

June 2020

Category review: Chips

Retail Analytics



Classification: Confidential



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. Purchase of chips increases and is at its peak just before Christmas
2. Sales have mainly been due to :- **Budget** - older families, **Mainstream** - young singles/couples, and **Mainstream** - retirees shoppers
3. Our target segment should be **Mainstream – young singles/couples** ; as they constitute majority of customers who buys chips.
4. The Category Manager may want to increase the category's performance by off-locating some **Tyrrells** and **smaller packs** of chips in certain segments of store

02

Task 2

1. For implementing new layout at Trial stores **77, 86, 88** we have found control stores **233, 155 and 237** respectively having similar total sales and customers before the beginning of trial period.
2. **This trial significantly increased the total sales** in 2 out of 3 months at stores 77 and 88 ,but only 1 month in case of store 86

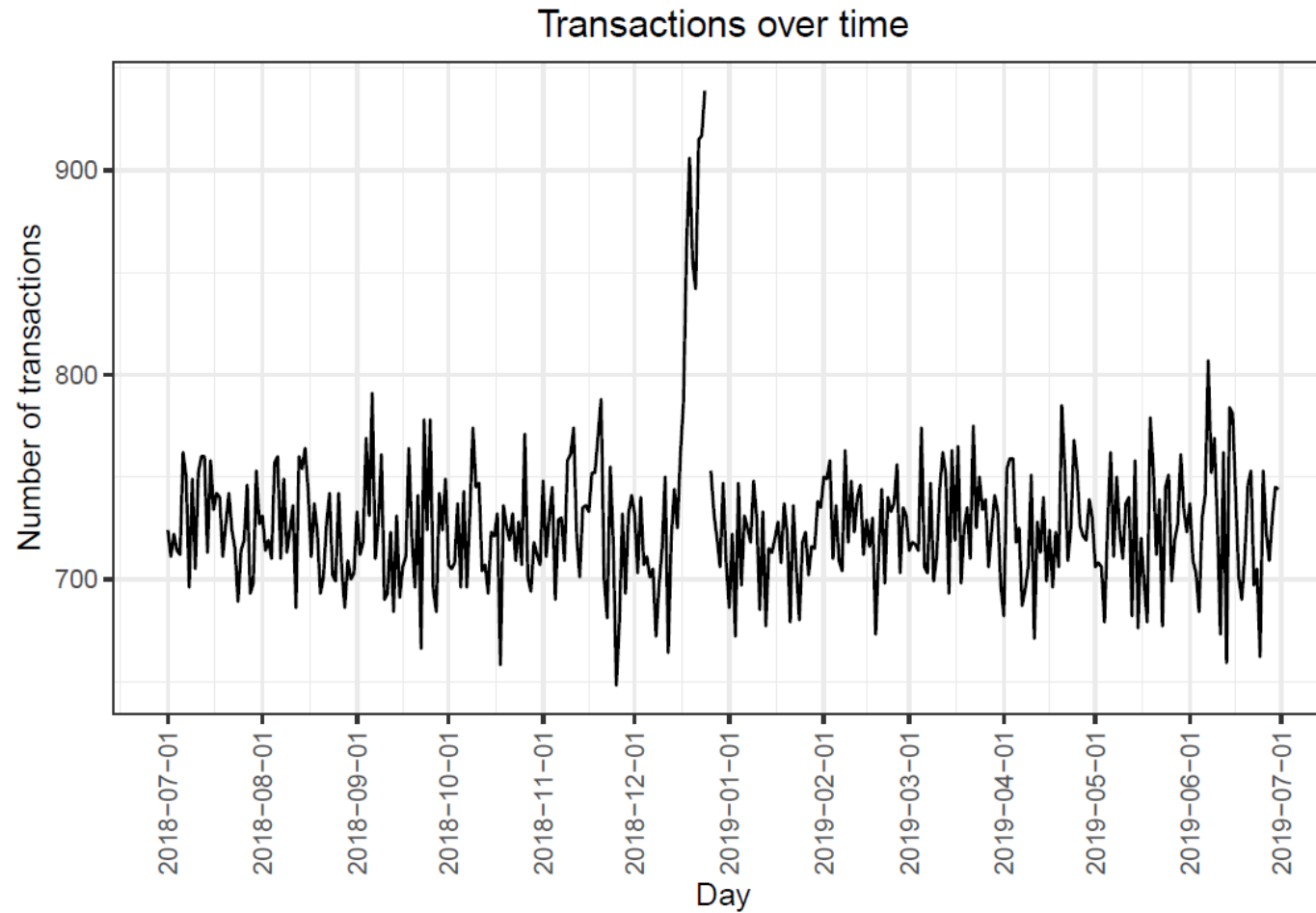
01

Category



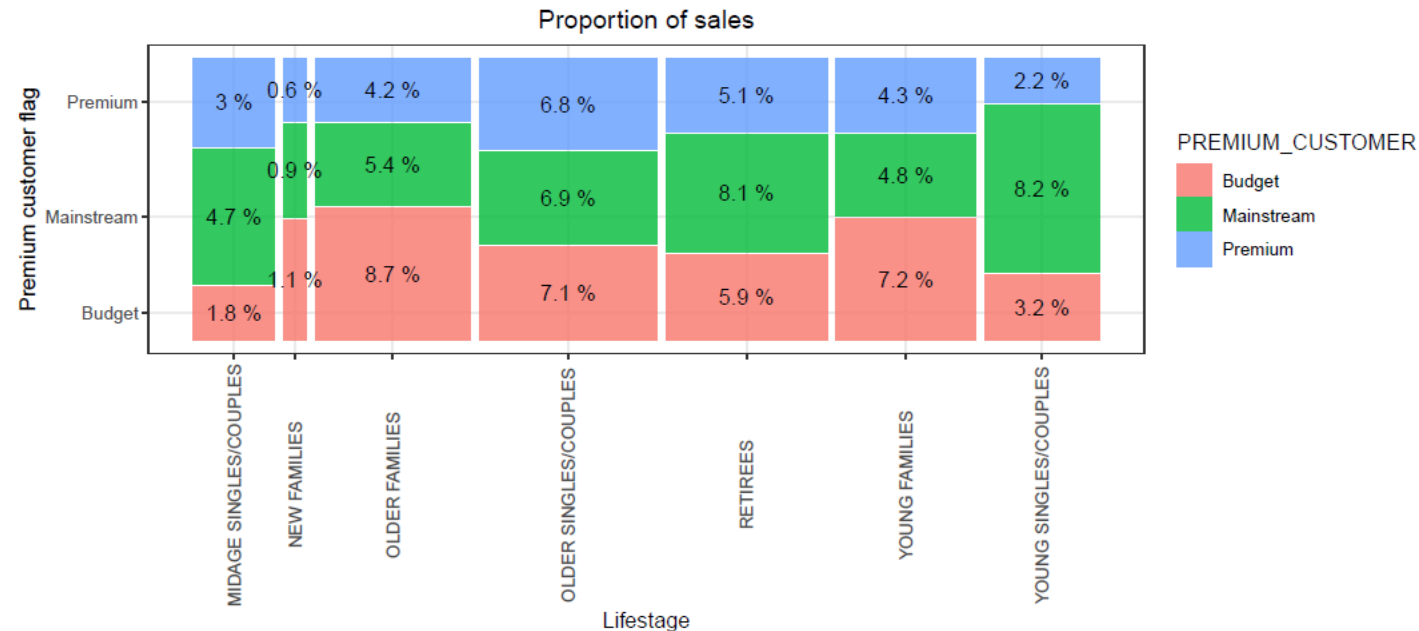
Purchase of chips tends to increase just before Christmas

This maybe due to the fact that holidays are coming near with no sales on Christmas as all stores are closed



Sales have mainly been due to :- **Budget** - older families, **Mainstream** - young singles/couples, and **Mainstream** - retirees shoppers

The following graph shows the proportion of sales by various customer segments



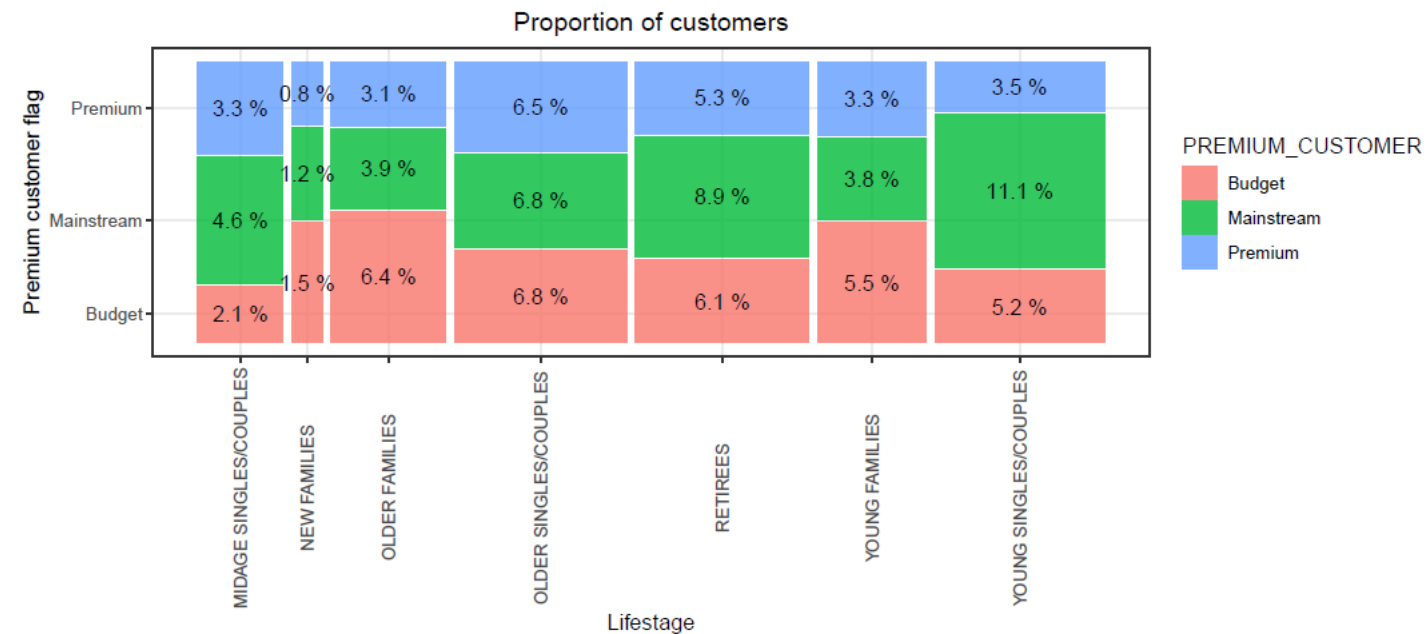
Budget – older families contribute **8.7%** of the total sales

Mainstream – young singles/couples contribute **8.2%** of the total sales

Mainstream - retirees contribute **8.1%** of the total sales

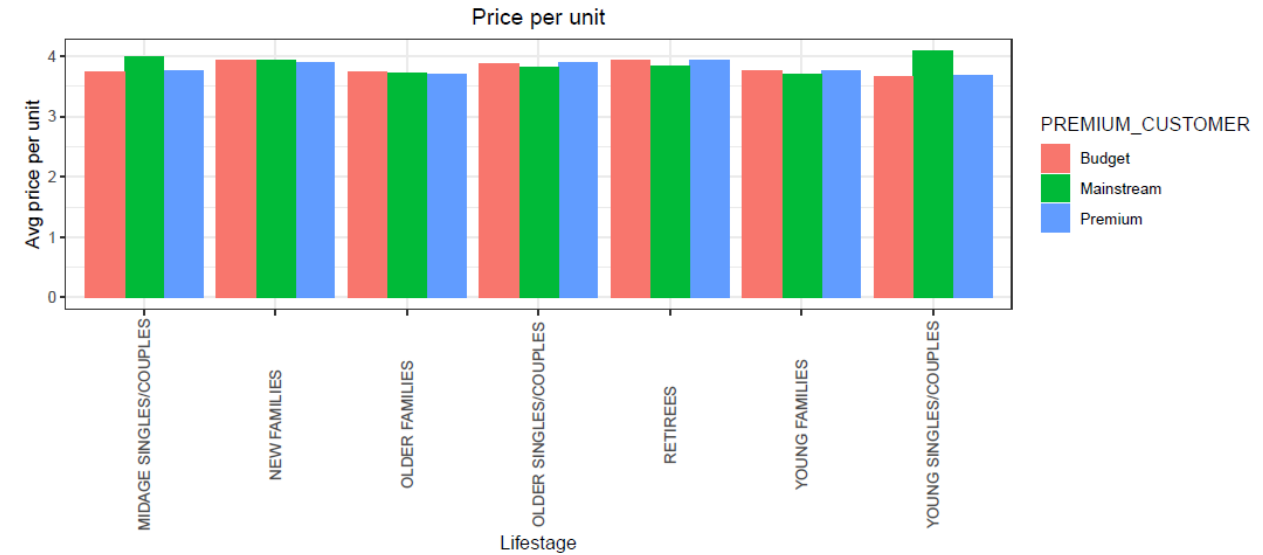
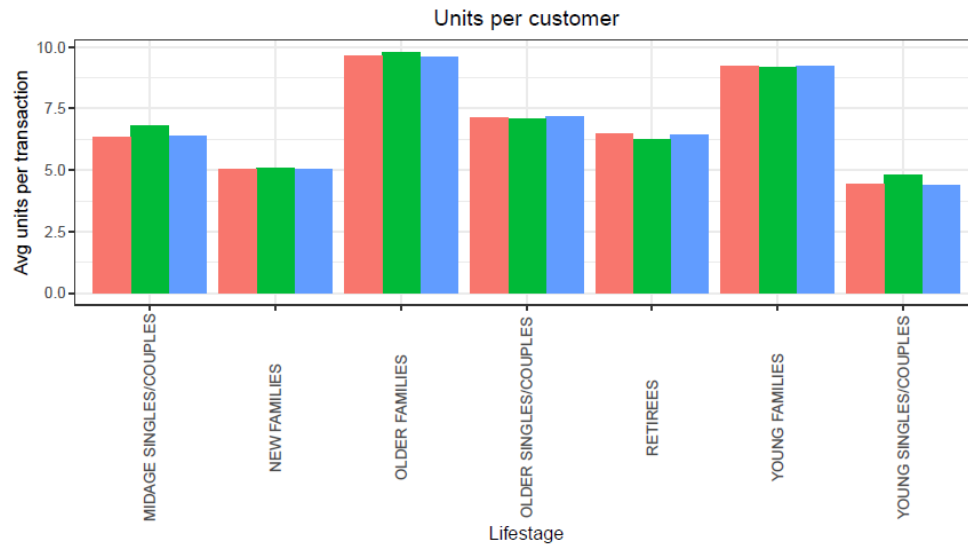
Our target segment should be **Mainstream – young singles/couples** ; as they constitute majority of customers who buys chips.

The following figure shows the proportion of total customers by various customer segments



As observed from above **Mainstream – young singles/couples** occupy **11.1%** of the total customer population, which is maximum percentage occupancy as compared to other customer segments

The following figure depicts the average chip price paid by various customer segments and units of chips bought per segment

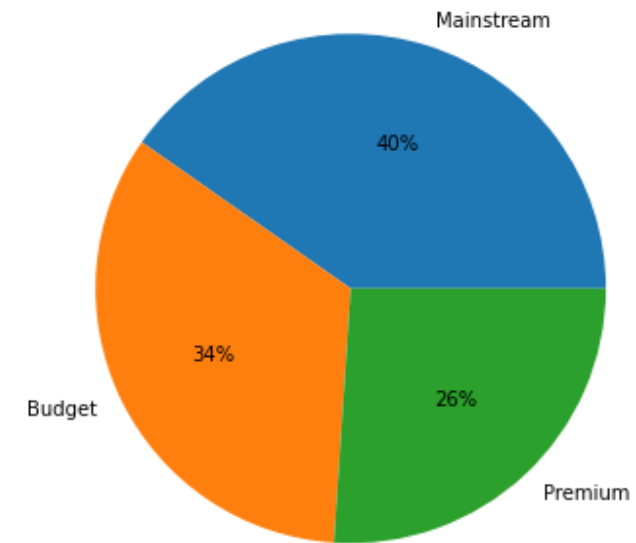
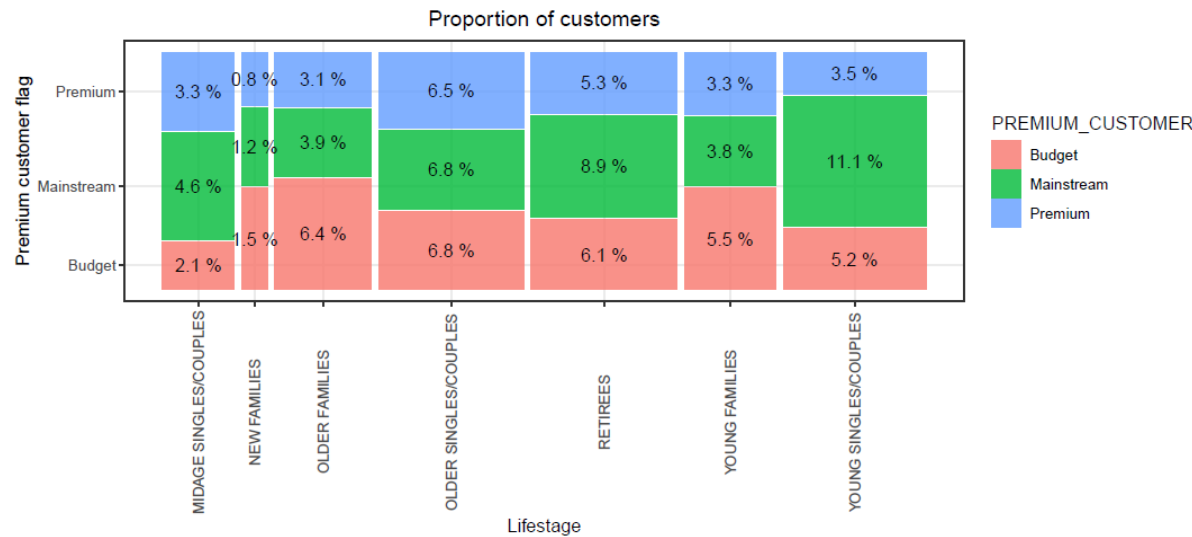


It can be interpreted that :-

Mainstream midage and young singles and couples are more willing to pay more per packet of chips compared to their budget and premium counterparts. This is indicative of impulse buying behaviour

This may be due to premium shoppers being more likely to buy healthy snacks and when they buy chips, this is mainly for entertainment purposes rather than their own consumption.

This is also supported by there being fewer(only 6.8% of 26%) premium midage and young singles and couples buying chips compared to their mainstream counterparts.



The Category Manager should increase the category's performance by off-locating some **Tyrrells** and **smaller packs** of chips

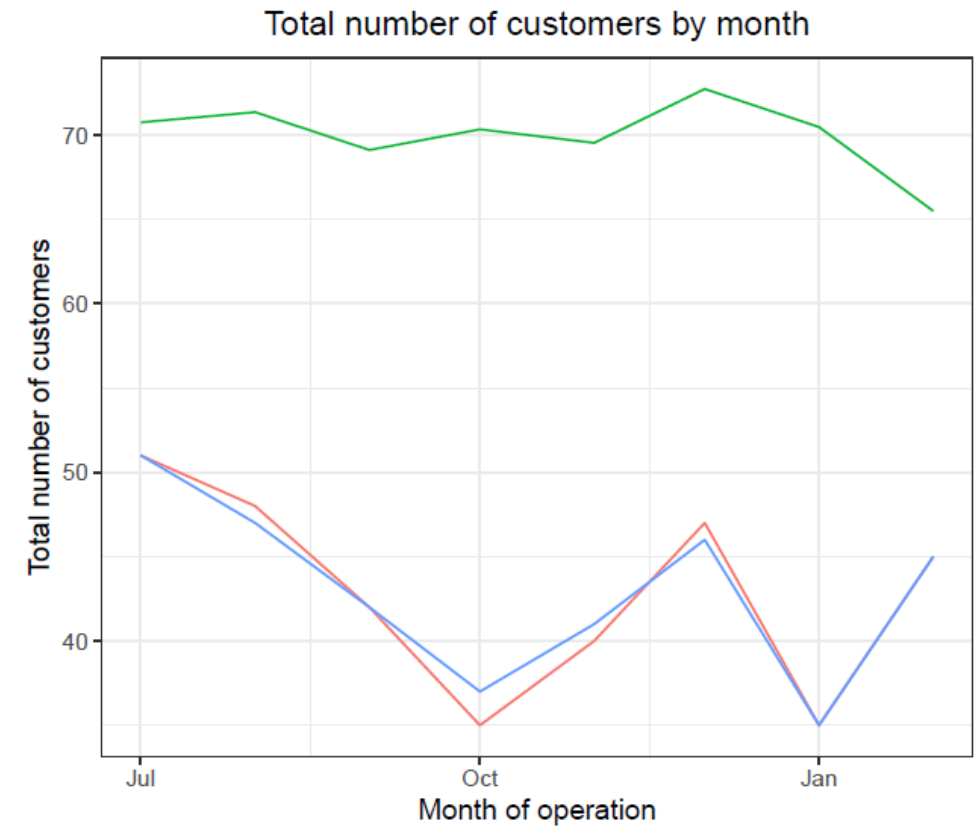
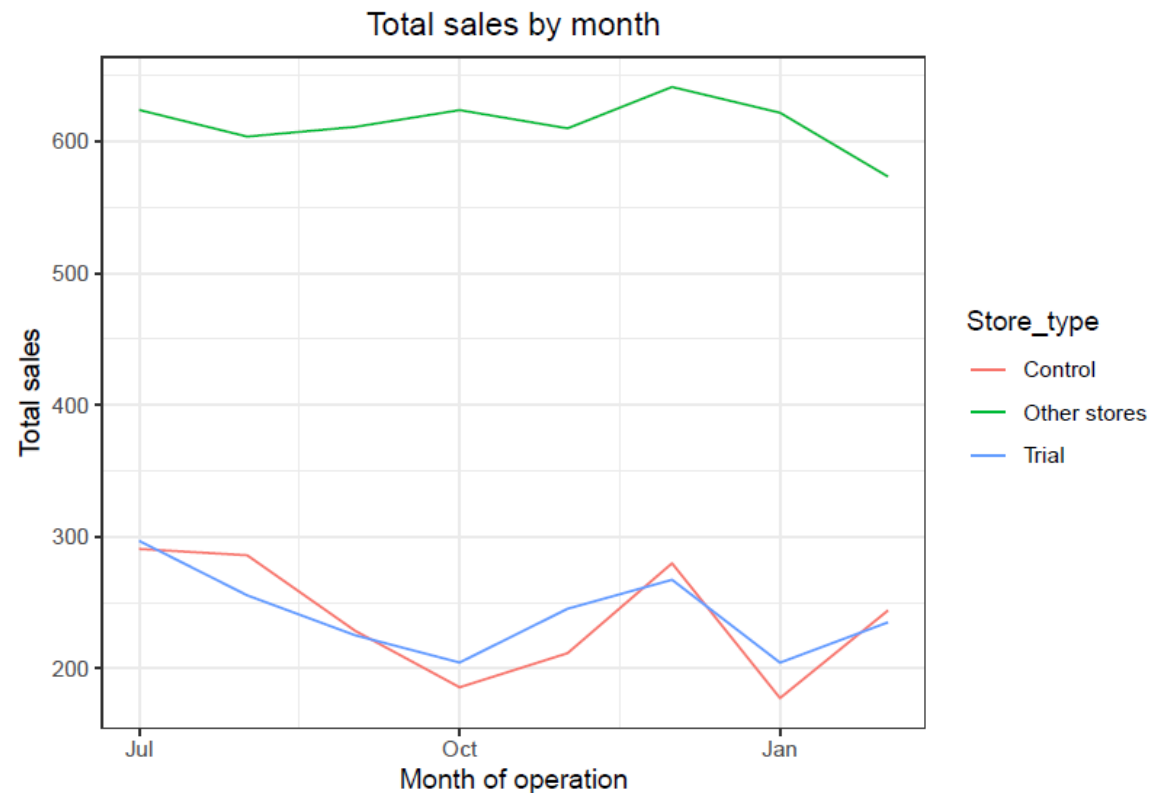
1. Our target segment ("Mainstream young singles and couples") are **23% more likely to purchase Tyrrells chips** compared to the rest of the population
2. They are 27% more likely to buy **270gm packs** than other packs; therefore more smaller packs must be present in the store
3. Chips should be located in discretionary space near segments where young singles and couples frequent more often to increase visibility and impulse behaviour.

02

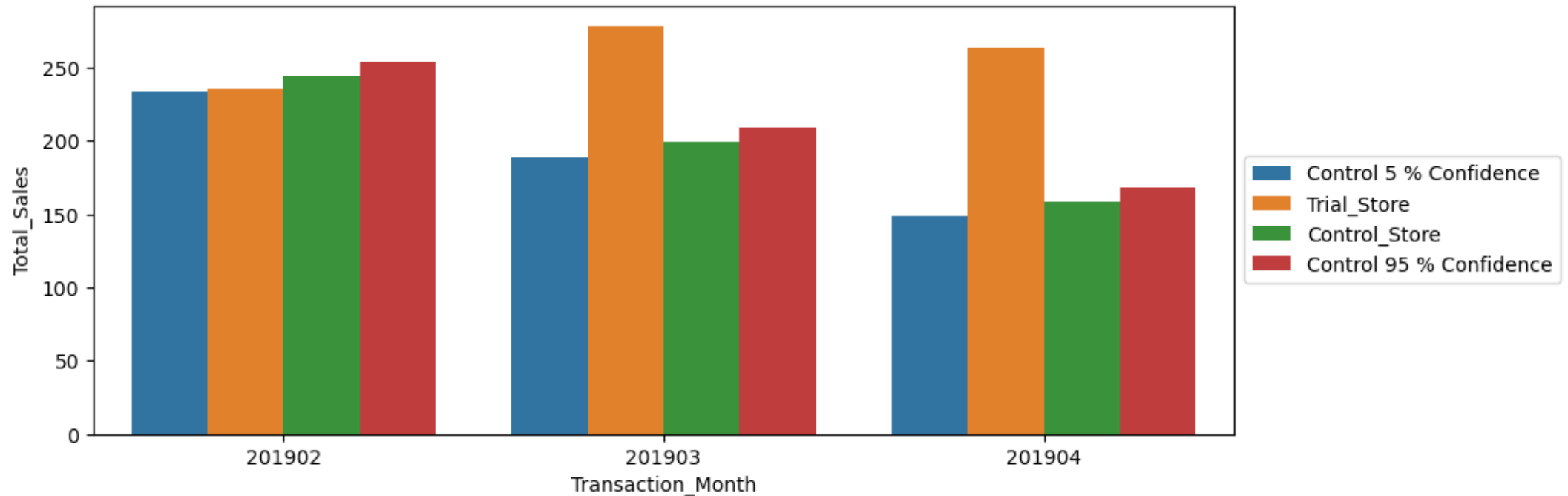
Trial store performance

Store - 77

We chose store 233 as control store for store 77 as it shared the same sales and customer trend as depicted in the following line graphs



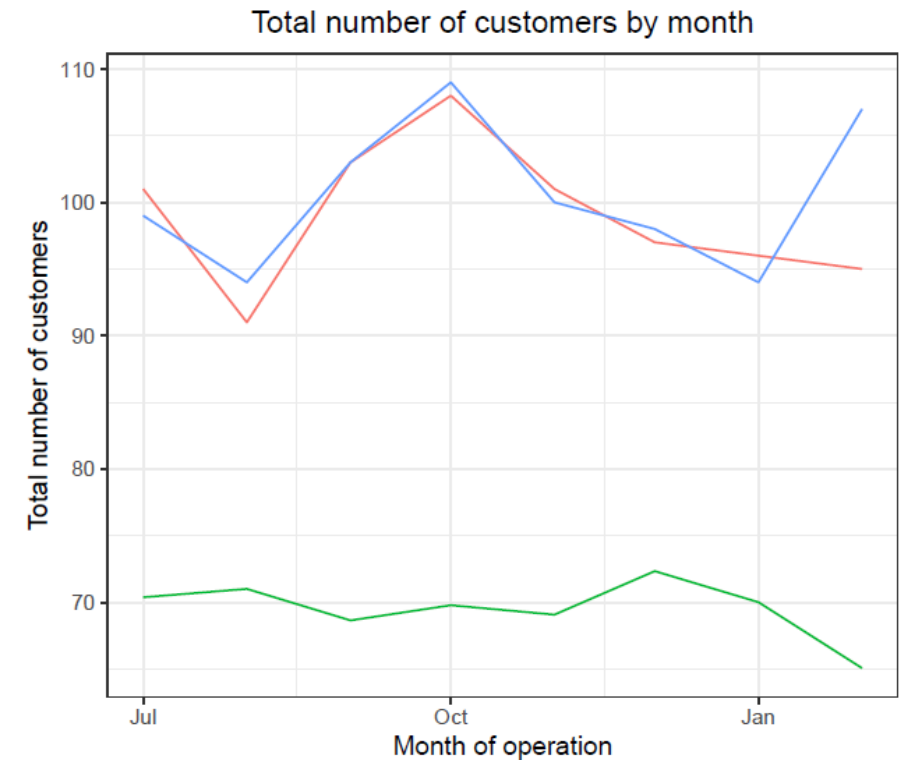
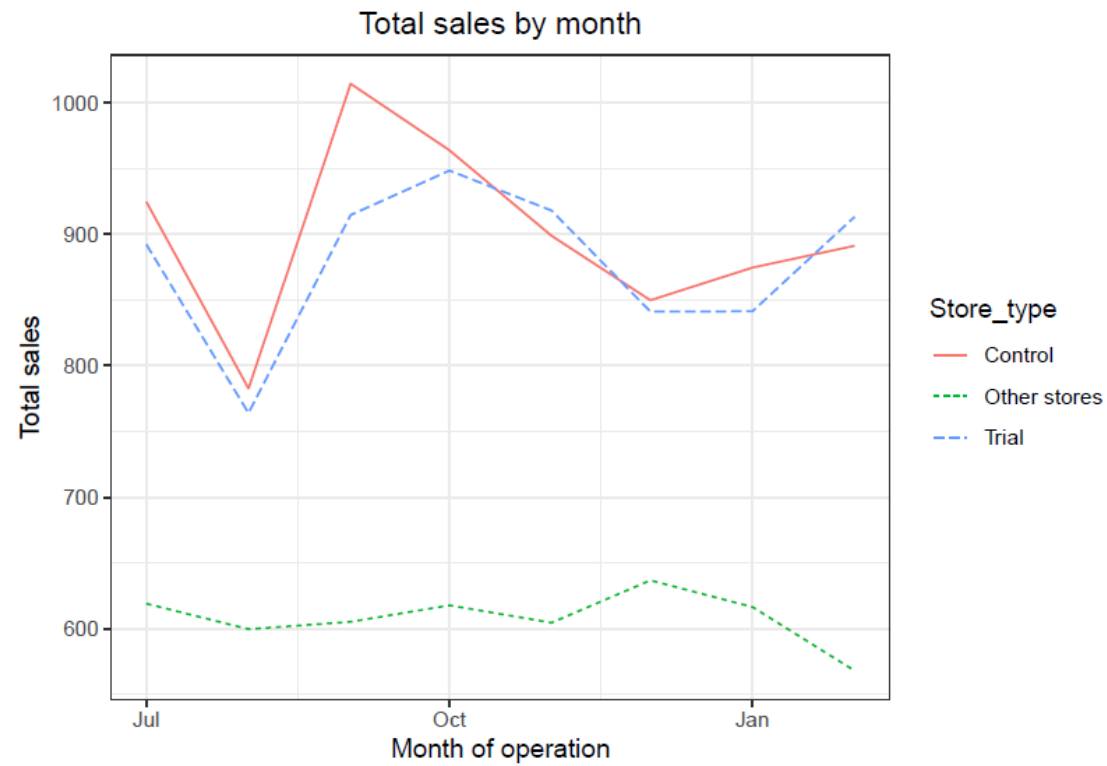
Performance in the trial store during the trial period of Feb 2019 to April 2019



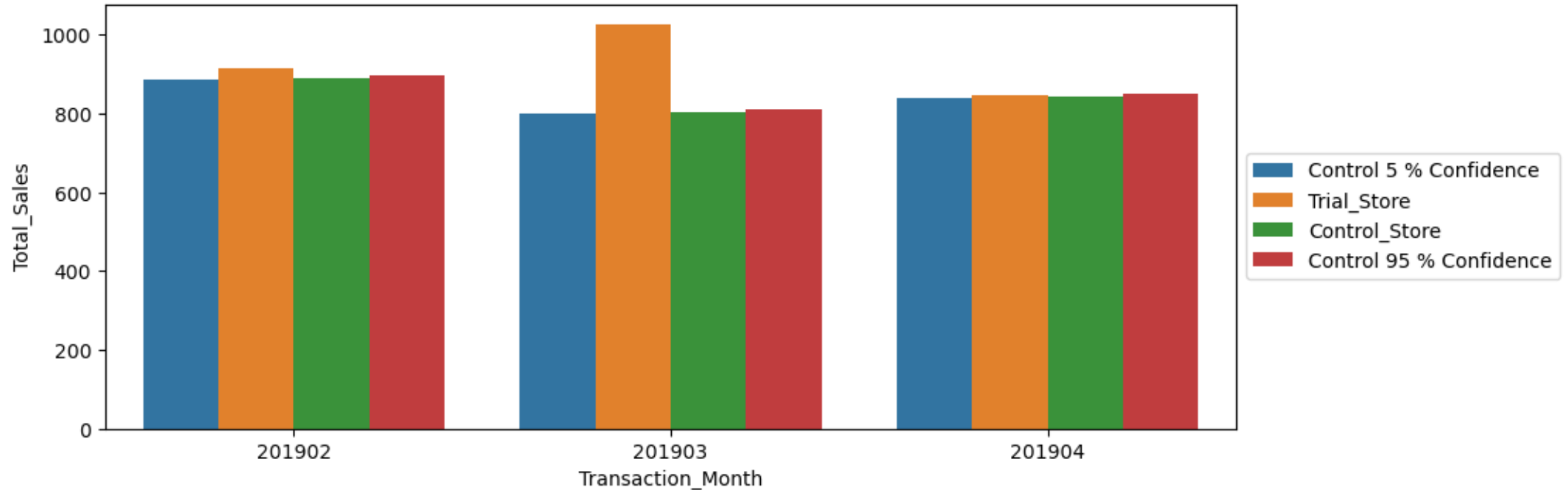
The above graph shows that the trial in store 77 is significantly different to its control store in the trial period. As the trial store performance lies outside the 5% to 95% confidence interval of the control store in two of the three trial months, this trial was **successful**.

Store - 86

We chose store 155 as control store for store 86 as it shared the same sales and customer trend as depicted in the following line graphs



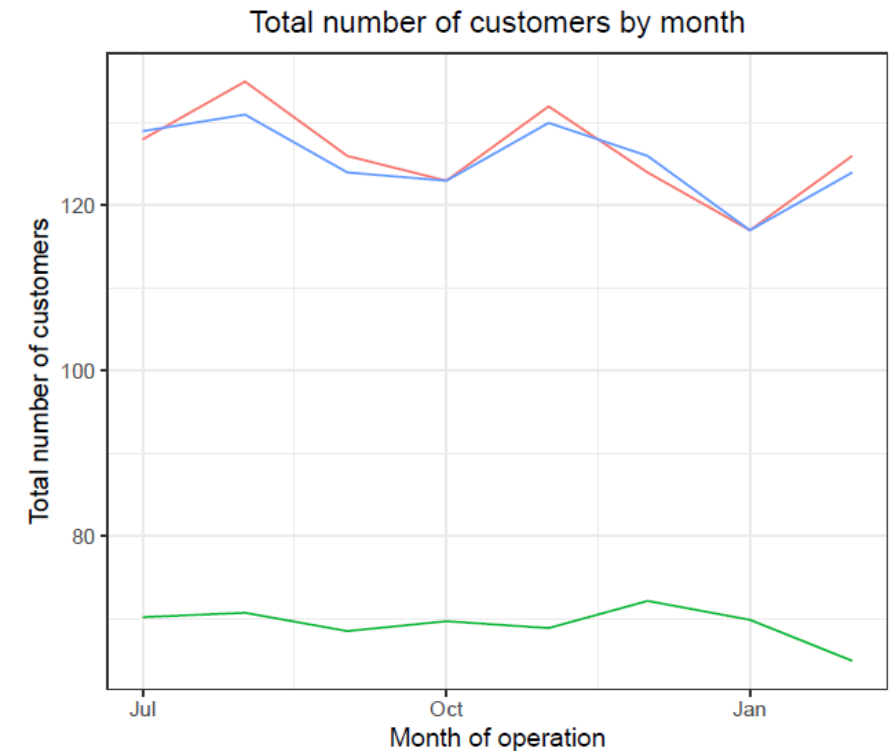
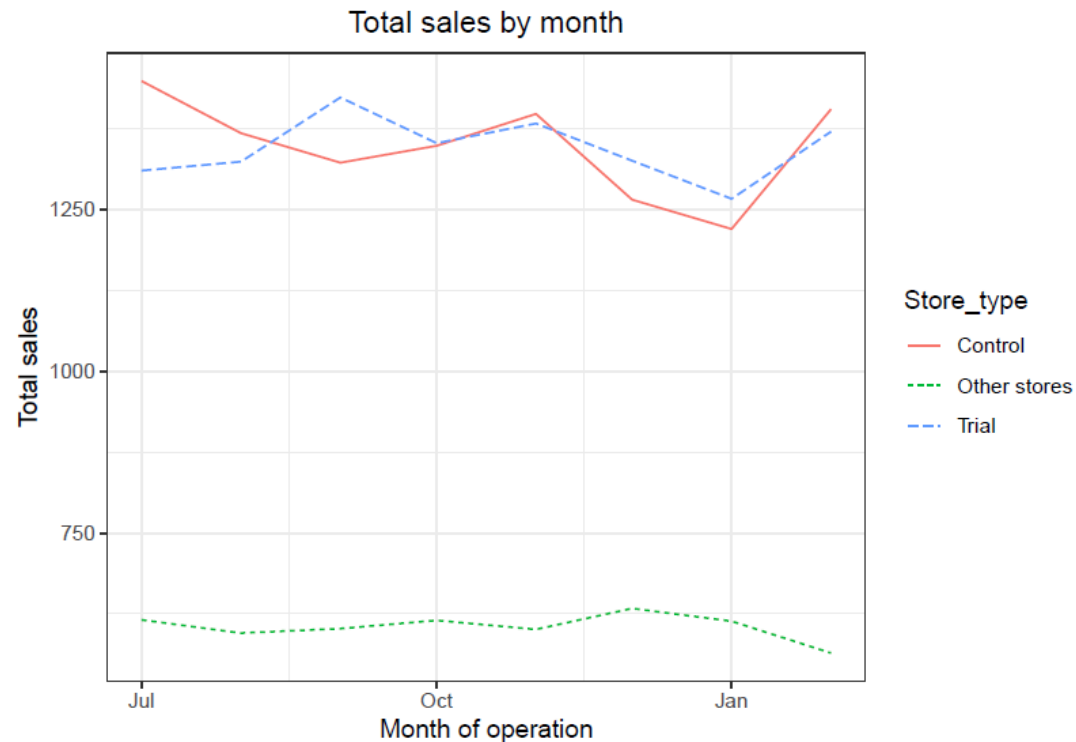
Performance in the trial store during the trial period of Feb 2019 to April 2019



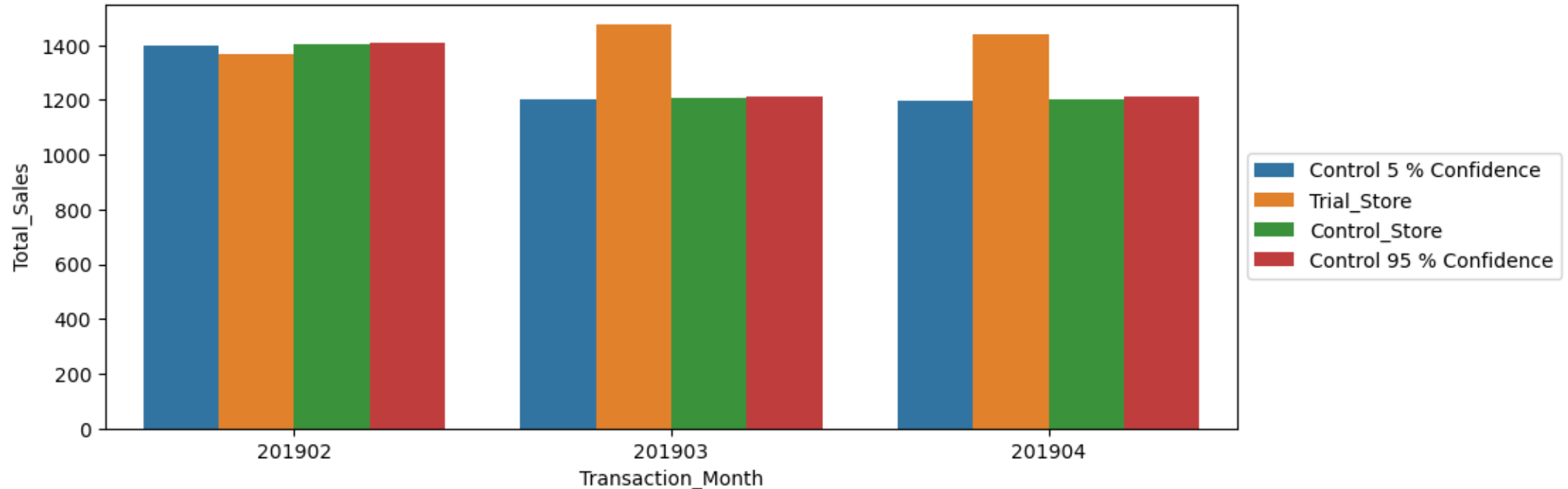
The results show that the trial in store 86 is not significantly different to its control store in the trial period as the trial store performance almost lies inside the 5% to 95% confidence interval of the control store in two of the three trial months

Store - 88

We chose store 237 as control store for store 88 as it shared the same sales and customer trend as depicted in the following line graphs



Performance in the trial store during the trial period of Feb 2019 to April 2019



The results show that the trial in store 88 is significantly different to its control store in the trial period. As the trial store performance lies outside of the 5% to 95% confidence interval of the control store in two of the three trial months, this trial was **successful**

THANK YOU

Made by :-

Yash Bhatnagar

An aspiring Data Scientist



Disclaimer: This document comprises, and is the subject of intellectual property (including copyright) and confidentiality rights of one or multiple owners, including The Quantum Group Pty Limited and its affiliates (**Quantium**) and where applicable, its third-party data owners (**Data Providers**), together (**IP Owners**). The information contained in this document may have been prepared using raw data owned by the Data Providers. The Data Providers have not been involved in the analysis of the raw data, the preparation of, or the information contained in the document. The IP Owners do not make any representation (express or implied), nor give any guarantee or warranty in relation to the accuracy, completeness or appropriateness of the raw data, nor the analysis contained in this document. None of the IP Owners will have any liability for any use or disclosure by the recipient of any information contained in, or derived from this document. To the maximum extent permitted by law, the IP Owners expressly disclaim, take no responsibility for and have no liability for the preparation, contents, accuracy or completeness of this document, nor the analysis on which it is based. This document is provided in confidence, may only be used for the purpose provided, and may not be copied, reproduced, distributed, disclosed or made available to a third party in any way except strictly in accordance with the applicable written terms and conditions between you and Quantum, or otherwise with Quantum's prior written permission