July 2024

Category review: Chips

Retail Analytics

Presenter: Yongshi Lin

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Classification: Confidential

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

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.

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.

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Executive summary

01 **Customer Analysis**

1. Overall, our stores sell 105 kinds chip products, gaining 1.8million dollars of revenue. Customers spend 7.3 dollars on chips per transaction on average.
2. For all customers, the most popular chips' brands are Kettle, Smiths, and Doritos. 175g is the most popular packet size. In general, medium-to-large size chips seems more popular.
3. Christmas' Eve had the peak number of transaction and total sales, indicating that holidays or family gathering events lead to increases of interests in chips.
4. Top 3 sales contributing customer segments are Budget Older families, Mainstream Young Singles/Couples, and Mainstream Retirees.
5. Factors driving sales: A) Mainstream Young Singles/Couples takes up the largest proportion of customers. B)Mainstream Young & Midage Singles and Couples are more willing to buy more packet of chips on average and pay more per chips, which is indicative of impulse buying behavior. C) Older Families & Young Families buy more chips per customer.

02 **Trial Store Analysis**

1. The control stores successful reflect the performance of trial stores, instead of the average of other stores, based on the performance of total sales and number of customers.
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.
3. overall, the trial shows a significant increase in sales during trial period.

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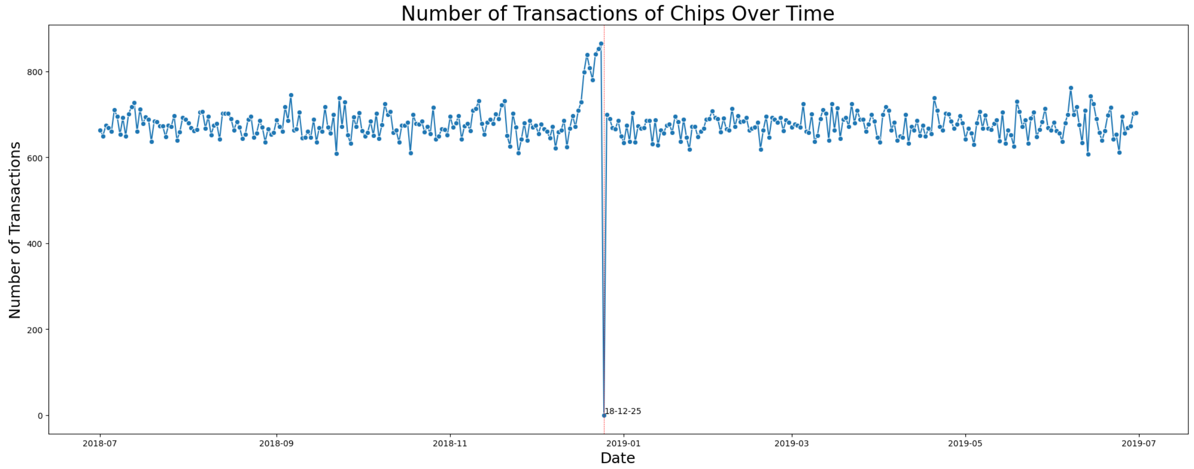
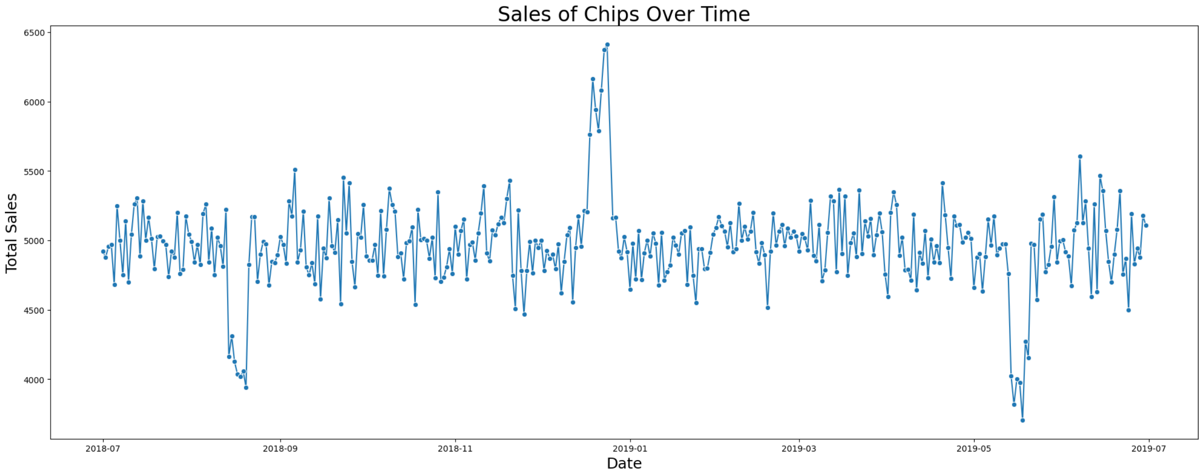
01

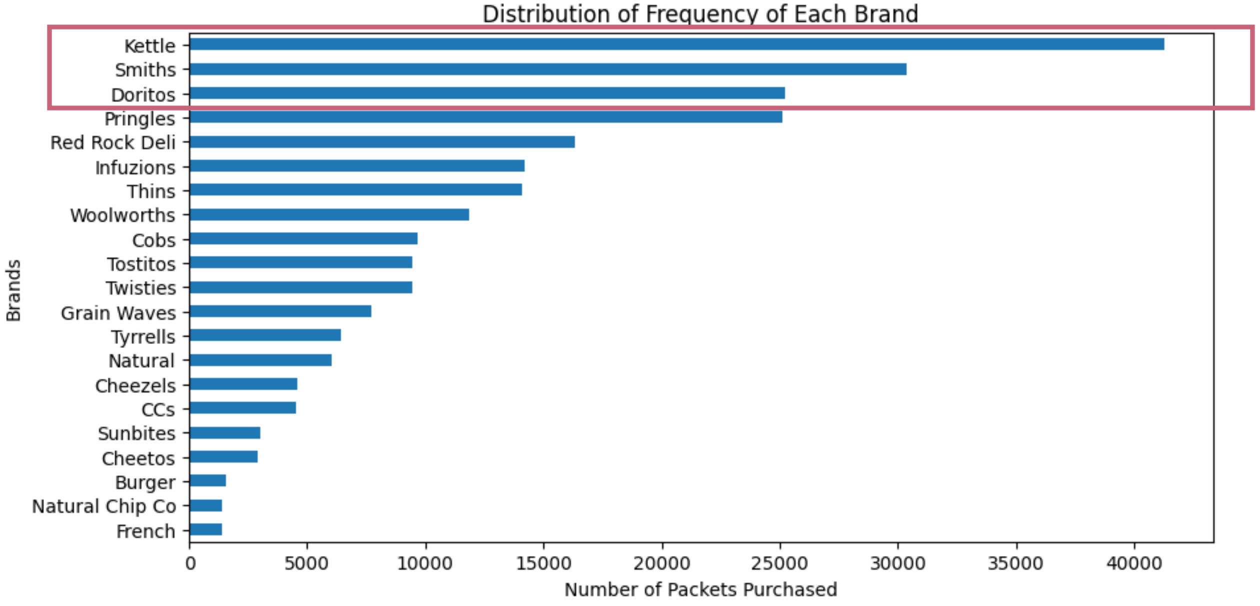
Customer Analysis

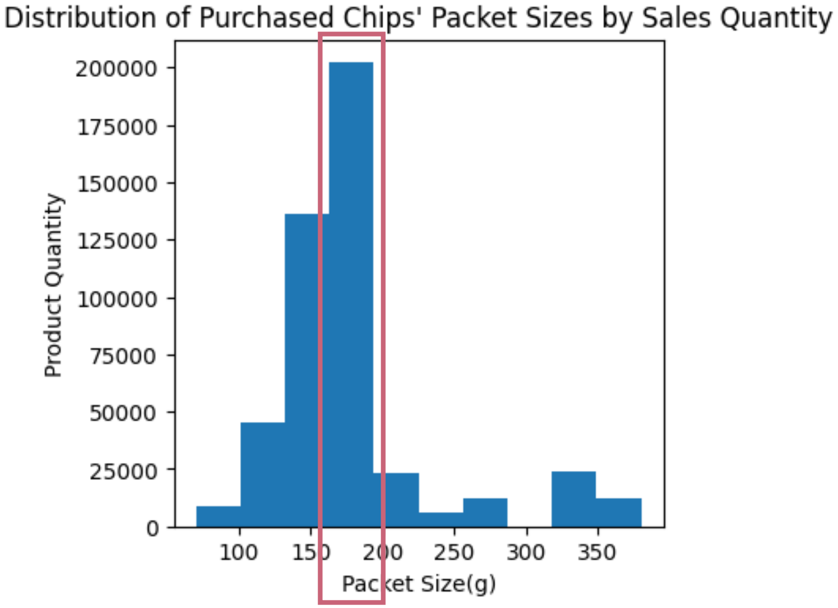
Christmas' Eve had the largest number of transaction and total sales, indicating that holidays or family gathering events might lead to increases of interests in chips.





The most popular brands are Kettle, Smiths, and Doritos. 175g is the most popular packet size. In general, medium-to-large sized chips are more popular.





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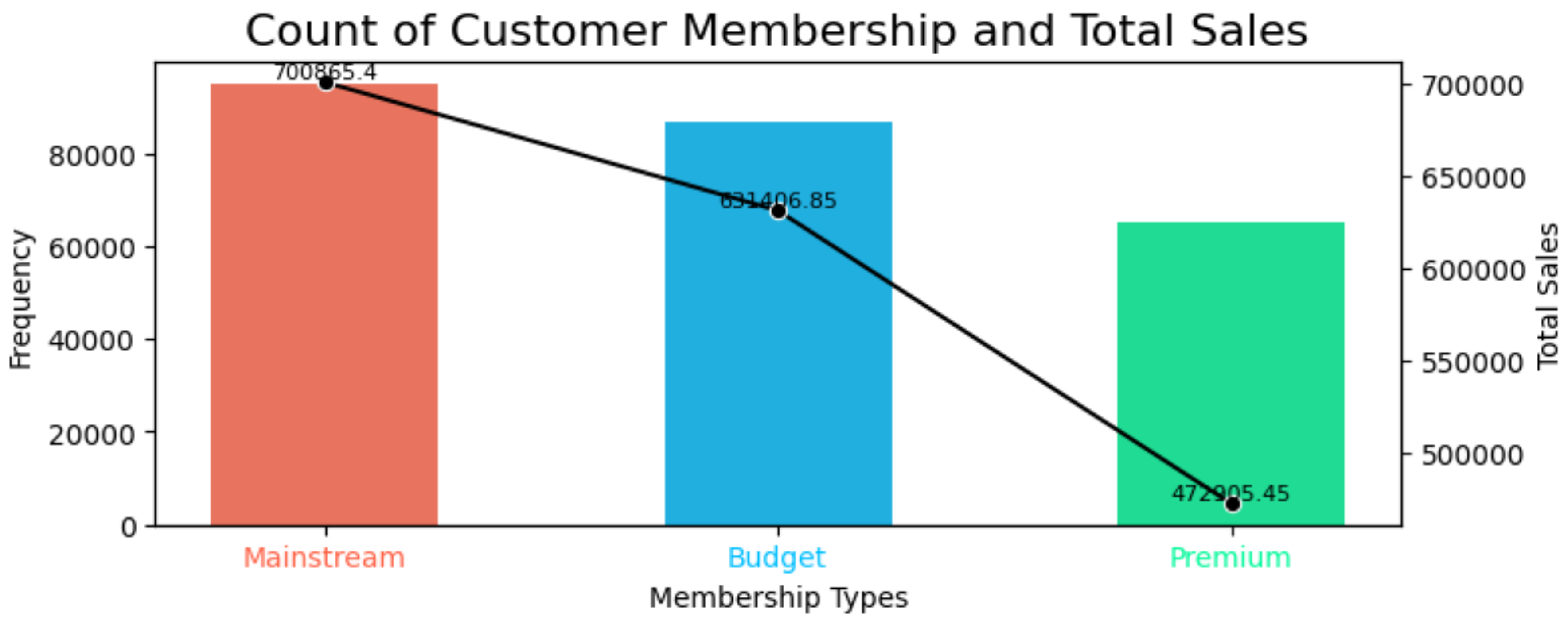
The number of customer in different affluence types(or membership types) directly influence the total sales of chips caused by each segments.



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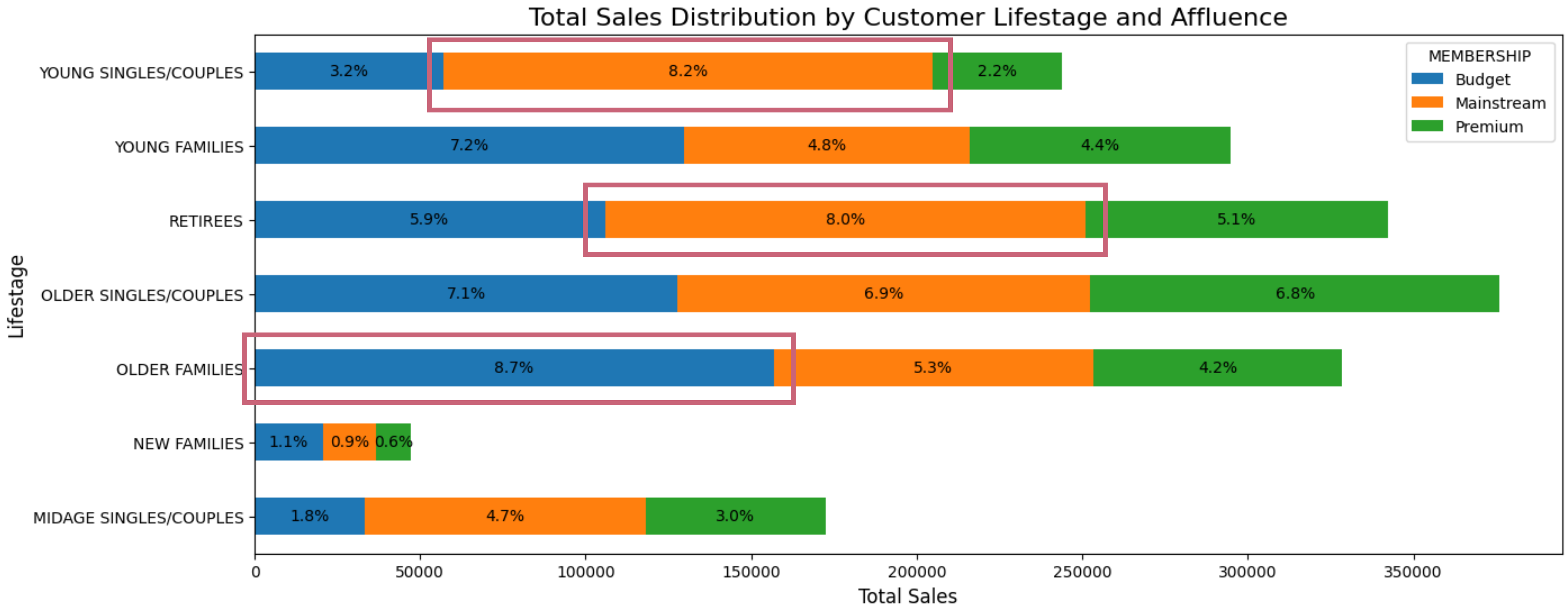
The top three customer segments contributing to the total sales are Budget Older Families, Mainstream Young Singles/Couples, and Mainstream Retirees.



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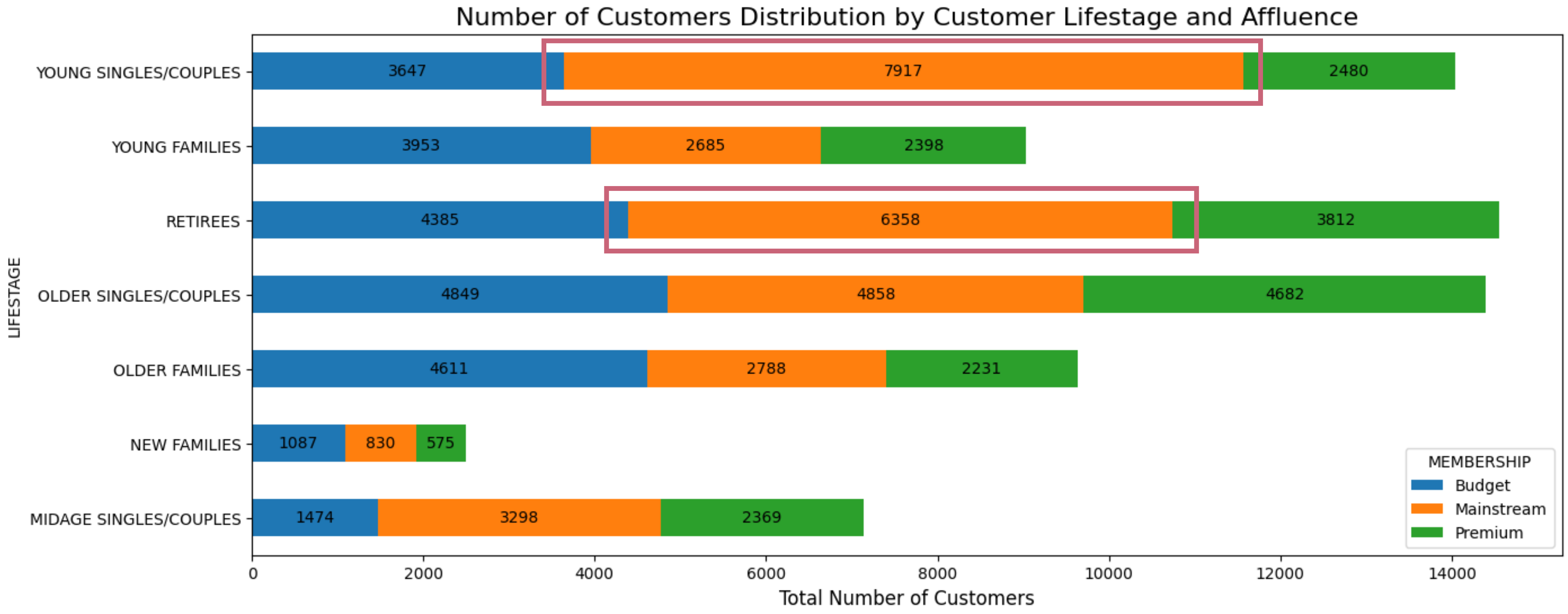
Factors driving sales: Mainstream Young Singles/Couples has the largest proportion of customers, followed is Mainstream Retirees, driving to their total sales. However, this is not a major case for the Budget Older Families.



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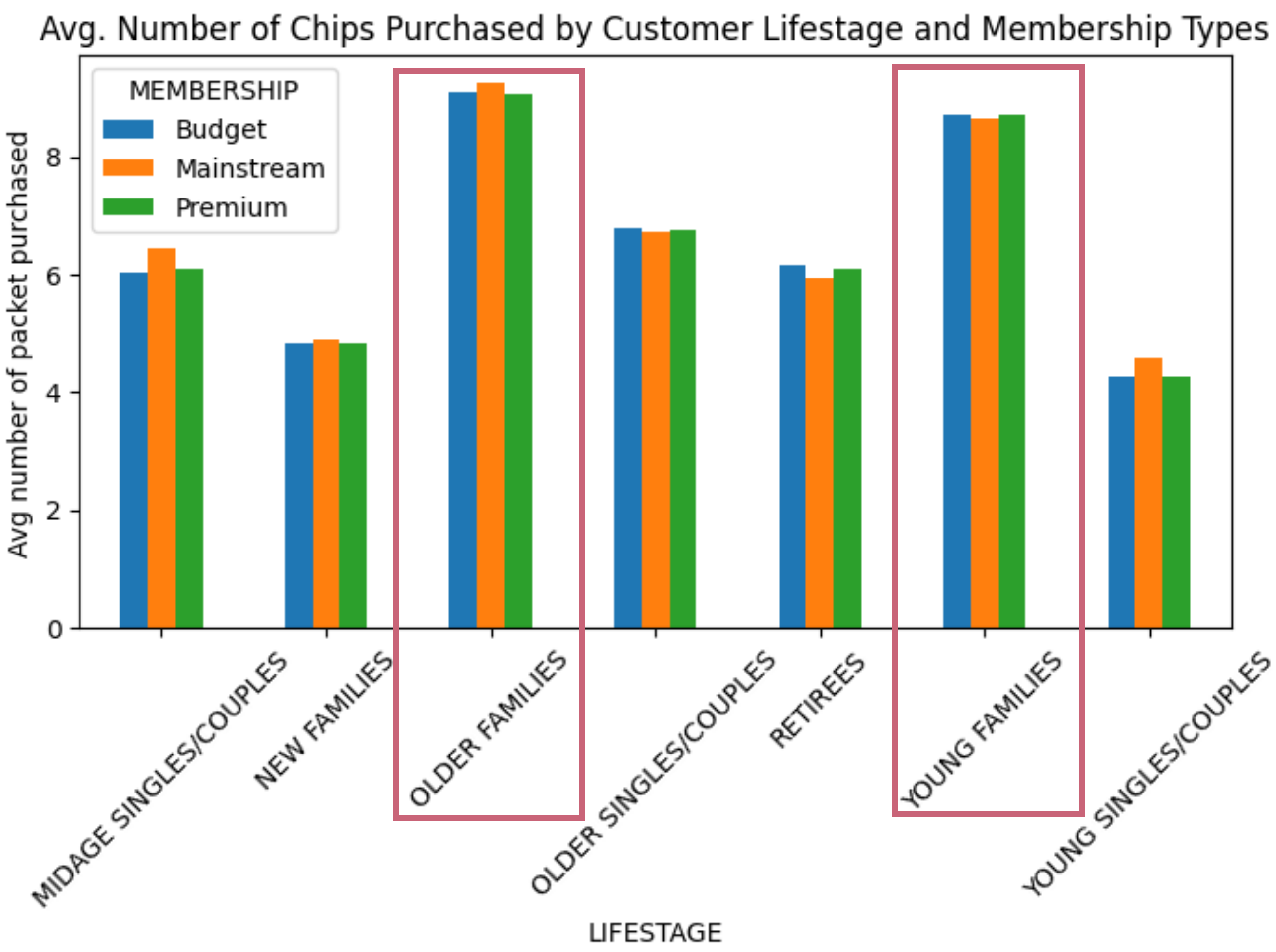
Factors driving sales: Older Families & Young Families buy more chips per customer on average.



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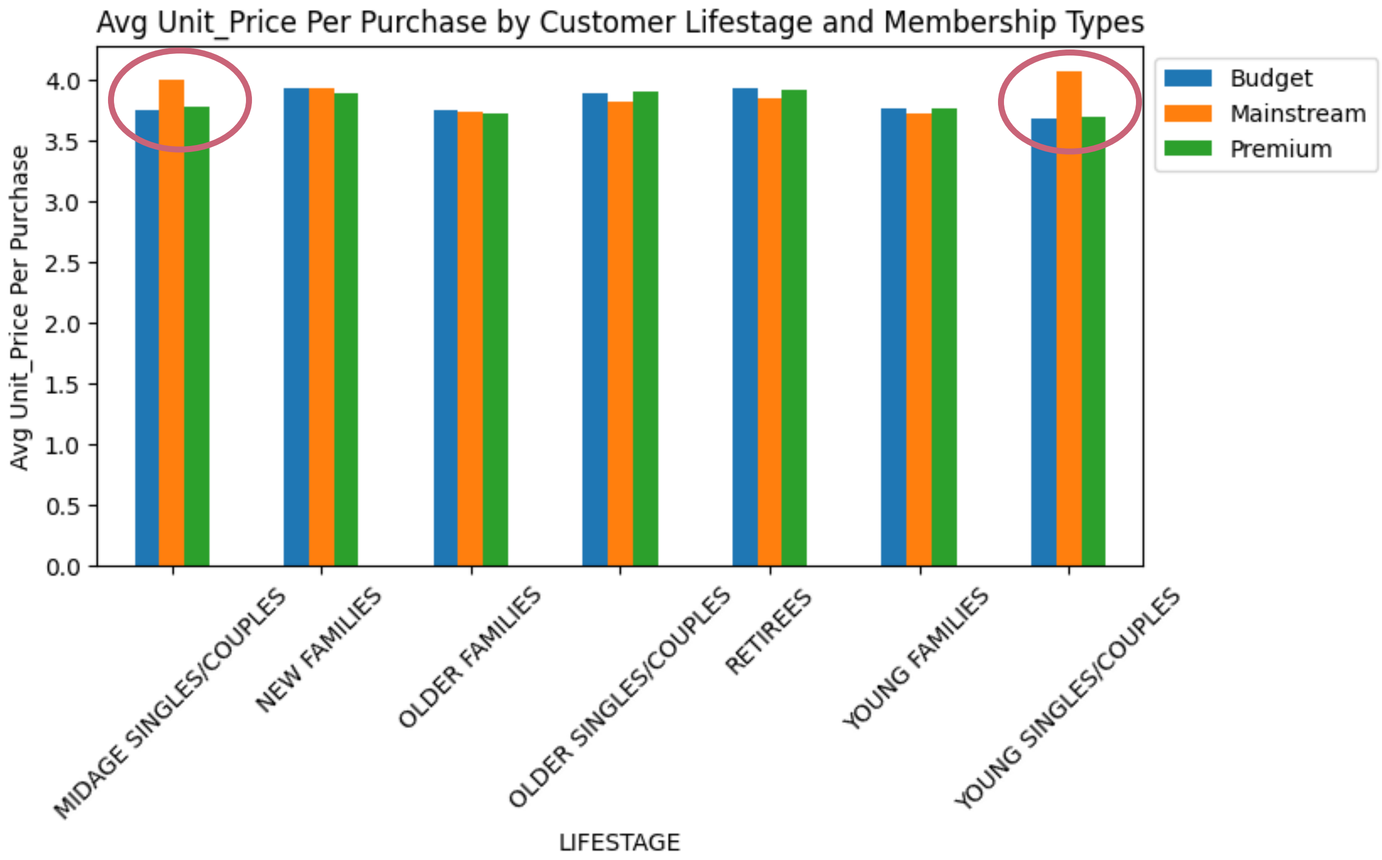
Factors driving sales: Mainstream Young & Midage singles and couples are more willing to pay more per packet of chips, which is indicative of impulse buying behavior.



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Stretch: Customer preferences of our target customer segments

About brands:

1. Budget Older Families are 38% more likely to buy Natural Chip Co chips than the rest of the customers.
2. Mainstream Retirees are 18% less likely to buy French chips than the rest of the customers.
3. Mainstream Young Singles/Couples are 23% more likely to purchase Tyrrells chips than the other segments. However, they are 56% less likely to purchase Burger Rings compared to the rest.
4. Stores can display the most popular brands of chips where all customers and our target customer groups are easier to see them.

About packet size:

1. Budget Older Families are 35% more likely to buy 180g packet size of chips than other customer segments.
2. Mainstream Retirees are 14% more likely to buy 250g packet size of chips than other customer segments.
3. Mainstream Young Singles/Couples prefer 175g packet size the most. They are 27% more likely to purchase 270g packet size of chips(only Twisties sells) than other customer segments; and are 56% less likely to buy 220g pack size of chips(only Burger Rings sells).

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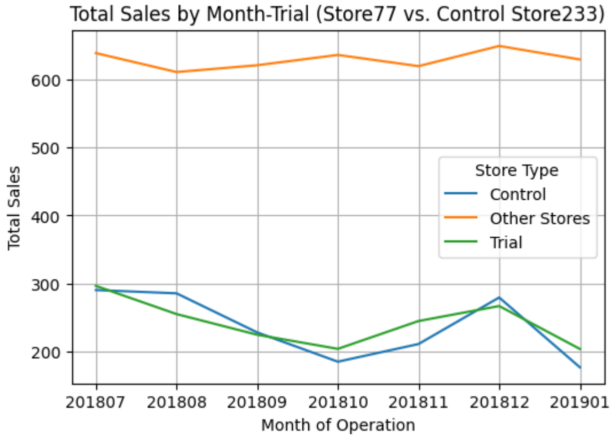
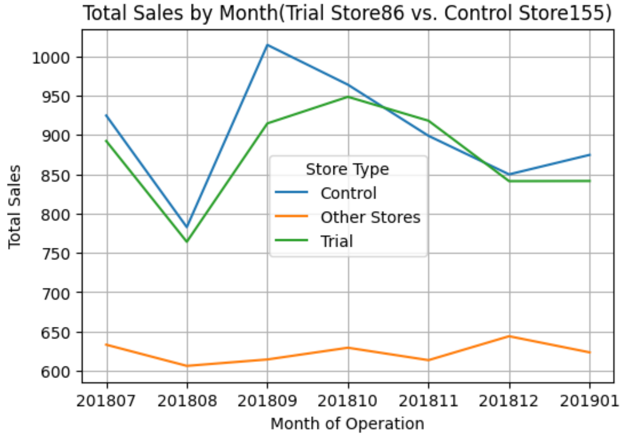
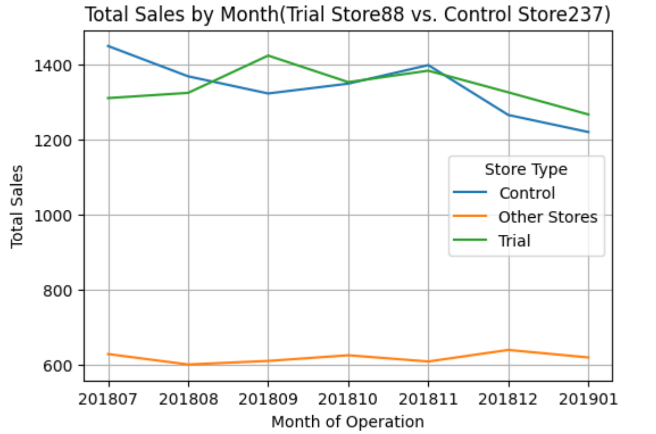
02

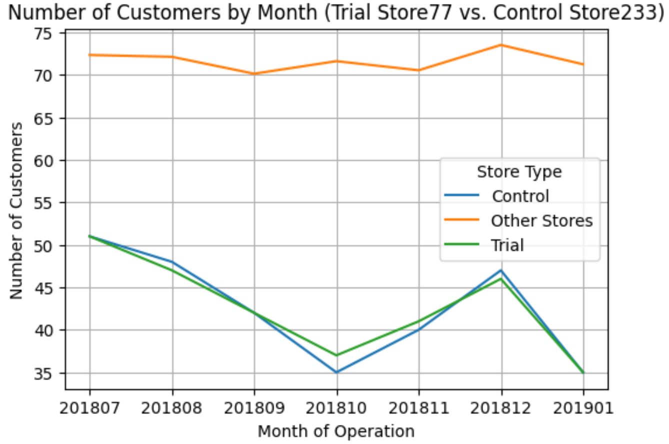
Trial Store Analysis

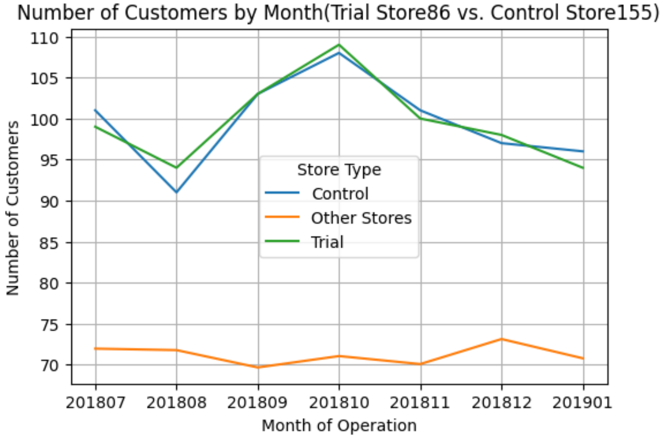
The control stores successful reflect the performance of trial stores, instead of the average of other stores. Here are our three control-trial pairs:

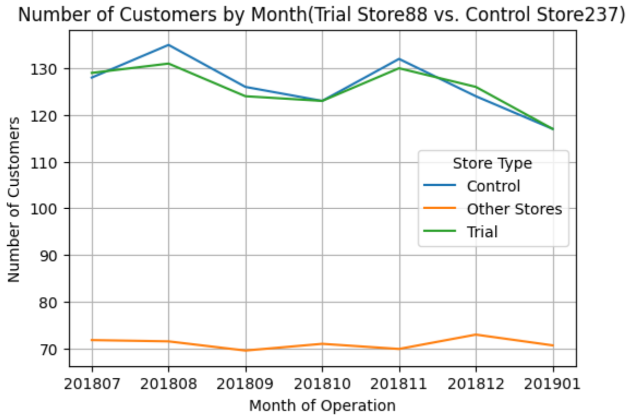












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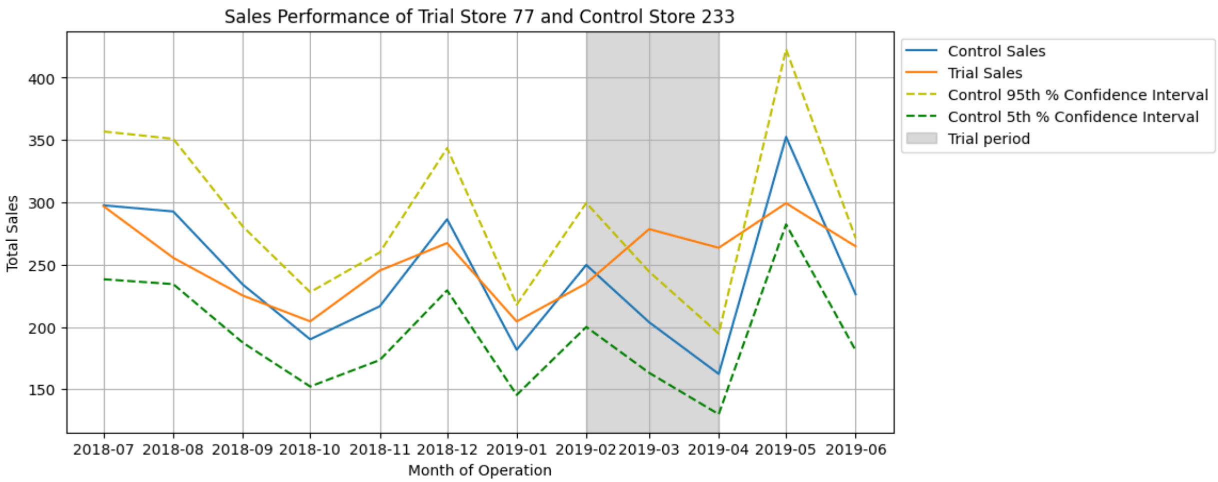
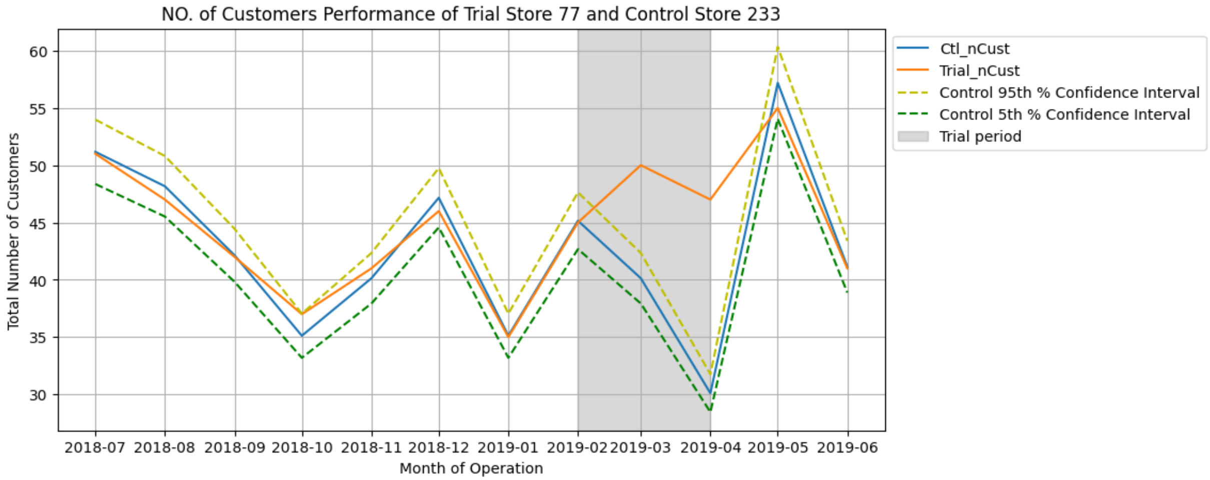
Trial Store 77 & Control Store 233: Trial succeed, they are significantly different. The driver of change is from both increases in total sales and number of customers.





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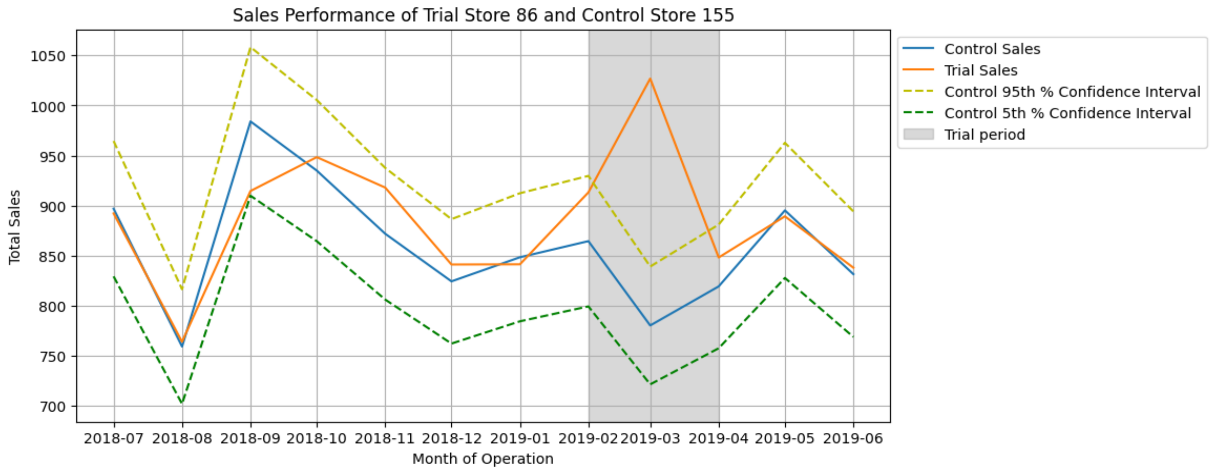
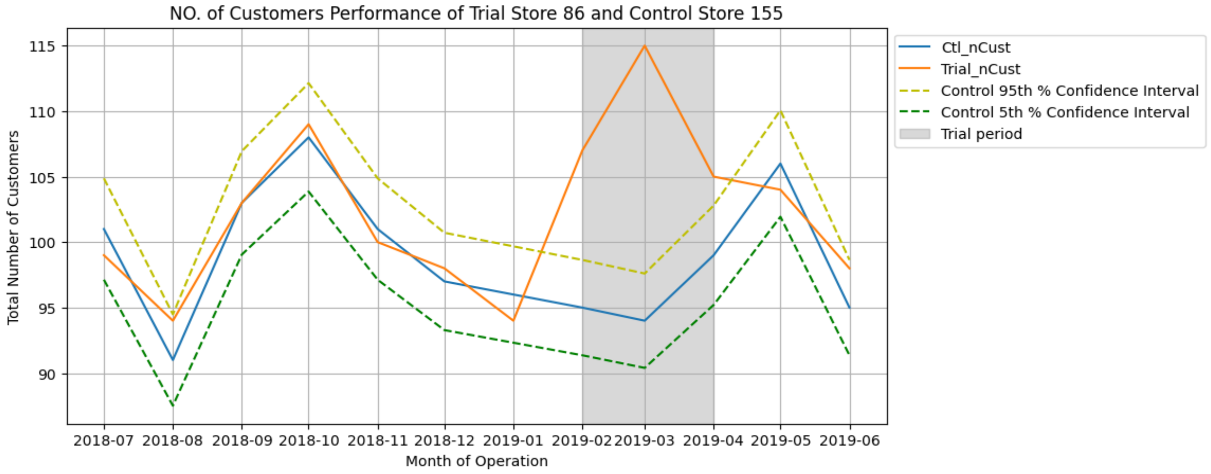
Trial Store 86 & Control Store 155: Trial not succeed. The number of customers is significantly higher in all three months, but sales is not. Check trial store’s trial period implementation, such as discount deals for reasons.





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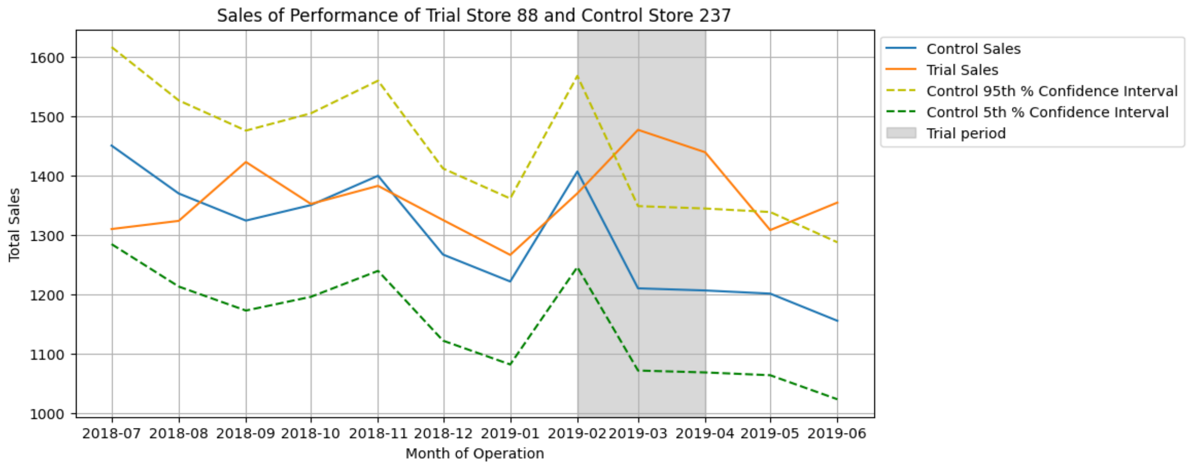
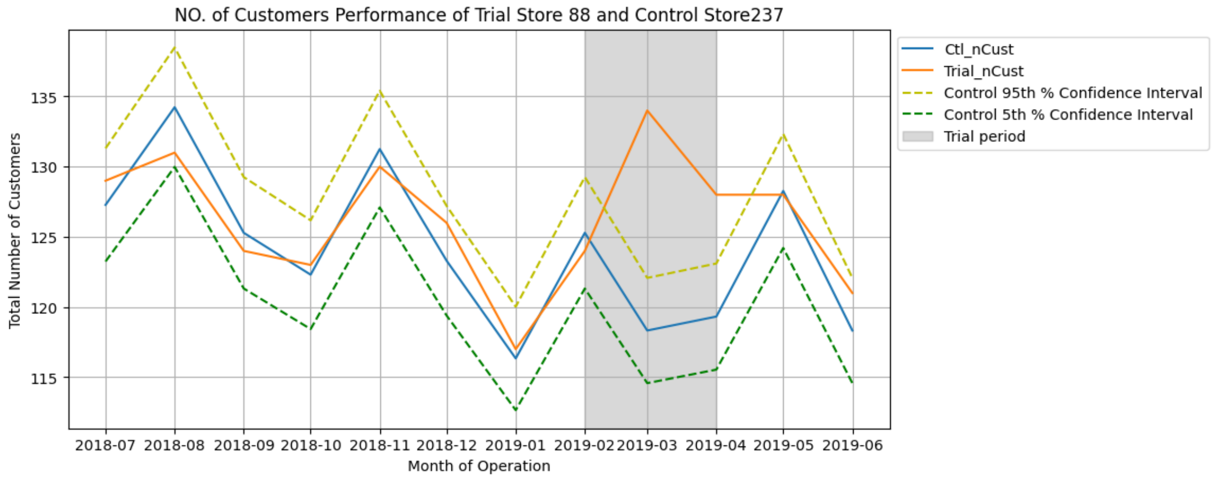
Trial Store 88 & Control Store 237: Trial succeed. The driver of change is more from the number of customers than sales.





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Limitation & Suggestion

It is suggested that the stores should improve their product naming system or format to avoid statistical bias, such as naming the product in a format like "Brand & Flavor & Product Category & Weight/Size."

The reasons are:

- The original database lacks clarification in product categories. It is not easy to determine if the product is a chips product, cheese product, salsa product, or another kind just by looking at the product names. This can lead to significant bias due to misunderstandings.
- The brand names and product categories in the current product name column are not unique. One brand has more than one brand name, and a chip product has more than one category name. Without further communication with the stores or a full understanding of the products, analysts might generate biased or inaccurate analyses.

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