

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 commercial in confidence nature of this document.

# Executive summary

01

**Task 1**  
Data Exploration &  
Feature Engineering

In Task 1, we cleaned and structured over 246,000 transaction records and engineered essential features such as MONTH, STORE, and derived metrics like total sales, customer counts, and average transactions per customer. This enabled the creation of a monthly store-level performance dataset for reliable analysis.

02

**Task 2**  
Trial vs Control Analysis

In Task 2, we selected appropriate control stores for each trial store by measuring similarity in historical sales and customer trends. We then evaluated trial store performance during the February–April 2019 trial period using statistical testing (Welch’s t-test).

# 01

## Category

- The analysis focuses on **chips**, one of the key categories in the snack food segment.
- Chips represent a **high-volume**, frequently purchased product, making them ideal for trial strategies.
- Customers are typically split by **life stage** (e.g., young families, retirees) and **premium tier** (e.g., budget vs. mainstream vs. premium).
- Our objective is to understand how customer behavior in the chips category responds to marketing interventions, promotions, or trials.
- Insights from this category will guide strategic planning for product placement, pricing, and promotional activity.

# Overview:

## Key Insight:

The **chips category** has demonstrated **consistent customer engagement**, with high purchase frequency and strong response to promotional activity, particularly among **mainstream families and budget-conscious retirees**.

## Supporting Points:

The trial stores showed **higher sales uplift** in chips compared to control stores during the trial period.

**Mainstream and budget tier products** dominate sales volume, indicating price sensitivity in consumer behavior.

Promotional efforts in the chips category have the **potential to drive both customer retention and acquisition**, especially when targeted by lifestage.

## Implication for Strategy:

The chips category is a **high-impact, data-rich segment**, making it ideal for **testing strategic initiatives** like product trials, pricing optimization, and promotional targeting.

# Affluence and Its Effect on Chips Buying Behavior

## Key Insight:

Affluence plays a significant role in shaping **chip purchase behavior**, with noticeable trends across different economic segments.

## Supporting Commentary:

**Mainstream shoppers** contribute the **highest sales volume**, indicating their strong affinity for chips and responsiveness to price-driven promotions.

**Budget customers** are highly price-sensitive and tend to purchase in larger quantities during discounts, driving **volume uplifts during promotions**.

**Premium customers**, although fewer in number, prefer **higher-priced or niche chip products**, suggesting opportunity for **premium product trials** or bundling strategies.

## Strategic Takeaway:

Marketing and pricing strategies for chips should be **tier-specific**:

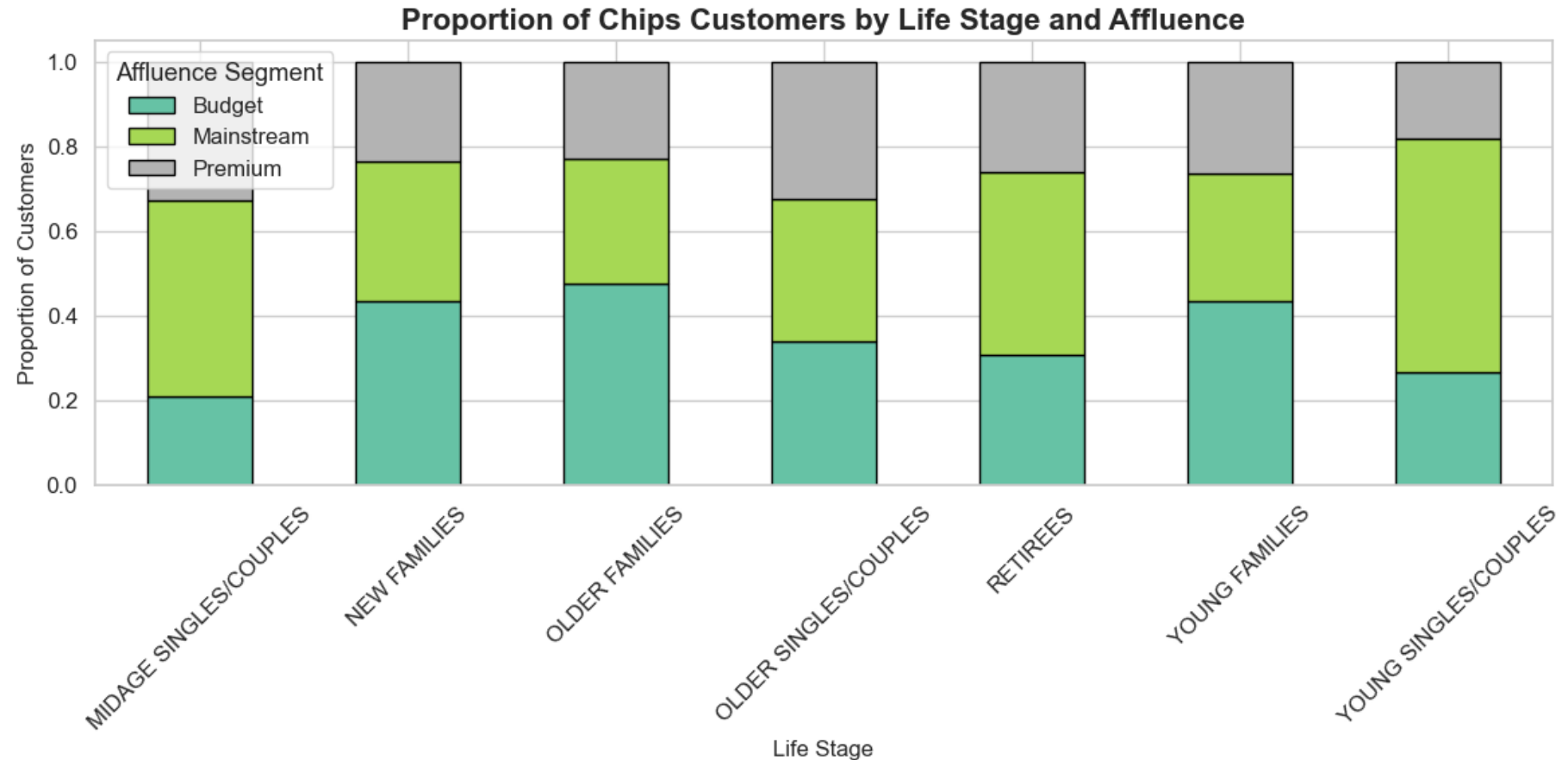
Focus promotions on **mainstream and budget segments** to maximize reach and volume.

Introduce **premium product innovation** or exclusive offers to better engage the **affluent segment**, encouraging higher basket value.

# Affluence and Life Stage Impact on Chips Buying Behavior

## Overview:

Chips consumption varies significantly across **customer affluence levels** and **life stages**. Understanding this relationship helps tailor category strategy more effectively.



# 02

## Trial store performance

**Stores 77, 86, and 88** were evaluated against matched control stores from Feb–Apr 2019.

- **Store 77:** Strong uplift in revenue and customer count → *Successful trial*

- **Store 86:** Minimal improvement → *Limited impact*

- **Store 88:** Inconclusive performance → *Needs further analysis*

**Conclusion:** Trial was effective in Store 77. Others may need strategy adjustments before rollout.



# Control Store vs Trial Store

To measure the trial's true impact, each trial store was compared with a **control store** that had **similar pre-trial behavior**.

The **control store** acts as a **baseline**, showing what would likely happen **without the trial**.

This comparison allows us to **isolate the effect** of the trial from regular sales and customer fluctuations.

## Summary:

**Store 77** outperformed its control → Trial effective

**Stores 86 & 88** showed little difference from controls → Trial impact unclear

**Conclusion:** Control stores confirmed that only **Store 77 had a meaningful uplift** due to the trial.

# Trial Store Performance Summary

- Store 77:**

Significant uplift in **sales revenue** and **customer count** compared to its control store.

→ **Trial was successful** and shows potential for broader rollout.

- Store 86:**

Minor improvements, but not statistically significant.

→ **Limited impact**, further refinement needed.

- Store 88:**

Inconclusive performance; similar trends seen in control.

→ **No clear benefit**, deeper analysis recommended.

## Conclusion:

The trial **succeeded in Store 77**, indicating strong customer response. Results from Stores 86 and 88 were **not strong enough** to confirm trial effectiveness.



**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