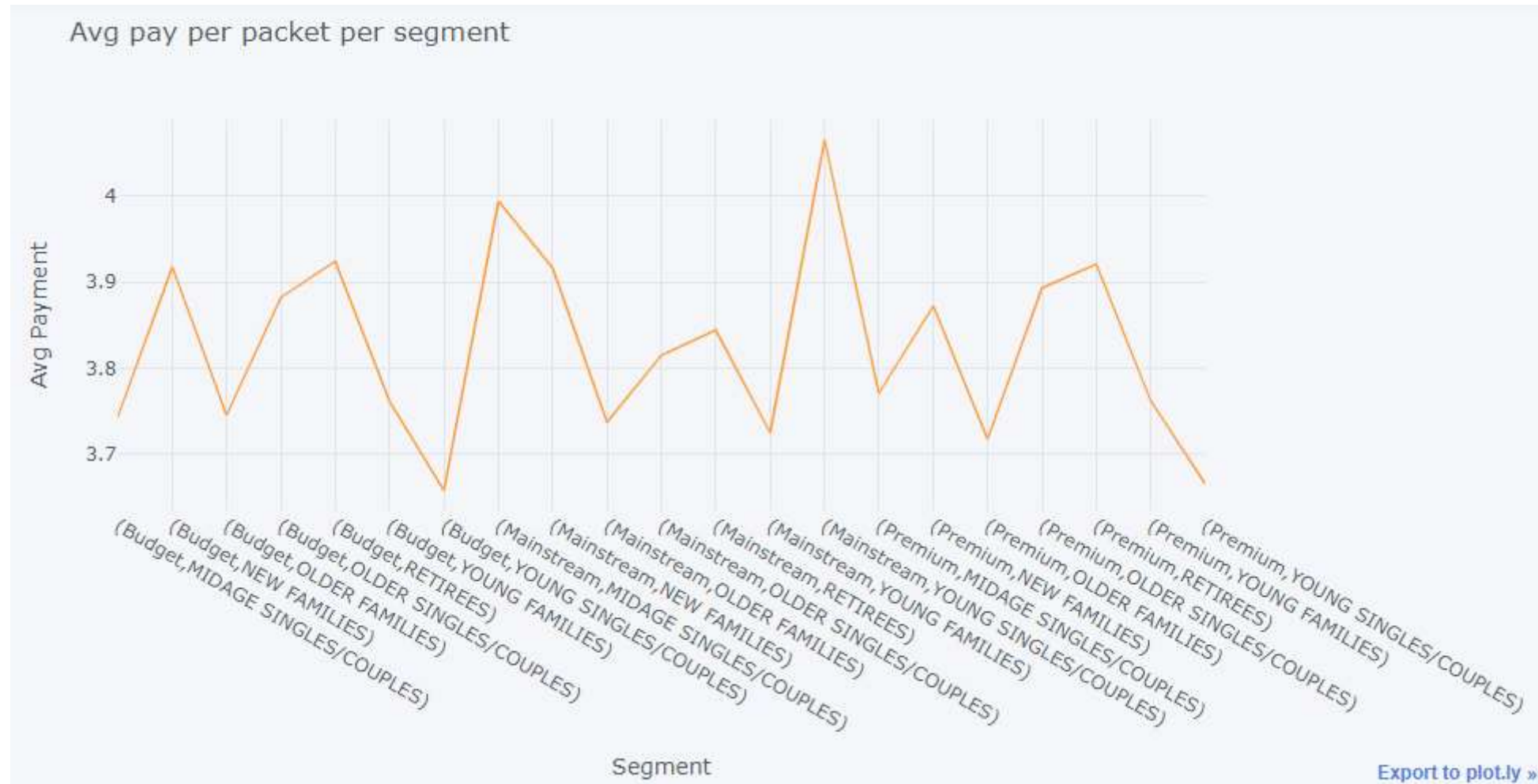
Distribution Of Customers Over Premium Types



Total Sales By Premium Customer

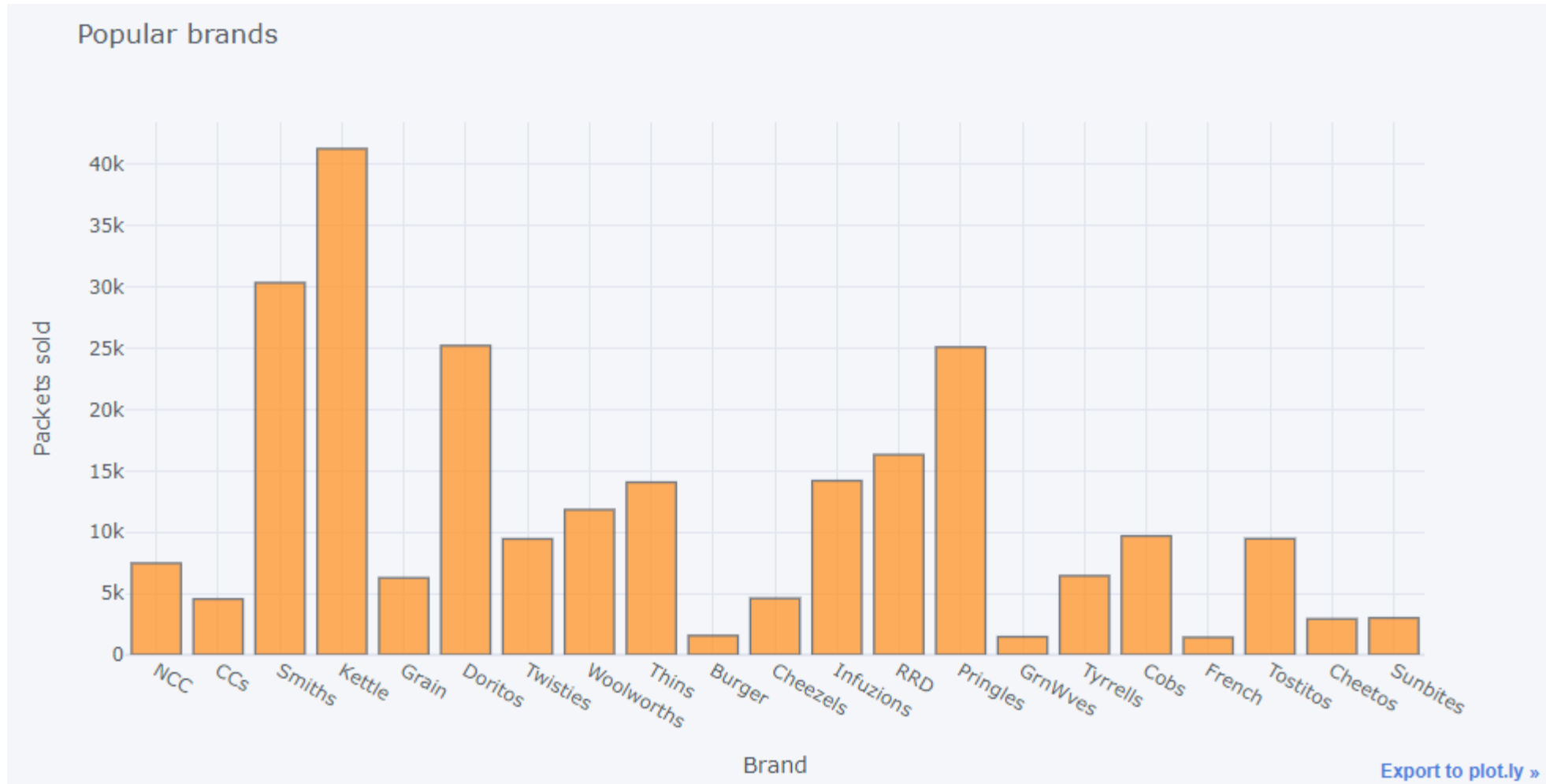


Average expenditure per segment



mainstream young singles/couples also spend the most

Popular brands

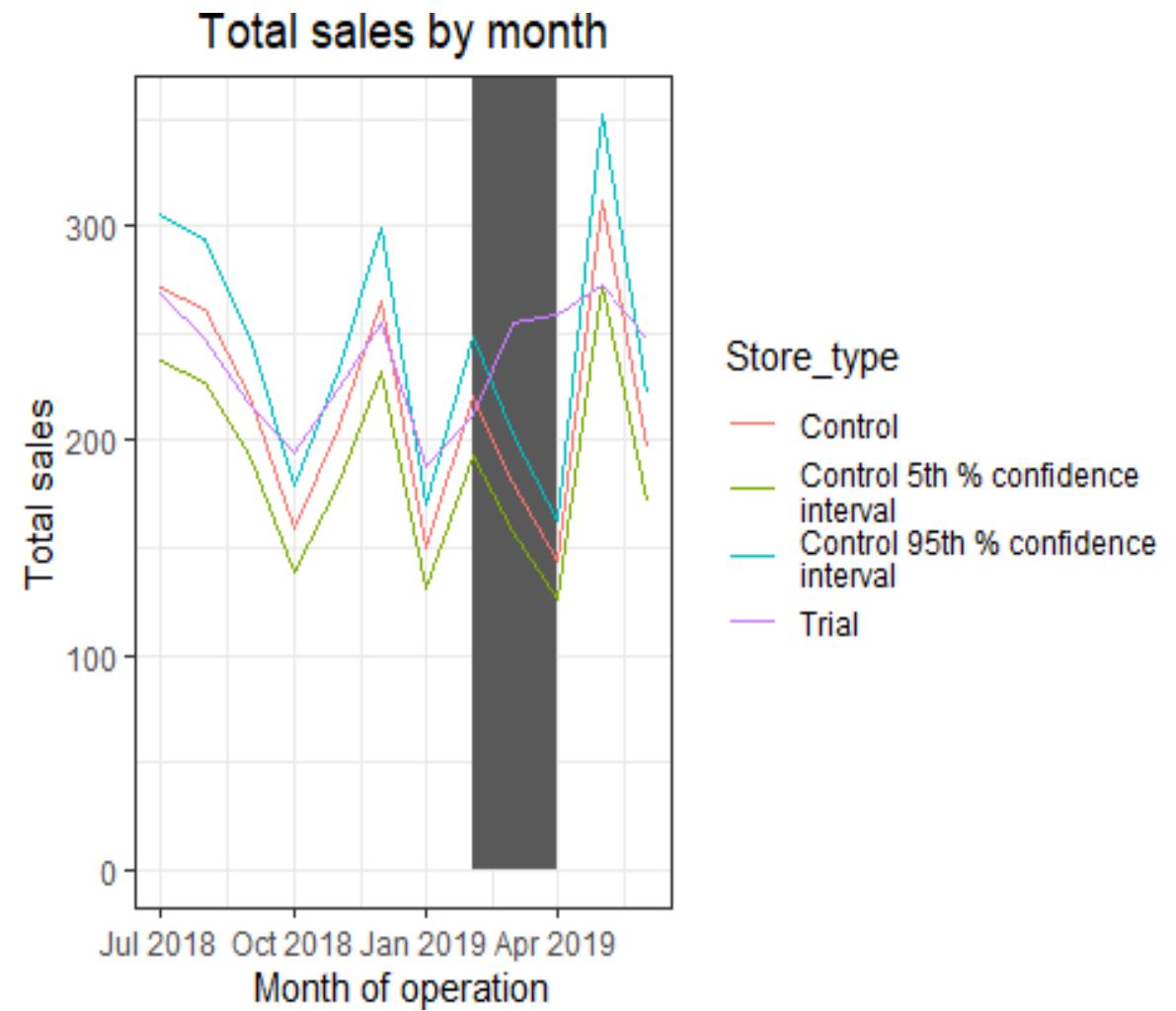
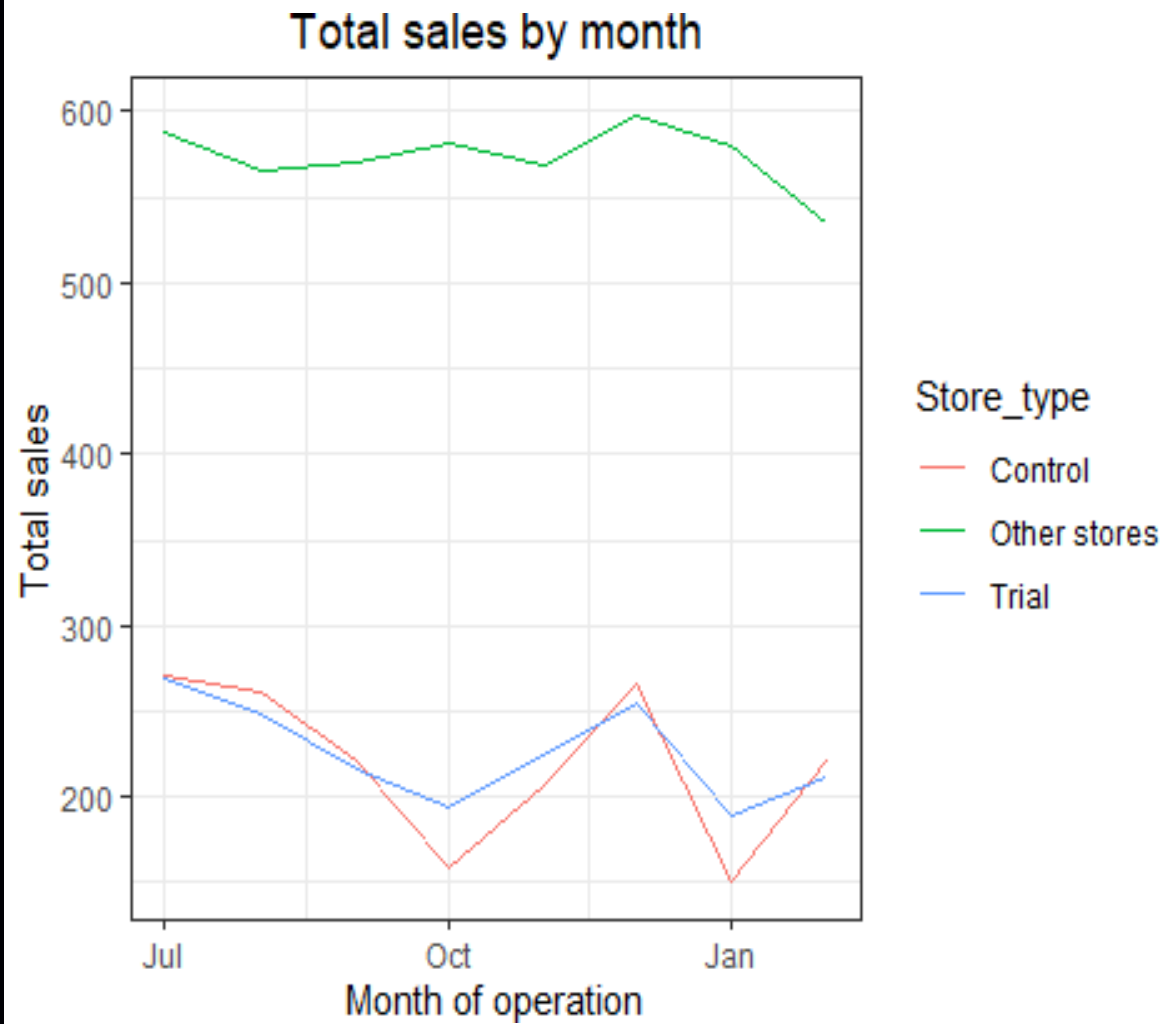


Kettle is the most popular brand followed by Smiths, Doritos and Pringles.

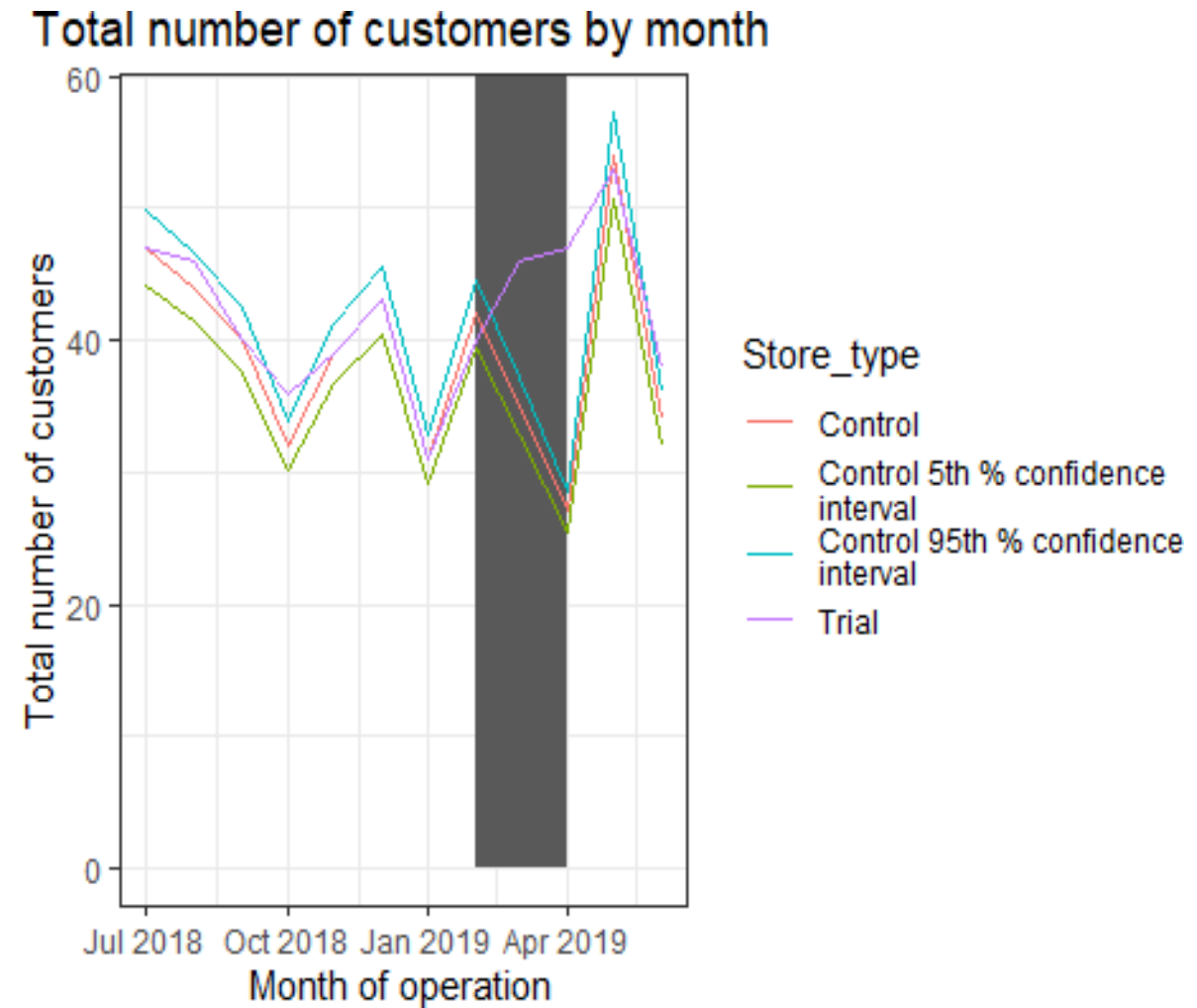
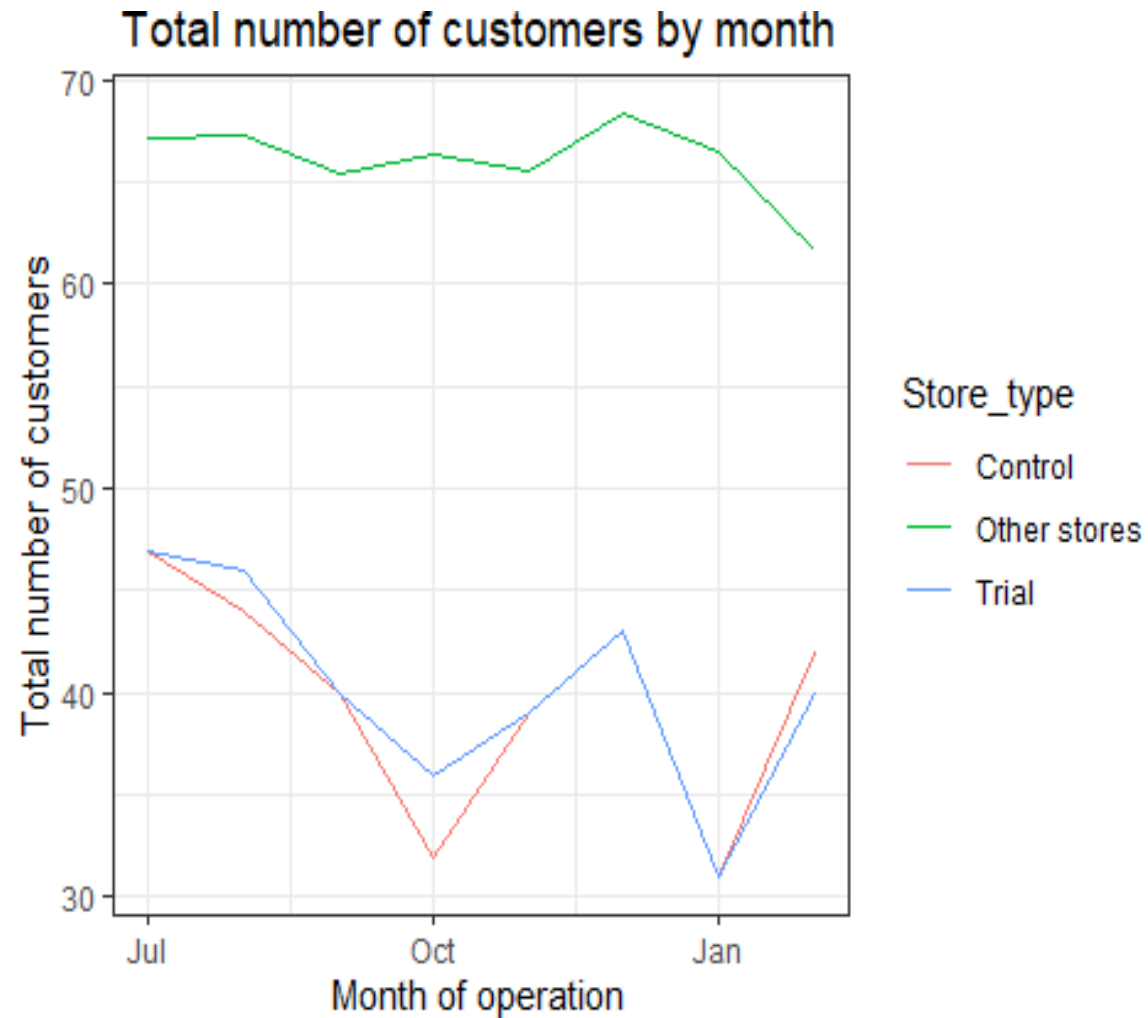
02

Trial store performance

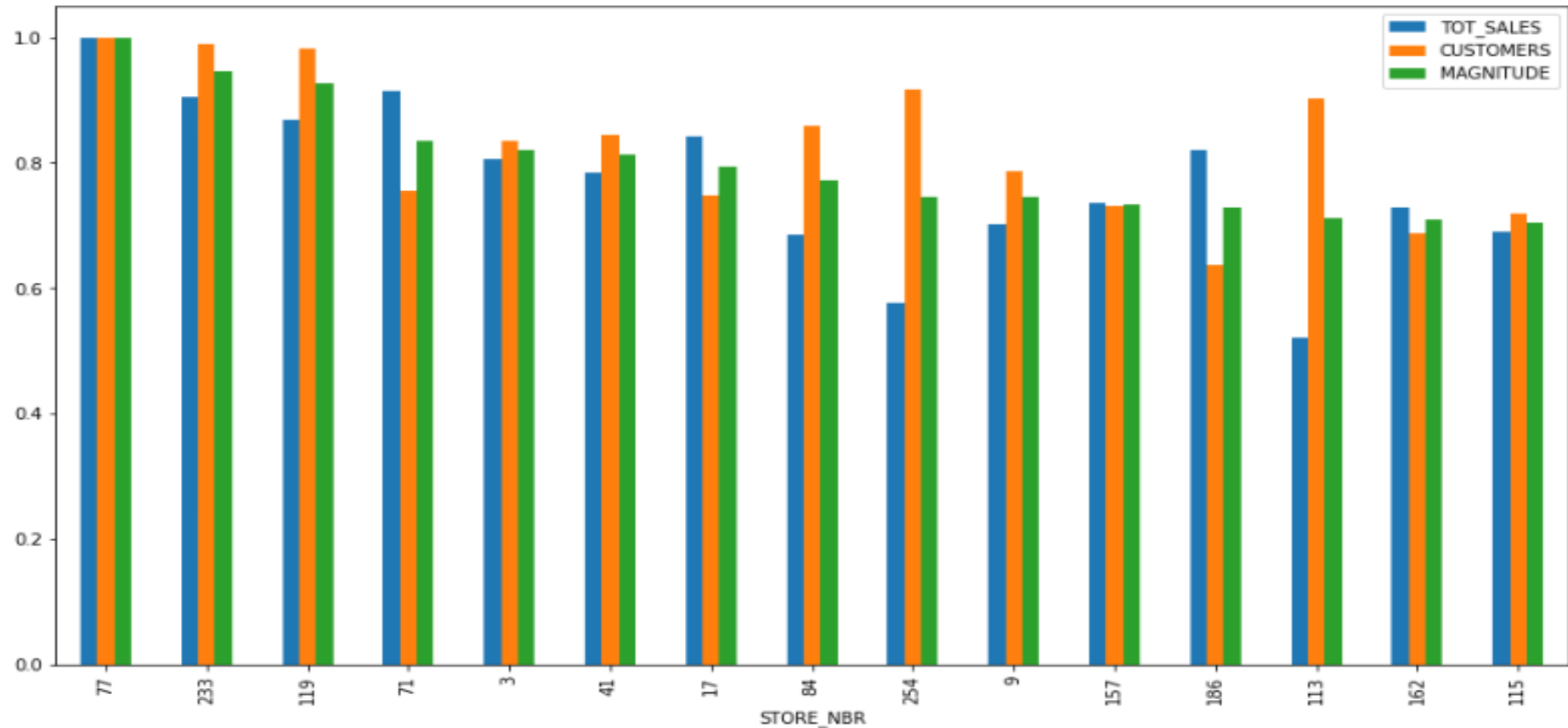
Total Sales Per Month



Total Number of Customer Per Month

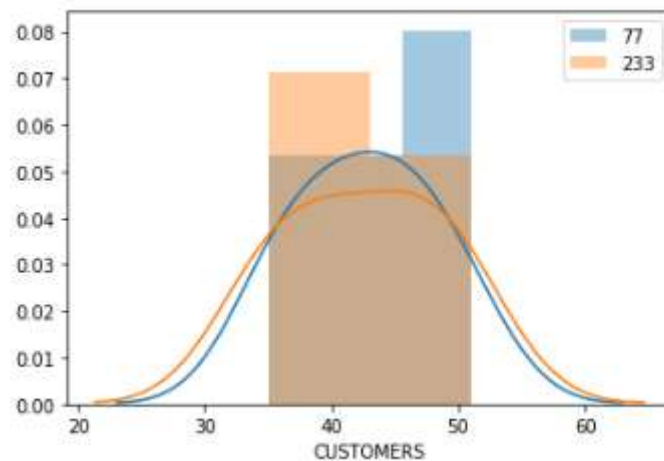
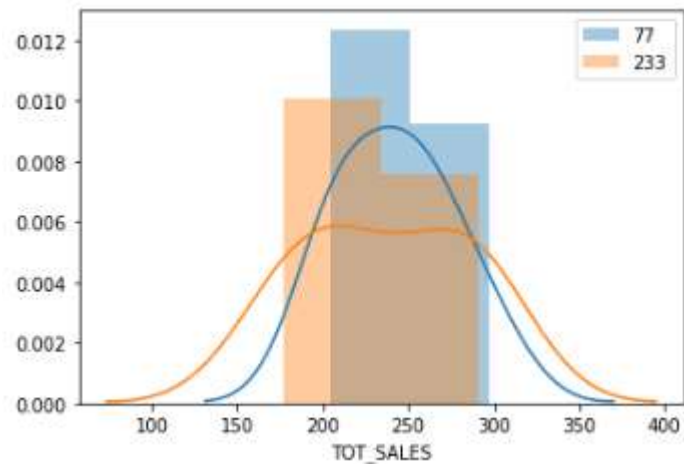


Correlation of the control store 77 vs other stores



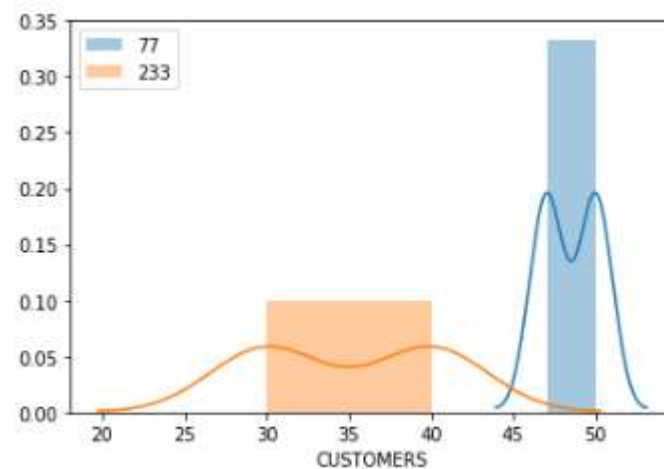
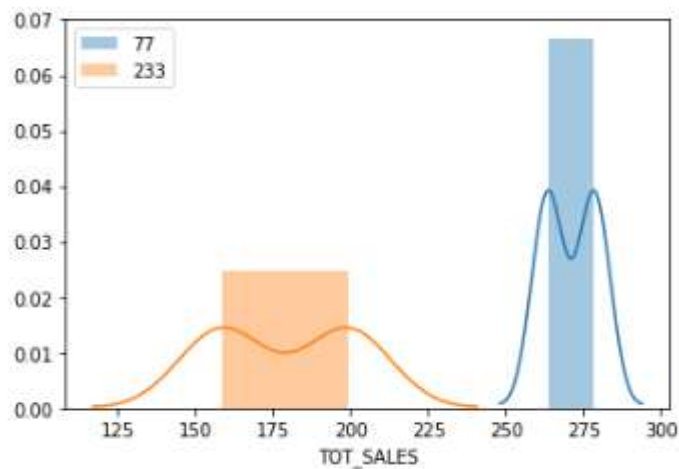
Stores with maximum similarities have the highest correlation. So stores 233, 119 and 79 are the most correlated.

Trial store 77 vs Store 233



Distributions of total sales and customers in pretrial period

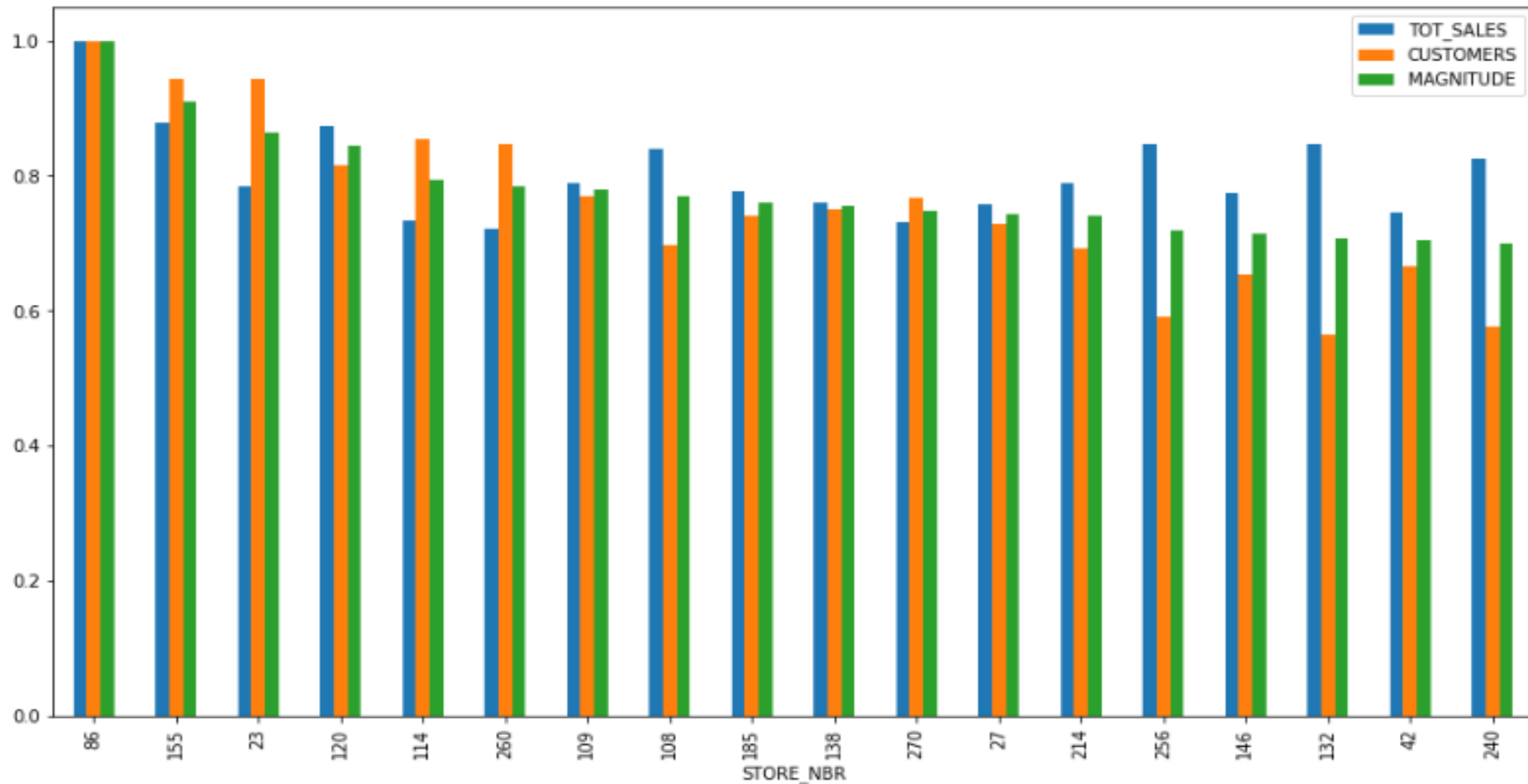
- Means don't vary and there is no significant difference



Distributions of total sales and customers in pretrial period

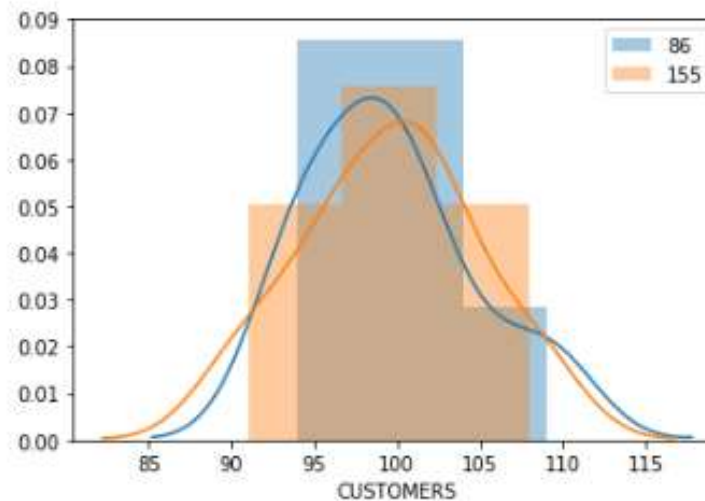
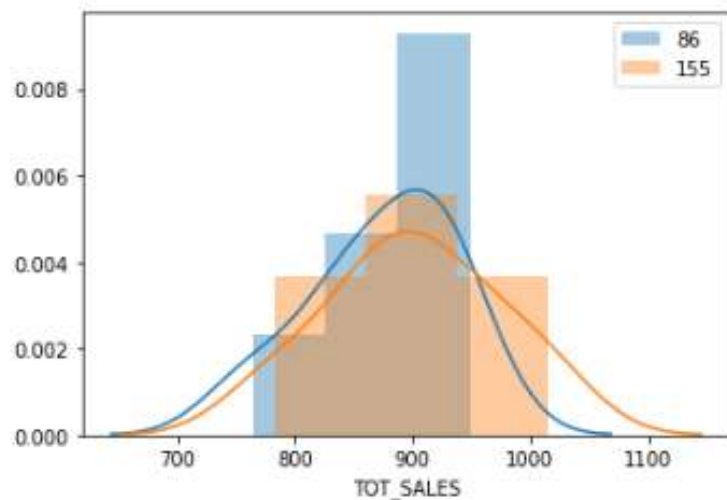
- Means vary and there is a significant difference

Correlation of the control store 86 vs other stores



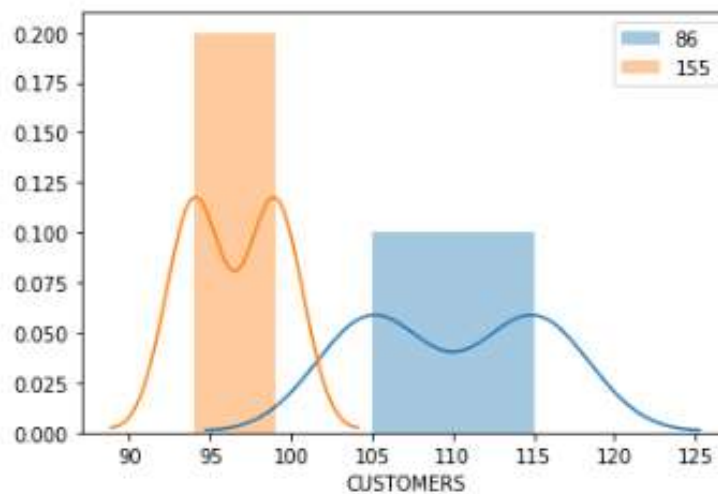
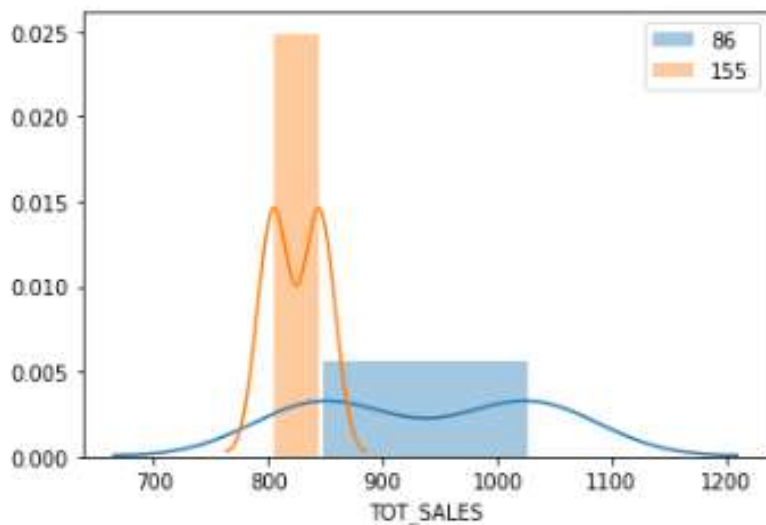
Stores with maximum similarities have the highest correlation. So stores 255, 23 and 120 are the most correlated.

Trial store 86 vs Store 155



Distributions of total sales and customers in pretrial period

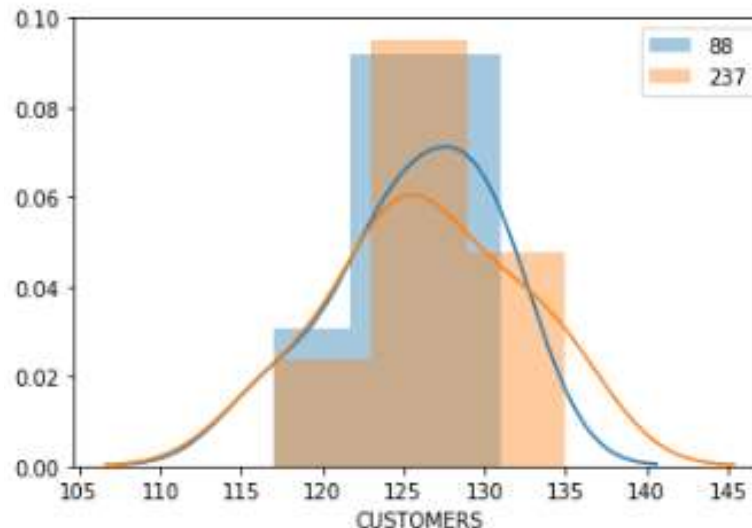
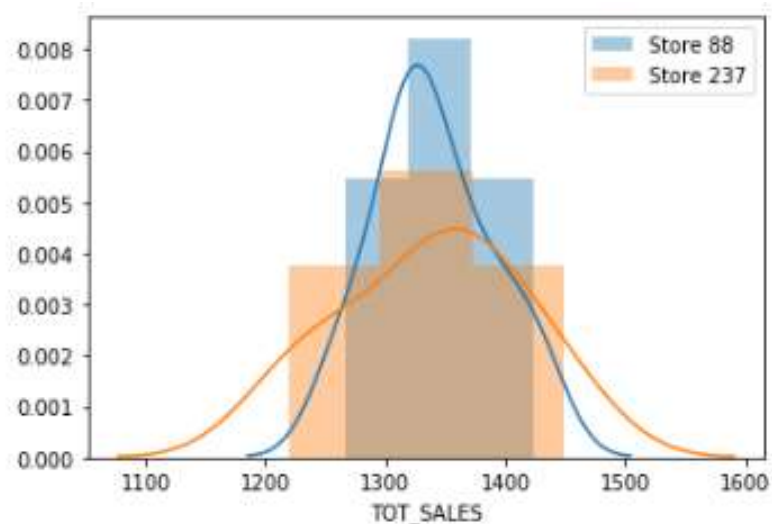
- Means don't vary and there is no significant difference



Distributions of total sales and customers in pretrial period

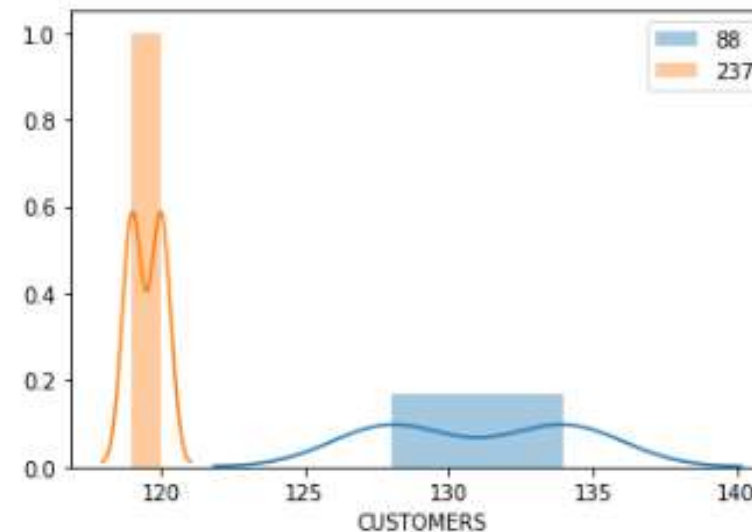
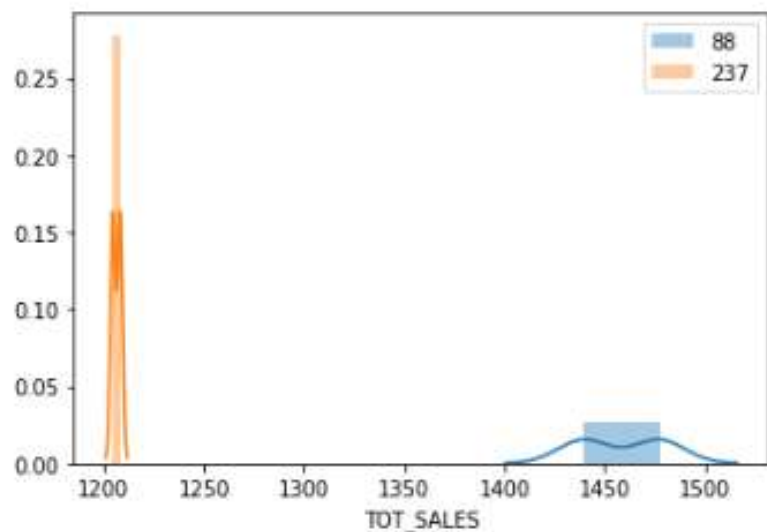
- Means vary and there is a significant difference

Trial store 88 vs Store 237 – Similarly selecting store 237 as trial store for store 88



Distributions of total sales and customers in pretrial period

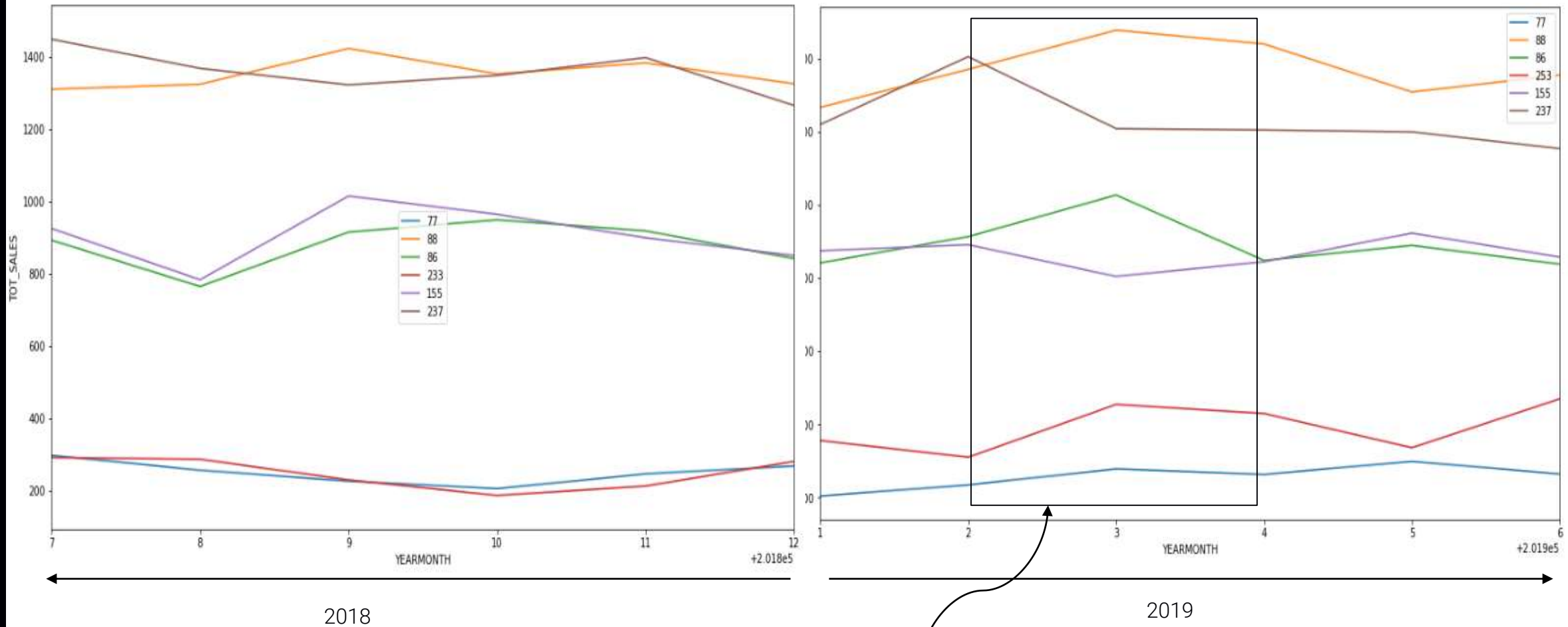
- Means don't vary and there is no significant difference



Distributions of total sales and customers in pretrial period

- Means vary and there is a significant difference

The control store were set up to measure sales whether trial store are doing better during the trial period or not.



Conclusion

- It was found that control stores 233, 155, 237 for trial stores 77, 86 and 88 respectively.
- The results for trial stores 77 and 88 during the trial period show a significant difference in at least two of the three trial months but this is not the case for trial store 86.
- We can check with the client if the implementation of the trial was different in trial store 86 but overall, the trial shows a significant increase in sales.

Recommendations

1. Stocks should be high in December before the Christmas
2. Kettle, Smiths, Doritos and Pringles should be kept in stocks as they are the most sold
3. Mainstream young singles/couples, retirees are the account for a great share of chips sale so they need much attention.
4. Budget older families have the maximum contribution to sales.
5. Control stores 233, 155, 237 for trial stores 77, 86 and 88 respectively would be a good choice



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