July 2024

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.

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

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. But overall, the trial shows a significant increase in sales.

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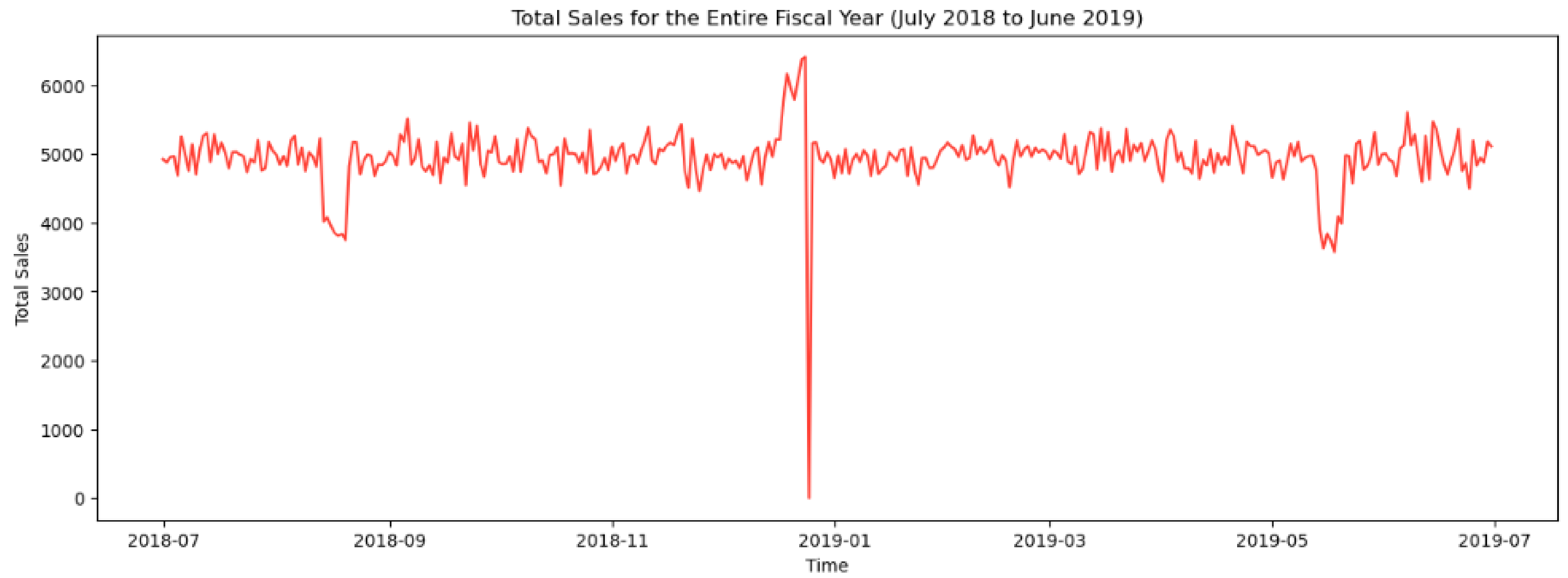
01

Customer Analysis

Sales distribution



As we can see from the line graph, the sales drop to zero on a certain date, which is 25th December 2018 – Christmas Day, which we manually set to zero. However, the sales also reached an all-time high right before that, so we would need to analyse the transaction data for December 2018 to find out more about the sales.

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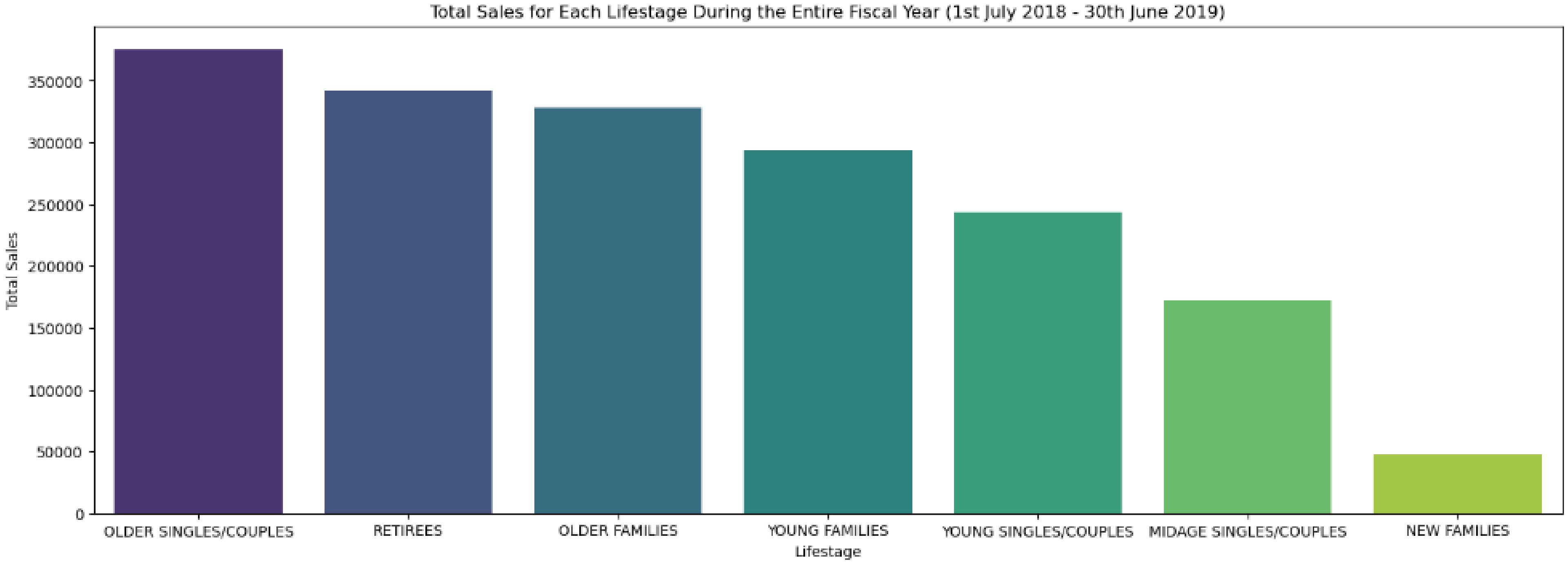
Affluence and its effect on consumer buying for the category of chips

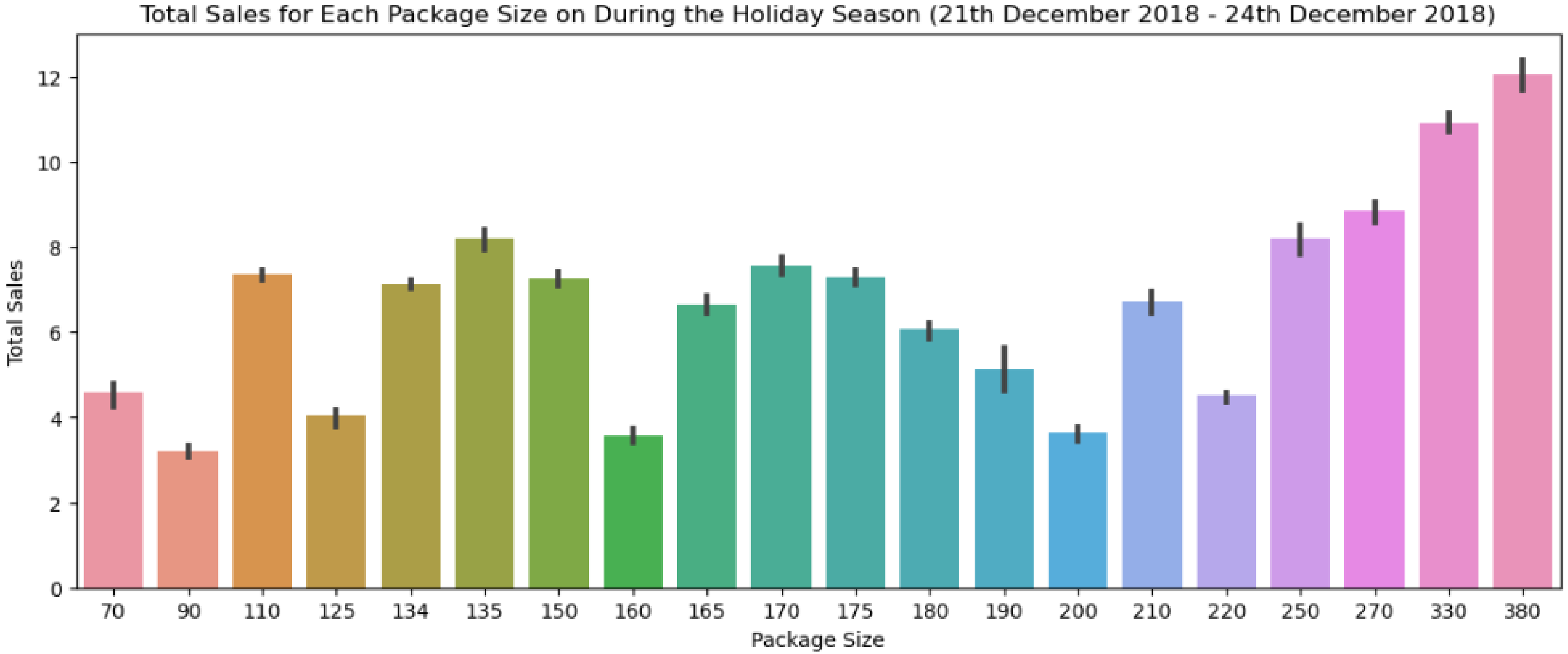
1. Kettle is the most popular brand followed by Smiths, Doritos and Pringles.
2. Mainstream young singles/couples, retirees are the most common customers and also account for a great share of chips sale.
3. Budget older families have the maximum contribution to sales.
4. Mainstream young singles/couples 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 seems like OLDER SINGLES/COUPLES are the most loyal customers of the store and NEW FAMILIES are the least. Interestingly, we can see a decreasing trend of purchases according to age in the first half of the bar graph, with customers that are the most likely to spend the most time at home also having the most purchases, even though snack items wouldn't logically be associated with an age demographic.

Total sales for each package size between 21st December 2018 and 24th December 2018

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It seems like customers mostly purchased the 380 gramme package size (the largest one in the store) when approaching the
holiday season.
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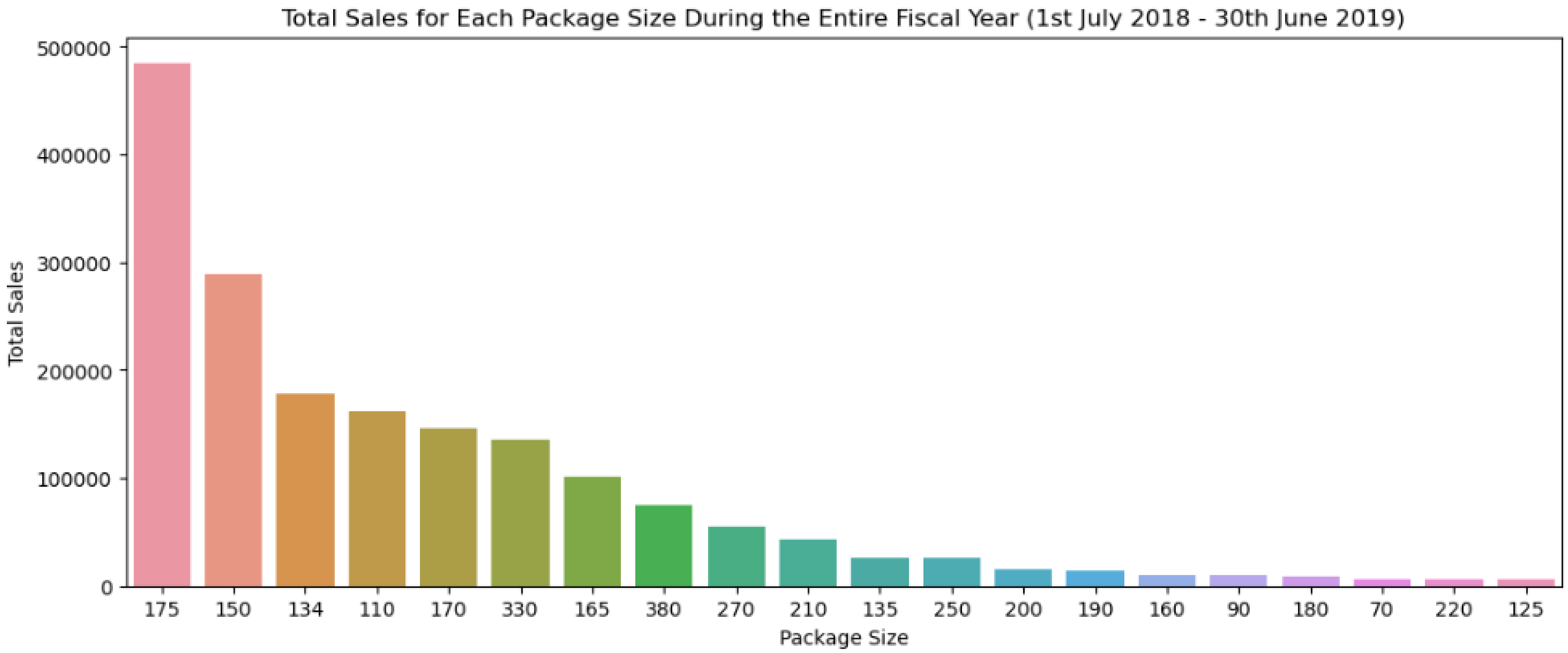
Total sales for each package size during the entire duration.

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As we can see, the 175 gramme package size was the highest-selling one over the entire duration of the recorded sales, and even
that by nearly 37% from the second highest-selling package size. Hence, it's clear that the 175 gramme package size is a
customer favourite!
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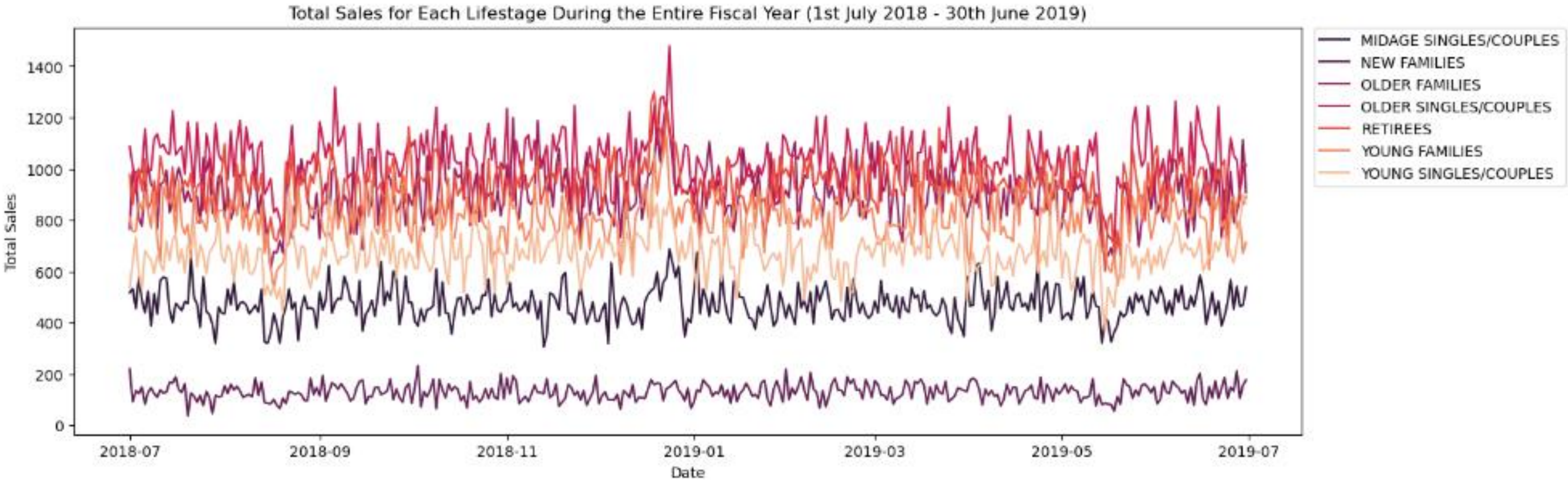
Lifestage during the entire duration

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Like the holiday season statistics, we can see an increase in sales right before Christmas Day for all age demographics, except
NEW FAMILIES, which remains consistent throughout the entire recorded duration. As new families are more inclined toward their
careers and developing their newly established home, it's unlikely for them to spend on snack items frequently.

Let's see what sort of purchase behaviour each age demographic has!
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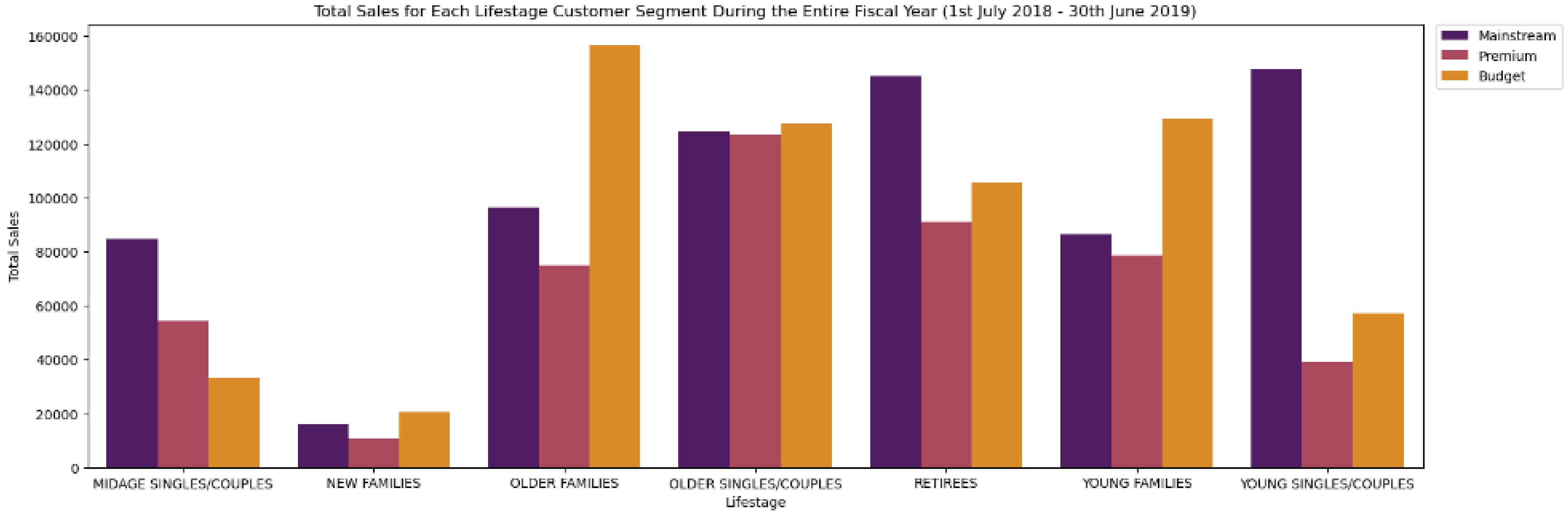
Total sales for each lifestage and whether it is a Premium, Mainstream, or Budget customer during the entire recorded duration.



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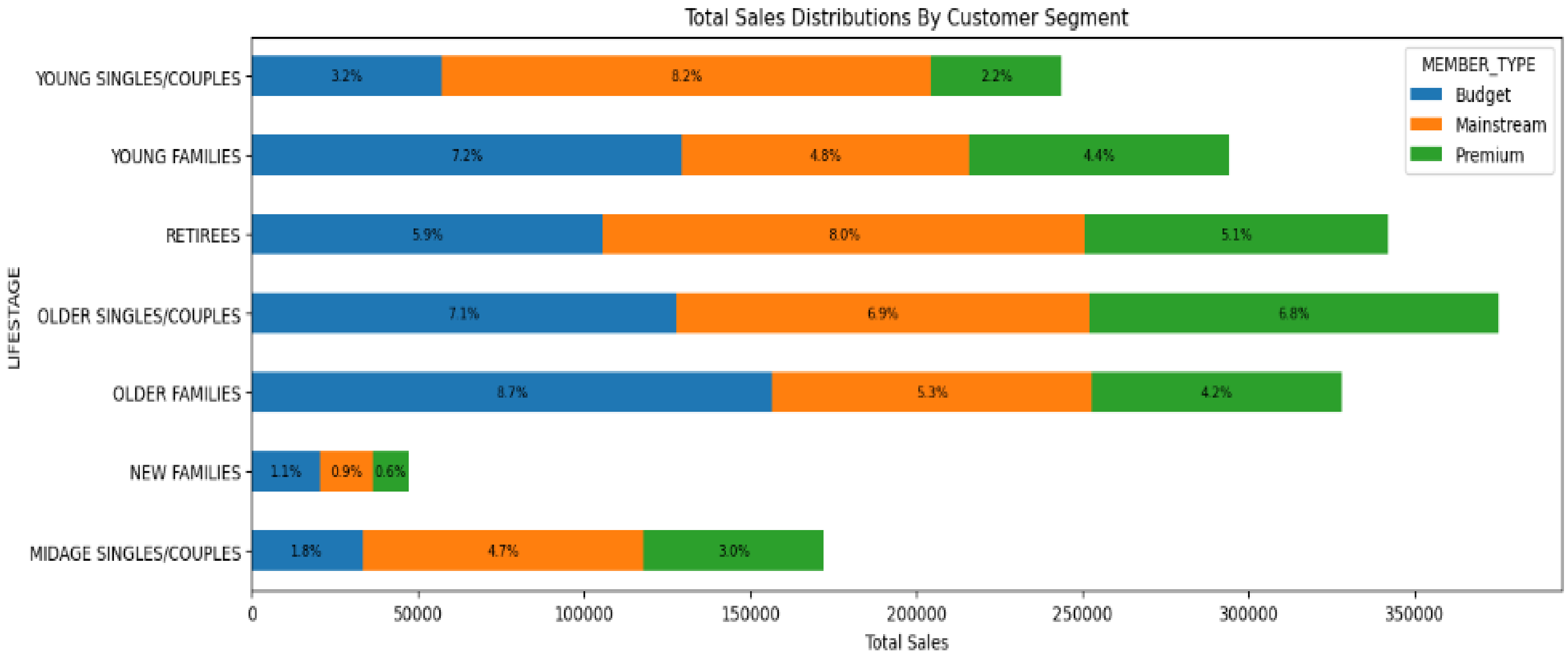
Total sales by lifestage and member type



OLDER SINGLES/COUPLES are the most loyal customers of the store

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Conclusion:

- Generally, sales gradually increase during the holiday season and are the highest the day before Christmas Day, but suddenly decrease right after, so this would be the ideal time for any promotional campaigns or discounts.
- The 380 gramme package size, also the largest in the store, is the highest-selling package size during the holiday season with KETTLE® being the highest-selling brand.
- KETTLE® is the also the highest-selling brand during the entire year, but the 175 gramme package size is the highest-selling package size, on average, with a difference of nearly 37% from the second highest-selling package size.
- OLDER SINGLES/COUPLES are the most loyal customers of the store and NEW FAMILIES are the least.
- MIDAGE SINGLES/COUPLES had the highest Mainstream and Premium purchases of all their purchases, while all the others had the least Premium purchases, which means that they're more likely to pay more per packet of chips than the others.
- MIDAGE SINGLES/COUPLES prefer KETTLE® and 175 gramme package size the most in both the Mainstream and Premium customer segment.
- Oldest customers may be most valuable to the store and the recent ones may likely be at risk of churning.

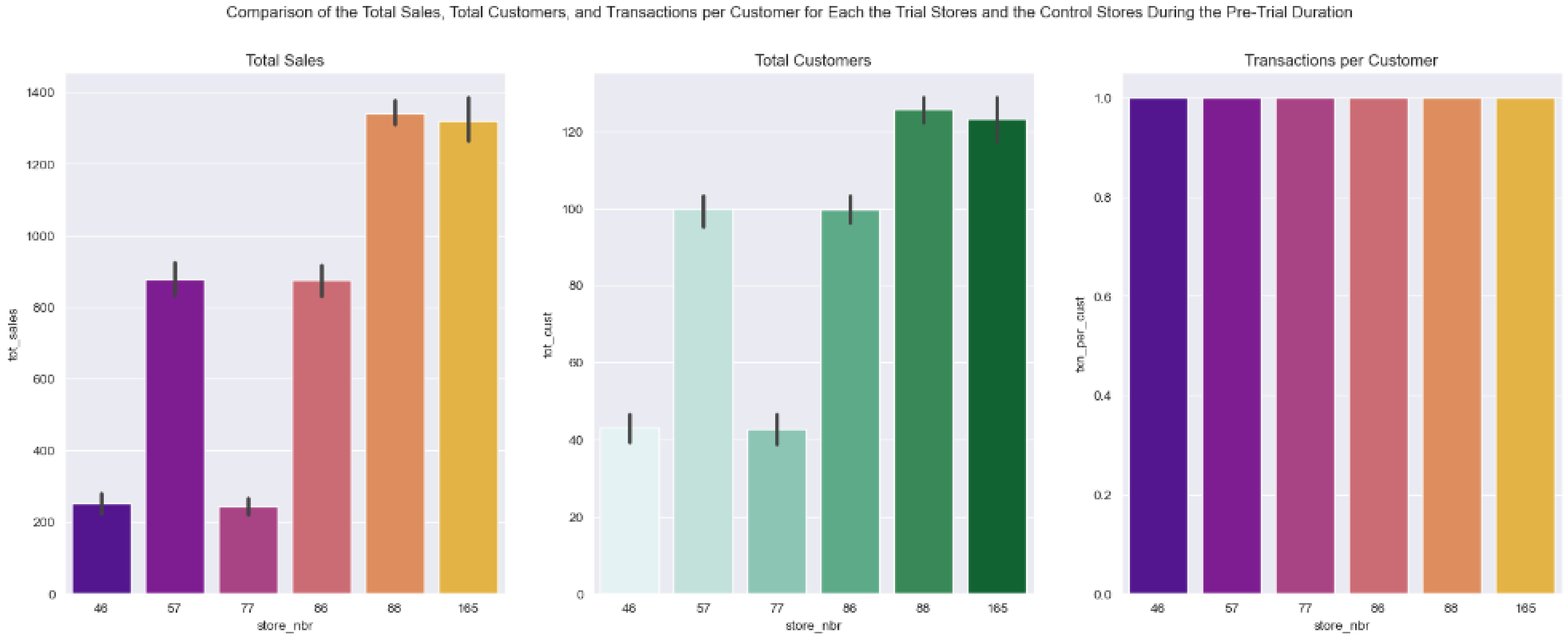
Recommendation

- Perhaps we can use the fact that Tyrells and Twisties chips are more likely to be purchased by mainstream young singles/couples and midage singles/couples and place these products where they are more likely to be seen by these customers segments. However, Burger rings is not recomended due to low popularity.
- Kettle chips is still the most popular, if target segment are mainstream young singles/couples and mainstream midage singles/couples, Tyrells and Twisties could be placed closer to the Kettles chips based on their association rules.
- Young Singles/couples is the only segment that had Doritos as their 2nd most purchases (after Kettle). it might be a good idea to do some branding promotion catered to "Young Singles/Couples - Mainstream" segment with Doritos brand.
- Midage Singles/couples is the only segment that had Smith as their 2nd most purchases (after Kettle). it might be a good idea to do some branding promotion catered to "Midage Singles/Couples - Mainstream" segment with Smiths brand.

02

Trial store performance

Comparison of the Total Sales, Total Customers, and Transactions per Customer for Each the Trial Stores and the Control Stores During the Pre-Trial Duration.



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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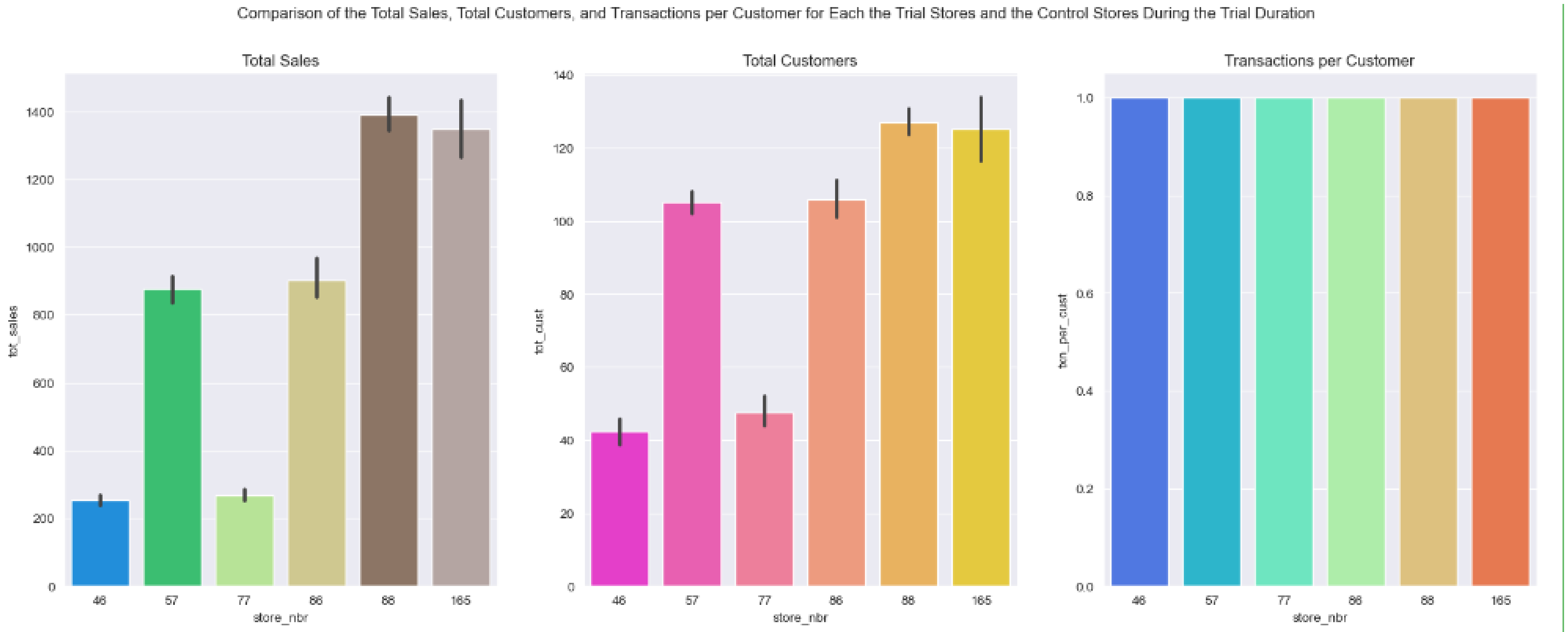
Comparison of the Total Sales, Total Customers, and Transactions per Customer for Each the Trial Stores and the Control Stores During the Trial Duration



We can, once again, notice that STORE_NBR 88 slightly out-performs its control store, STORE_NBR 165, 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:

- 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, STORE_NBR 165, in all attributes.
- 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, which may be because of the way the trial was implemented for it.
- Due to the maximum difference in the total sales of all the trial stores, STORE_NBR 88 remains the best implementation of the trial.
- The driver for the increase in total sales seems to be the purchasing customers rather than purchases per customer — the more the customers, the higher the sales.

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