June 2020

Category review: Chips

Retail Analytics

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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.

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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.

Executive summary

01 **Task 1**

- Every year, the period leading up to Christmas sees a spike in sales, making it an ideal time for promotional efforts.
- The most popular brand of chips is Kettle, and the most popular size is 175g. The primary sources of sales are Mainstream - Young Singles/Couples, Budget - Older Families, and Mainstream - Retirees.
- The higher average purchase quantity of young and older families, the high average purchase price of Mainstream mid-age and young singles/couples, and the vast number of consumers in the latter two segments are the main drivers of the high sales.

02 **Task 2**

- For every trial store, a control store was chosen, and the trial and pre-trial period's metrics values were compared.
- Trial store 86 does not exhibit a significant difference in at least two of the three trial months, according to the results for trial stores 77 and 88 during the trial period.

01

Customer Analysis

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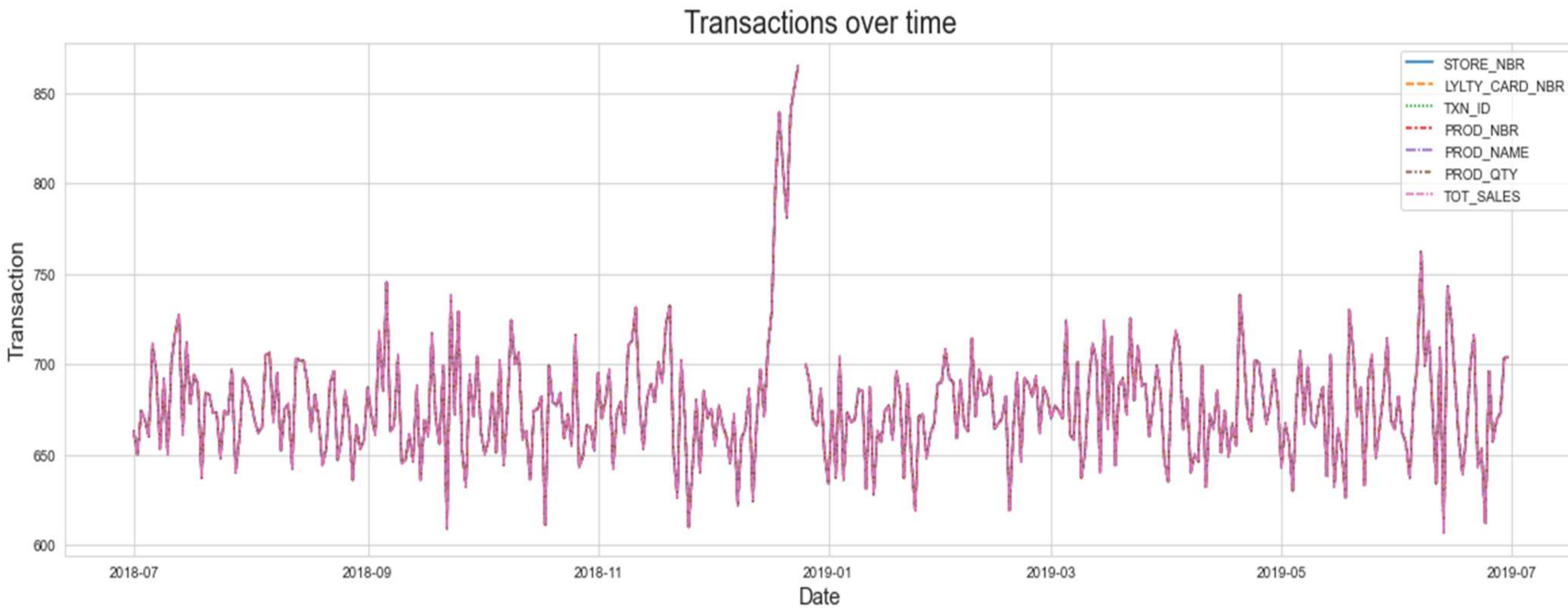
Overview: Transactions over time



The sales have a sudden hike in the month of December before the Christmas (except the day itself). Whereas there is no sales on 25th.

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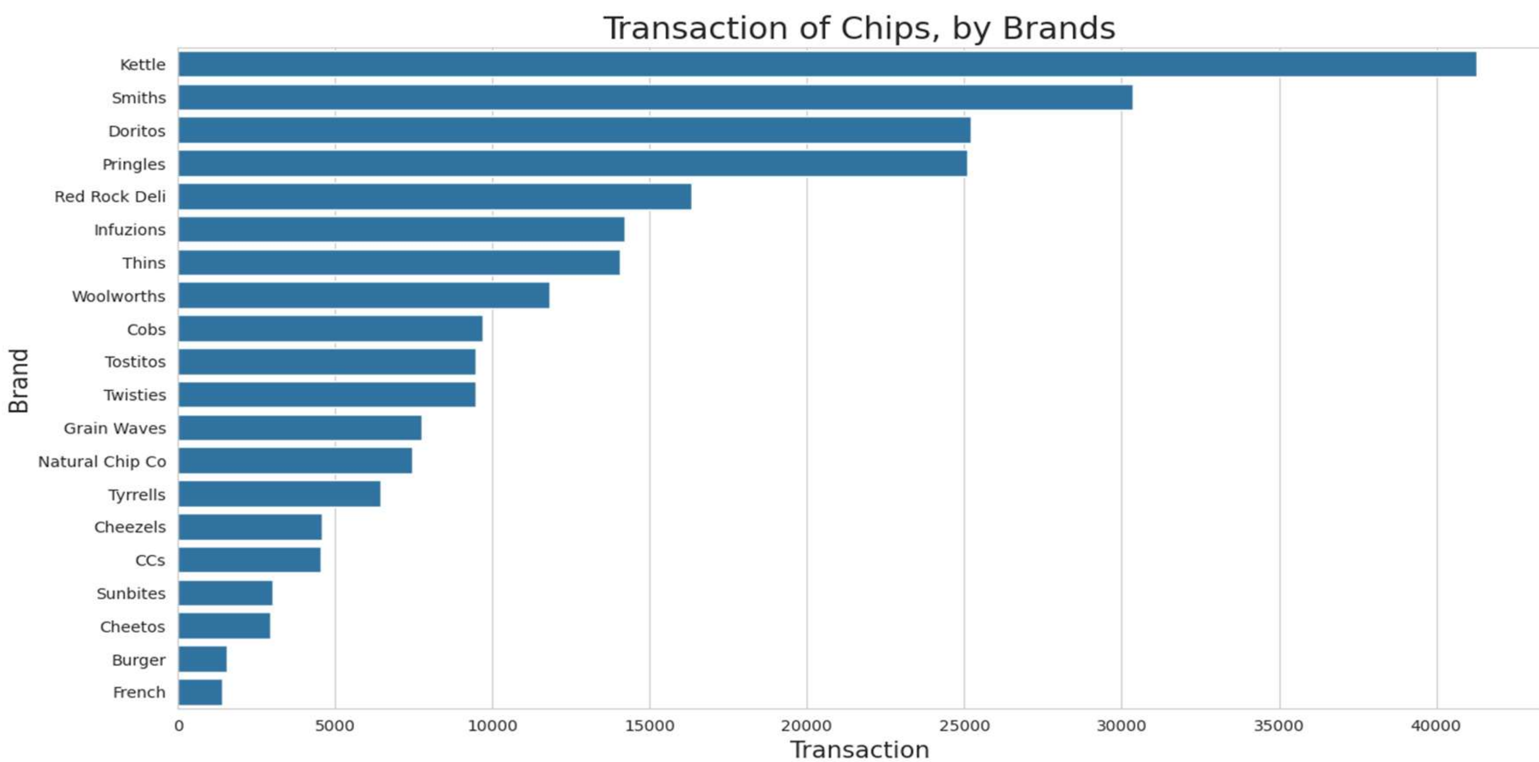
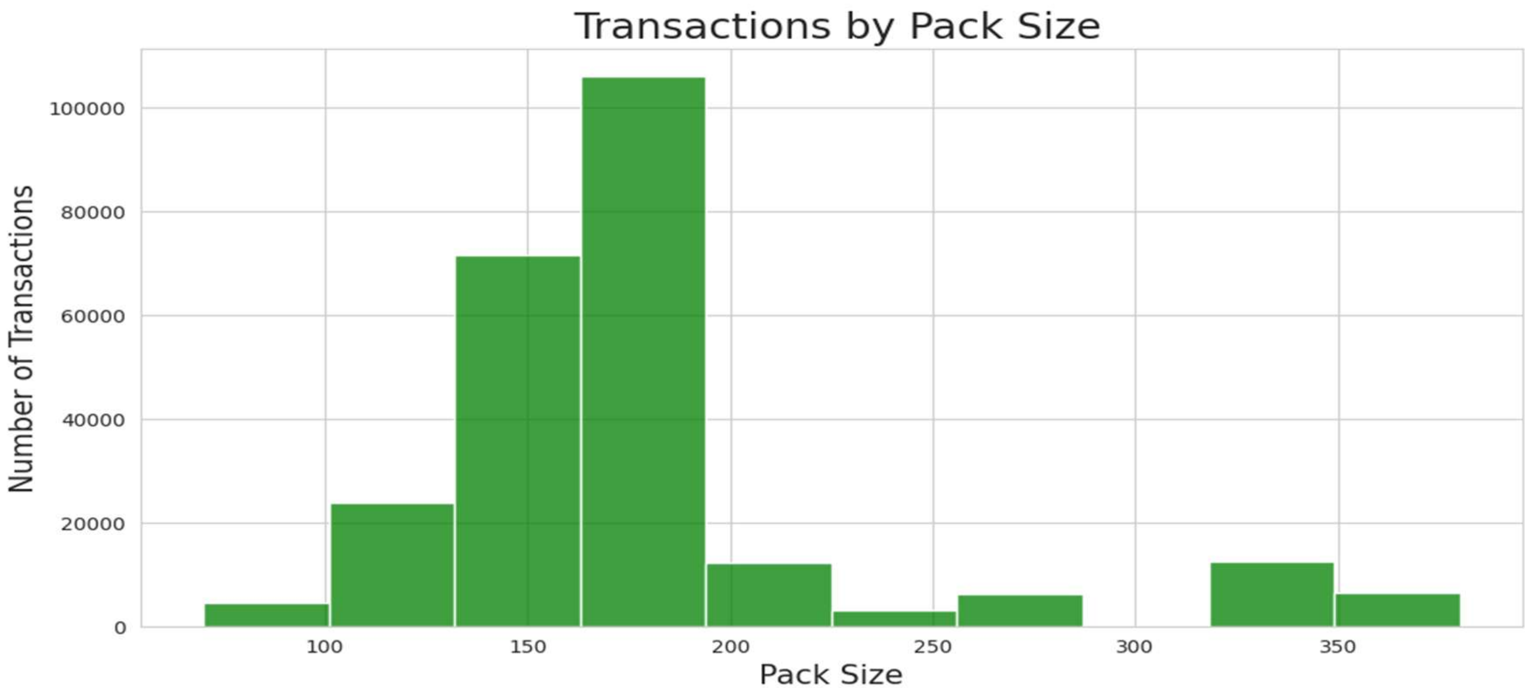
Overview: Popular Brands



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

Overview: Best selling package size



Best selling package size is 175g.

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

Total Sales - Top 3 sales driver segments :

- Budget - Older Families
- Mainstream - Young Singles/Couples
- Mainstream - Retirees

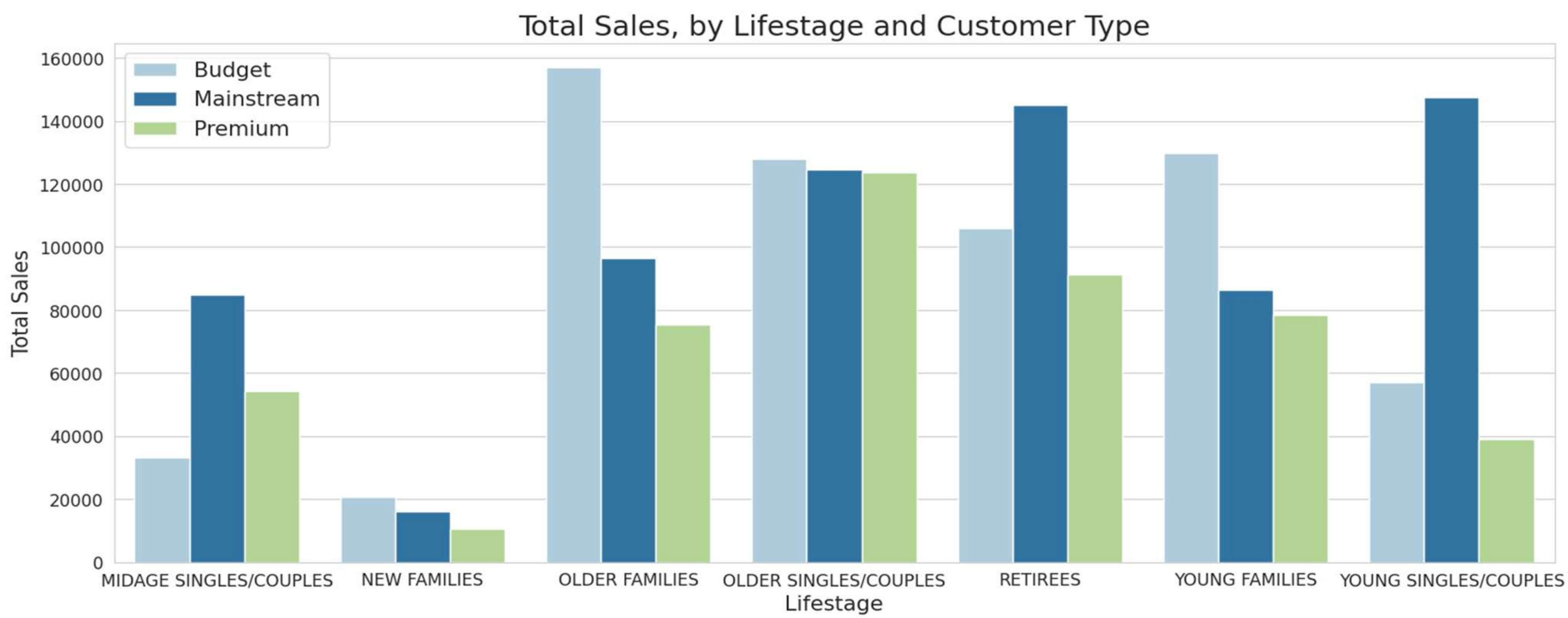
Other facts:

- Customer counts: Young singles and couples and retirees make up the majority of Mainstream customers who purchase chips.

- Average purchase quantity: Generally speaking, younger and older families purchase more chips per customer.

- Average purchase price: Compared to their budget and premium counterparts, mid-age and young singles/couples are more ready to pay more for a packet of chips (statistically significant).

Visualising the proportion of customers by affluence (customer type) and life stage



Sales are coming mainly from Budget - Older Families, Mainstream - Young Singles/Couples and Mainstream - Retiree

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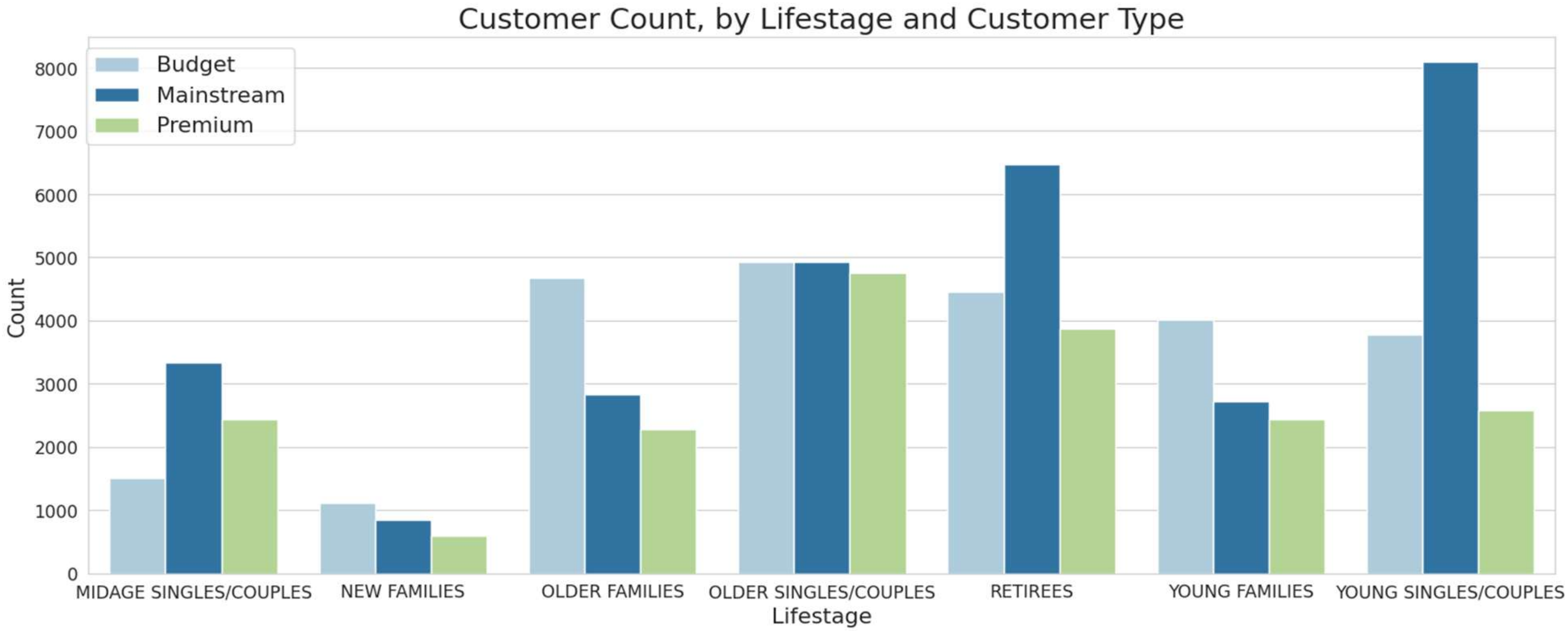
Visualising the proportion of customers by affluence (customer type) and life stage



We can clearly find out that there are more Mainstream - young singles/couples and Mainstream - retirees who buy chips.

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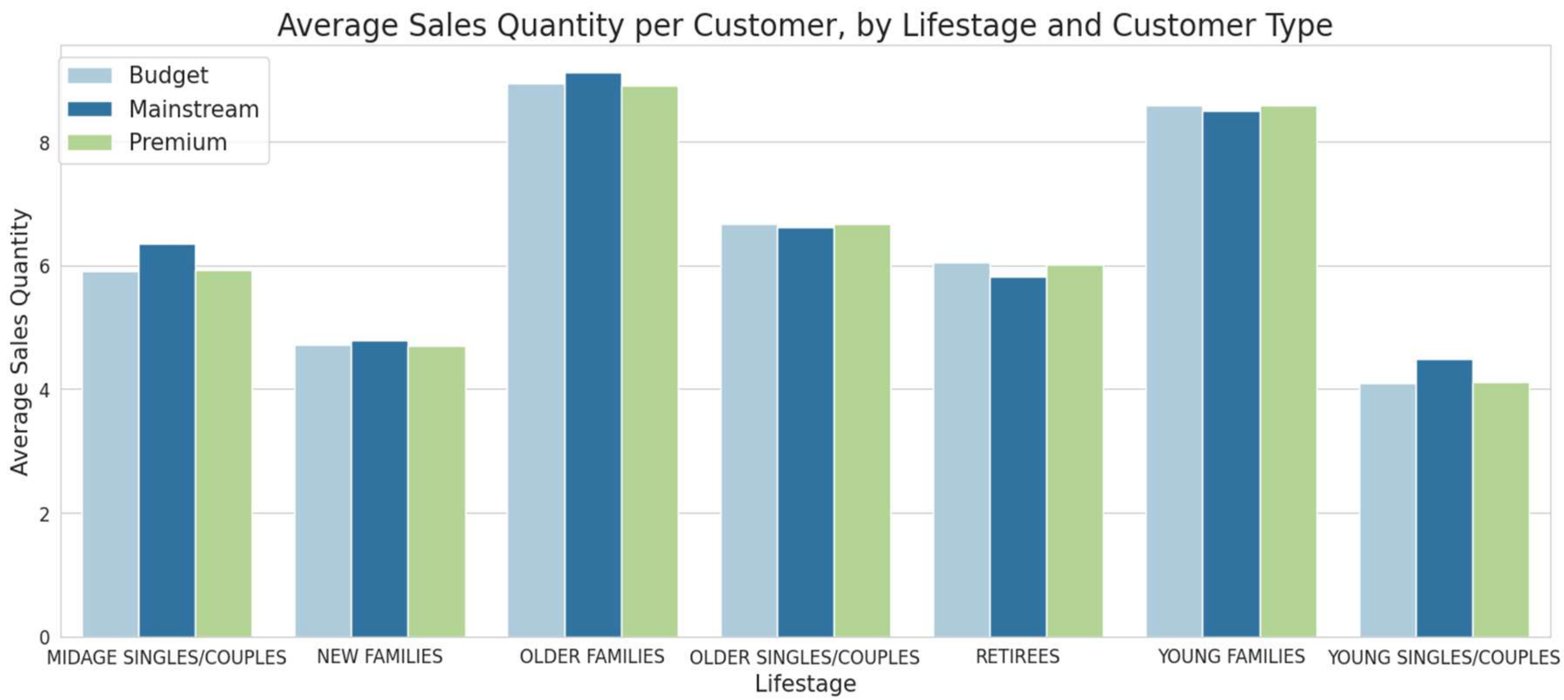
Visualising the proportion of customers by affluence (customer type) and life stage



Generally speaking, younger and older families purchase more chips per customer.

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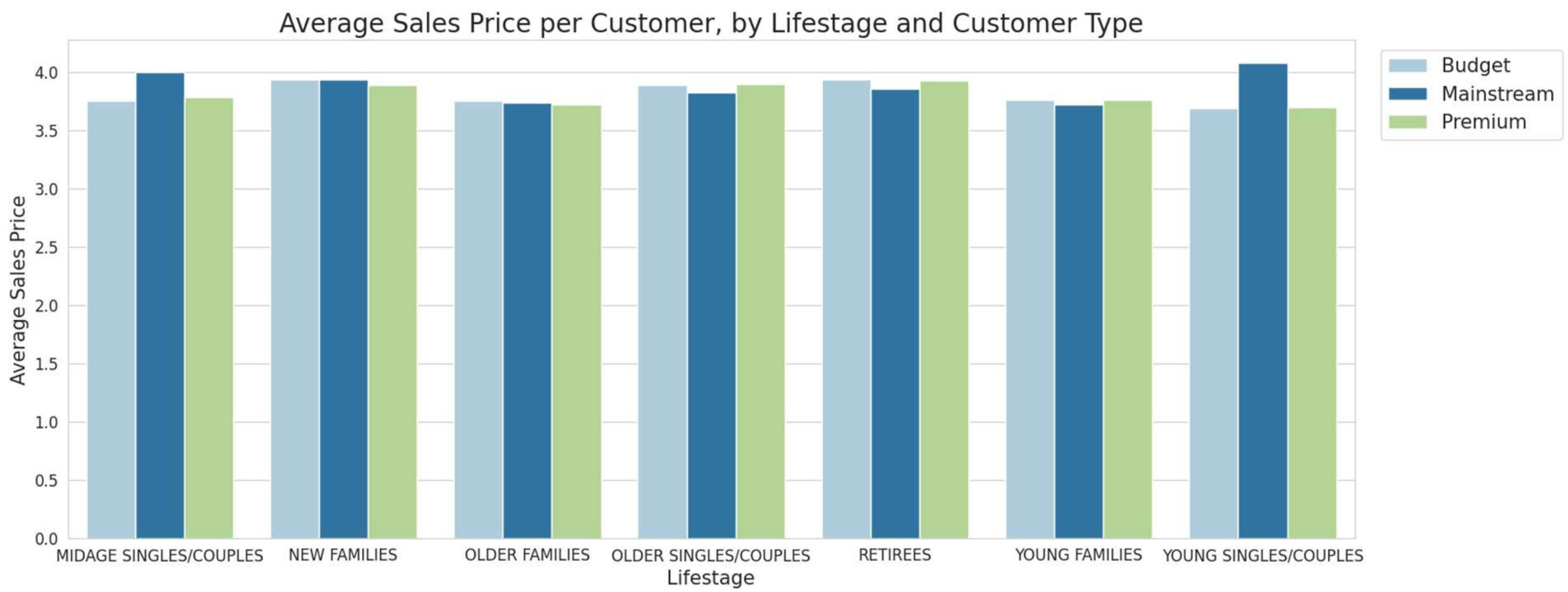
Visualising the proportion of customers by affluence (customer type) and life stage



Mainstream midage and young singles/couples are more willing to pay more per packet of chips compared to their budget and premium counterparts.

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02

Trial store performance

Explanation of the control store vs other stores

TRIAL STORES	CONTROL STORES
77	233
86	155
88	237

Selection for control stores is based on an average score from following standards :

- Total Sales and the Number of Customer
- Correlation and Absolute difference between the trial store's performance and each control store’s performance.

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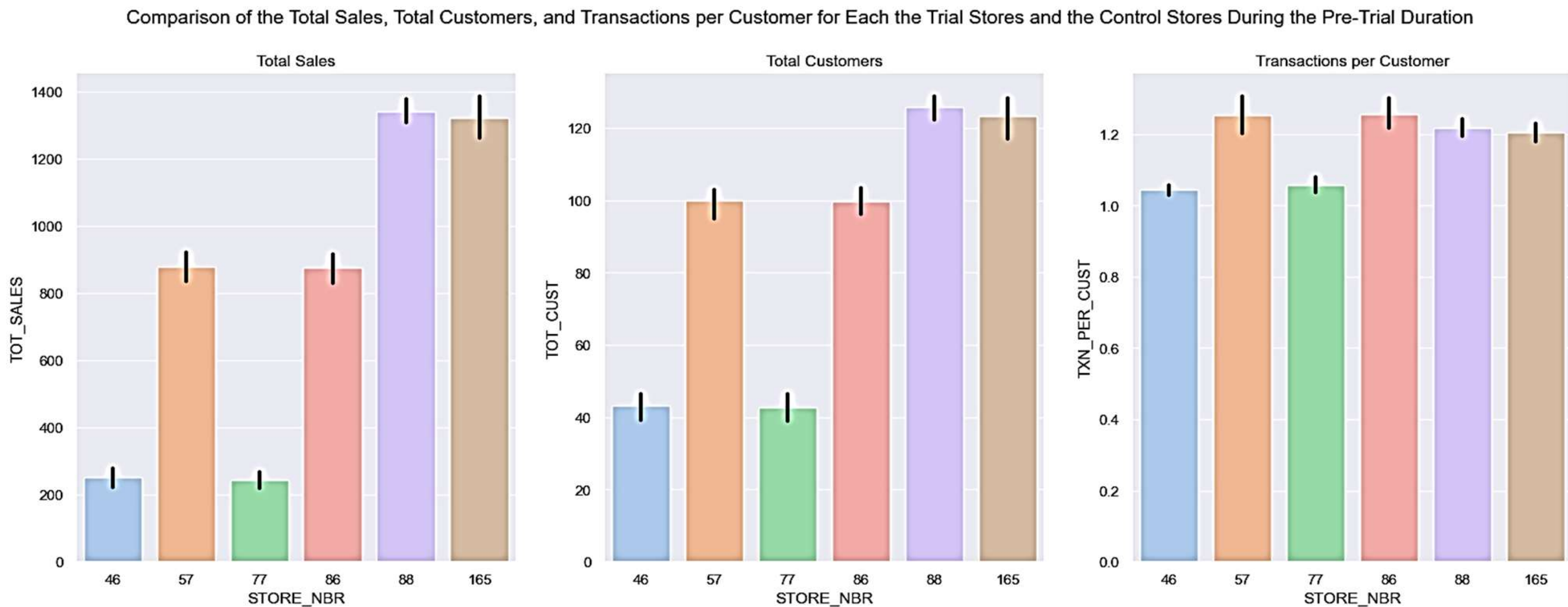
Overview: Pre-Trial Period



While the other trial stores performed the same as their corresponding control stores, we can see, however, that STORE_NBR 88 slightly out-performed its control store in all attributes. We can also notice that STORE_NBR 86 and 88 show a significant difference in terms of the total sales, but this isn't the case with STORE_NBR 77, whose sales are considerably less.

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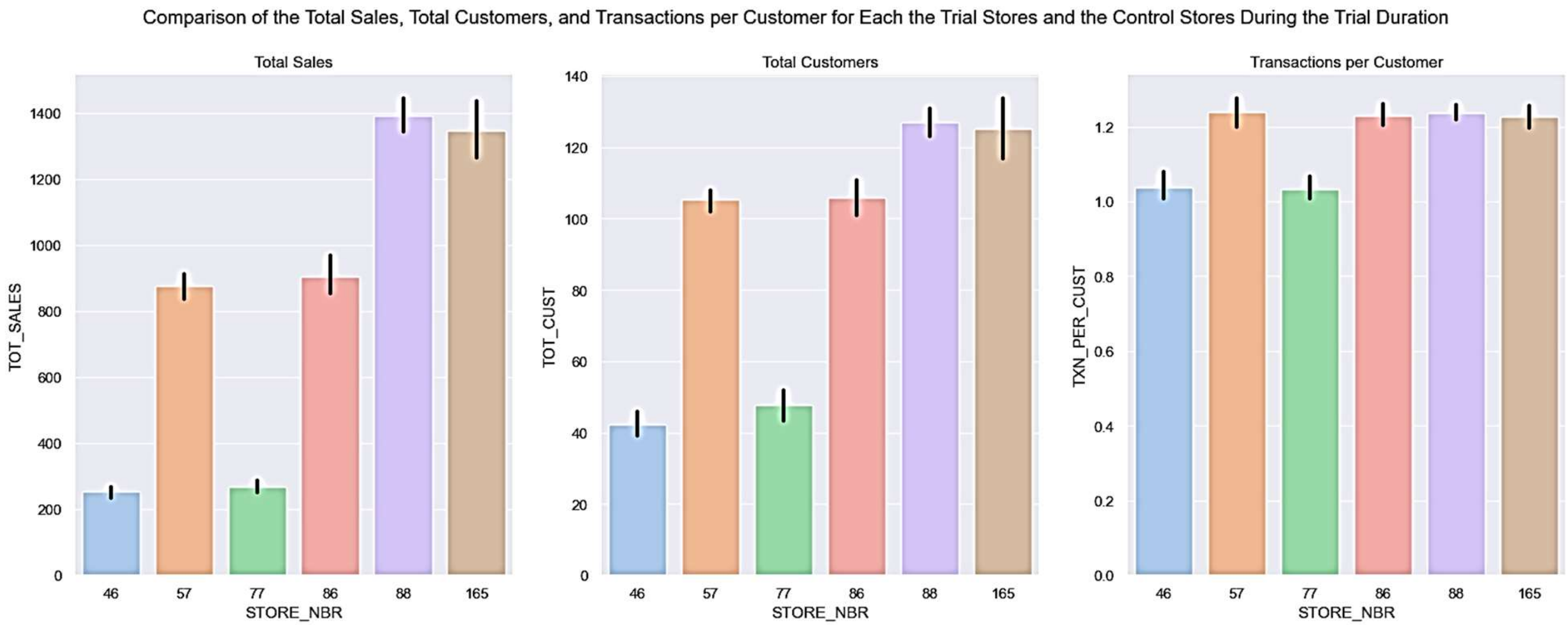
Overview: Trial Period



We can, notice that STORE_NBR 88 slightly out-performs its control store, STORE_NBR 237, and still remains the best implementation of the trial of all the trial stores. The driver for this seems to be the purchasing customers rather than purchases per customer, as we can see that with the increase in the total customers, there's also an increase in the total sales almost identically, but the transactions per customer seem to be reasonably high for all the trial stores regardless of the total sales.

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Conclusion

- We've found 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

General :

- Increase inventory and promotions in December
- Increase sales promotion of Kettle (all size) and 175g (all brands) chips

Target segments :

- Budget - Older Families : Promotion like 'Buy Two Get One Free'
- Mainstream - Young Singles/Couples : Target advertisements, Change the display area , Promotion and repackaging on popular brands and sizes
- Mainstream - Retirees :Target advertisements, Limited time sales promotions during daytime

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