Final report

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Teys Australia Learning & applying category insights (TAFS-CATMAN)

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Abstract

This project looked at the extent to which traditional grocery industry data sets, promotional activity, market structure and merchandising location and analysis could be applied to meat products, specifically in the Deli space in a major retailer.

There were a number of different data sources used with varying levels of practical usefulness and costs. Key design parameters were to identify a customer's shopping repertoire for meat within the deli category.

It was found that tools to help convert category information into insights – that is "learning from data" can enable timely trends analysis for decision making with the aim of achieving category growth/value.

Table of Contents

1 Data mining of Quantum data set

1.1 Market structure (Dendrograms)

1.1.1 Quantium's Definition of a Dendrogram

"Dendrgram (from Greek Dendron "tree" and gramma "drawing") is a tree diagram frequently used to illustrate the arrangement of the clusters produced by hierarchical clustering. Dendrograms are often used in computational biology to illustrate the clustering of genes or samples.

"a tree diagram, especially one showing taxonomic relationships.

"It's a visual representation of how products within a category correlate with each other in terms of how / if they are bought by the same customer over the amount of time we're looking at (doesn't necessarily have to be in the same basket)

"In other words, it's based on a customer's shopping repertoire within a category

"Key considerations include inter-purchase-interval (IPI), store coverage, seasonality, promotions

"Types of things that creates splits / specific need states include 'format' (e.g. tablet vs liquid), 'function' (e.g. pain relief vs energy provider), 'packaging' (e.g. can vs plastic bottle), 'price' (e.g. home brand vs branded) and 'brand' (e.g. Pepsi vs Coke)"

1.2 In store location choice for smallgoods and reason for purchase (Deli v Pre-pack)

1.2.1 Shopper Tracker Shopper iQ

An Industry system to create measures of shopper satisfaction, behaviours and perceptions across categories and retailers, tracked year to year.

2 Project objectives

2.1 Value of data sets and analytical techniques

To demonstrate the value of the different data sets, techniques and methods as decision making tools with the aim of achieving category growth.

This project will be a case study to investigate the extent to which this methodology and data sets can be used to provide an understanding of how shoppers are making decision and what sort of information influences their choices.

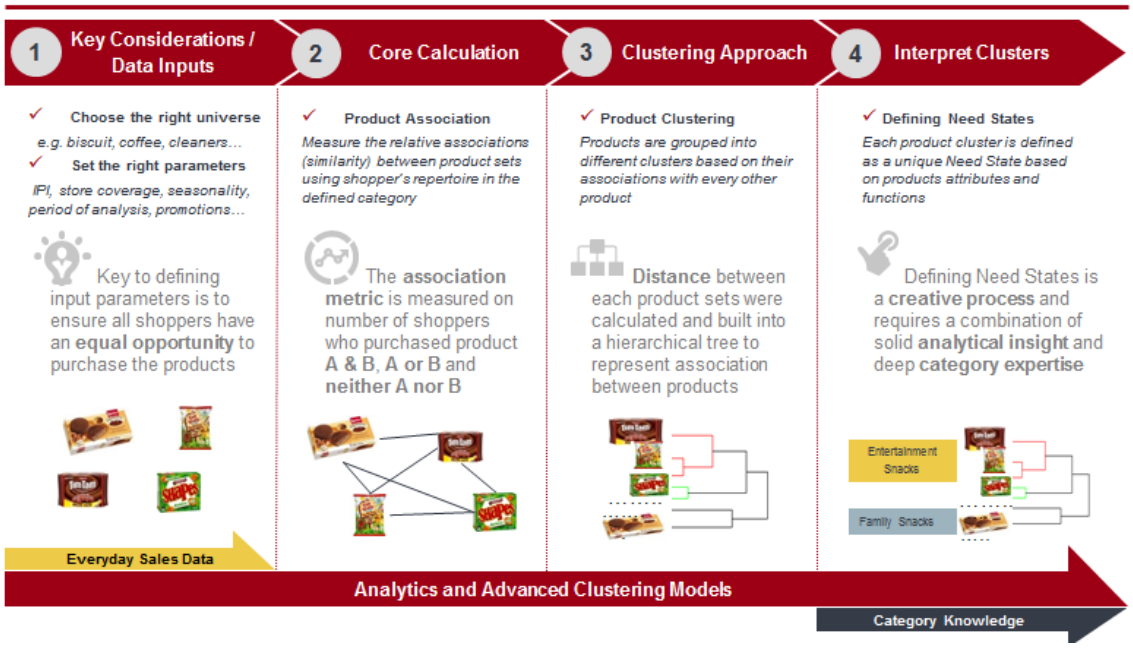
This information can add depth to current MLA central marketing and insights program and Brand Australia activities, for example, seek to understand if Dendrograms and Segmentation can be used to access the importance of marketing messages such as Australian made, Traditional methods, 100% beef, Award winning, All Natural, Health messages such as fat percentage or protein content, meal occasions, recipe ideas, etc. when applied to a domestic delicatessen trading department.

2.1.1 Quantium Data Sets and Analysis

Using the Quantium data set and the extent to which specific analytical techniques can be used to maximise sales of value added red meat products in the supermarket will be investigated – primarily within sliced and shaved meats and ready meals. This will provide demonstrate understanding of Market Structure Analysis (Dendrograms) and Segmentations.

A major objective was to understand if Dendrograms and Segmentation can be used to access the importance of marketing messages such as Australian made, Traditional methods, 100% beef, Award winning, All Natural, Health messages such as fat percentage or protein content, meal occasions, recipe ideas, etc.

The figure below presents Quantium's Dendrogram methodology overview:



2.1.2 Shopper Tracker Data

To assess the potential of this data set to provide information on shopping mission and shopper's frustrations in the category.

2.1.3 IRi Scan Data: Efficient Assortment Tool

To access it this propriety tool which was designed for general grocery data can be successfully used for meat products with random weight data. The tool should be able to provide a list of products in the category that are not performing and model the category growth that could be achieved by deleting these items and improving efficiency.

2.1.4 IRi Scan Data: Elasticity Analysis

To access if elastic analysis can be successfully done to model the impact of promotional price changes and then to use this data to create a model promotional program designed to increase sales without sacrificing profitability.

2.1.4.1 Data Set and Methodology

IRI Aztec Scan data for the Retail Deli trading department was used.

Single variable elasticity was used to generate elasticity values for the key Beef smallgoods products.

3 Key Findings

3.1 Market structure (Dendrograms)

3.1.1 The methodology

The analysis was completed on time but the following issues were encountered:

National data could not be used because of significant differences in the range of products in the retailer by state. The ranging differences meant that the first 'decision' was location and this was not a useful conclusion. As an alternative state based dendrograms were completed for the largest states, i.e. Queensland, New South Wales and Victoria.

The segmentation was slightly different by state reflecting the different ranging and a national picture was created as an overall average using both the data and professional judgement.

The Quantium data is only from one leading retailer and it utilises the retailer's in house product segmentation file for the classification of products. This file has errors and a number of products were incorrectly classified by the retailer, for example some bacon SKUs classified were as Sliced and Shaved Meats; Sliced Ham. These types of data issues caused some reworking of the analysis and created delays.

It was anticipated that the importance of marketing messages such as Australian made, Traditional methods, 100% beef, Award winning, All Natural, and Health messages such as fat percentage or protein content, meal occasions, recipe ideas, etc. could be evaluated - however the dendrogram results were based on product attributes such as meat type. There are issues with using this methodology in a category that is currently not communicating messages such as "All Natural" etc. In short the impact of messaging not currently in use cannot be measured with this technique at this time.

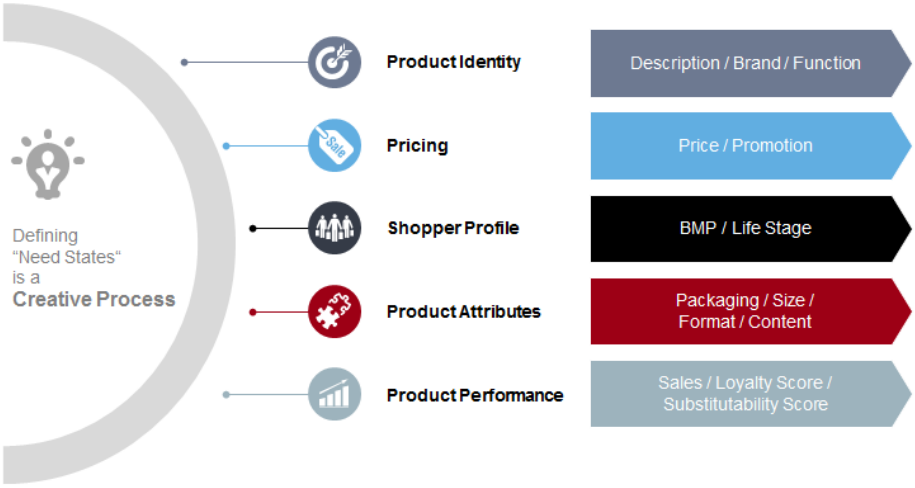
3.1.2 Results: Market structure (Dendrograms)

The analysis did not return the clustering results that were anticipated.

The most significant factor in shopper purchasing patterns was the location of the shopper and this is a reflection of the state based ranging in the Deli.

Currently sliced and shaved deli meats are grouped into a) Frankfurts and Cured Meats and b) Bacon and sliced and shaved meats with further segmentation based on application such as mainstream lunching, for cooking and meals for example.

Below illustrates the key factors considered in defining "need states":



It was found that Sliced and Shaved Meats other than hams were generally clustered.

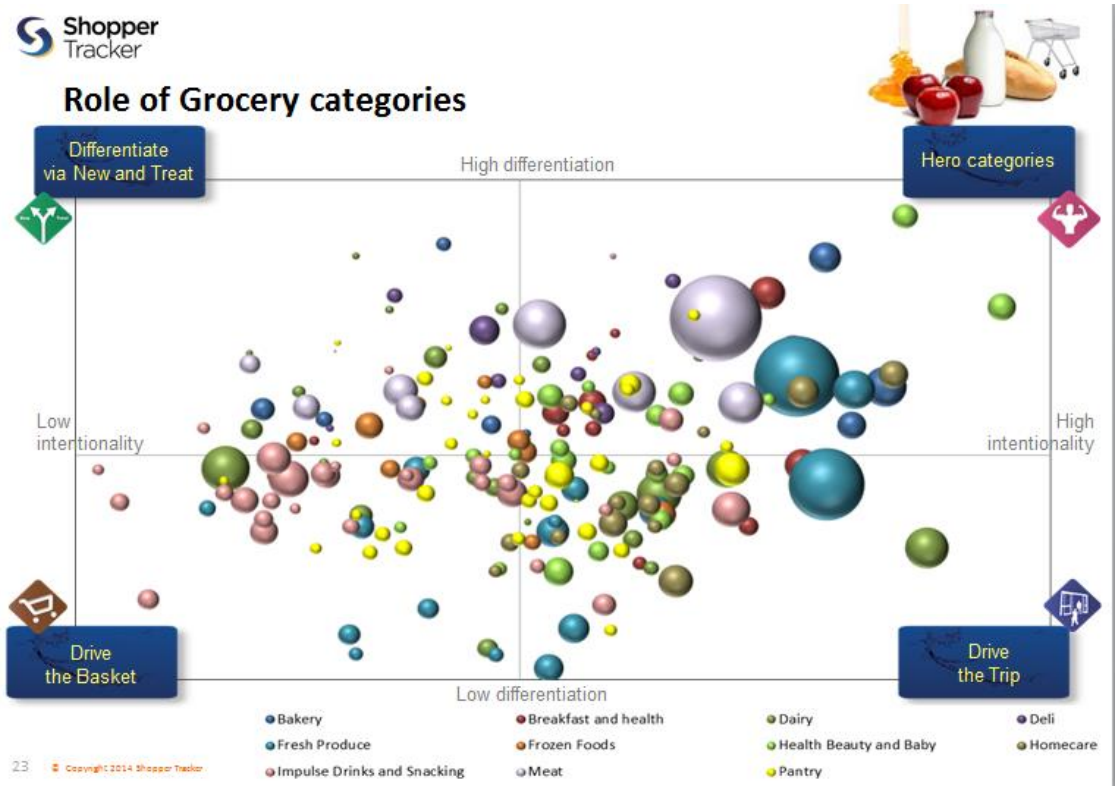
3.2 Results: In store location choice for smallgoods and reason for purchase (Deli v Pre-pack)

3.2.1 Shopper Tracker Data

The shopper Tracker data is syndicated and there are restriction on the definitions of the categories. Because in this project we were purchasing categories that had been originally defined for another client and data that had already been collected we had to use existing category definitions. The figure below presents an overview of shopper tracker methodology which looks to understand shopper traffic and spend in a category:

3.2.2 Reasons for shopping

The Shopper Tracker data provided information on the reasons for purchase in terms of when the products were to be used and who they were being bought for. The figure below displays a typical matrix where in depth category management can be interrogated.



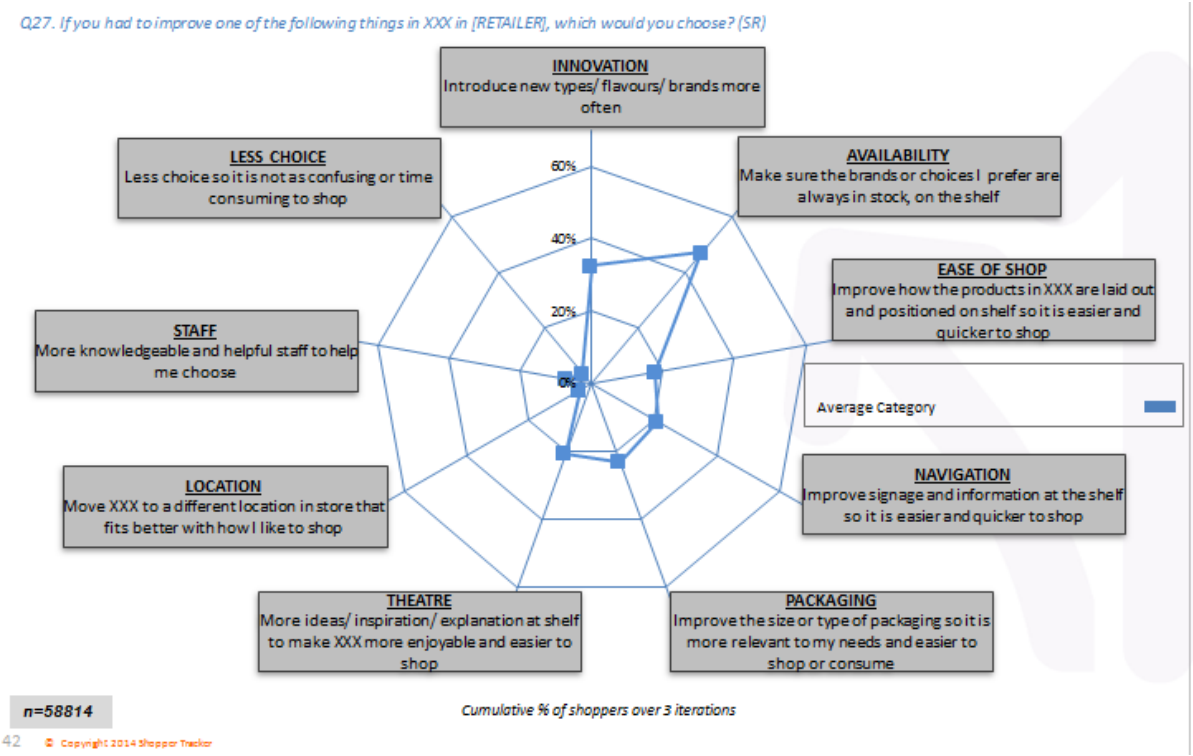
In this case study, the data did not show a statistically significant difference between the categories.

However data and analysis that looked at the potential of the categories to drive store traffic or increased spend for the retailer did show significant differences.

The analysis also provided information on things that shoppers consider important in that category compared with the extent to which shopper considered that those things were being delivered.

A list of key recommendations was produced from this data along with review of both the Quantium and IRi Aztec tools with the latter tool used for commercial in confidence analysis.

The figure below is an example of point of purchase matrix:



There were a range of technical issues with the analysis – namely, the difficulty caused by the way products are bought and then sold in the Deli in the Sliced and Shaved category. One item is purchased but it is sold generally as two different items: a sliced version and a shaved version and each of these have separate product numbers in the database. There is no easy way of identifying the items that belong together so there was a great deal of manual work and in some instances one variety performed but the other didn't so from a wholesale perspective a deletion wasn't warranted.

3.2.3 Efficient Ranging Results

The tool was successful in recommending a range of products for the Sliced and Shaved category that would help to arrest the decline in the category but not return the category to growth.

A list of recommended deletions was produced as well as a recommended range for Sliced and Shaved – this analysis remains commercial in confidence.

3.3 Elasticity modelling

Single variable elasticity was successfully used to generate elasticity values for beef smallgoods.

Weekly national data price/Kg and Kilograms sold were obtained for the four promotional groups from retail scan data.

The elasticity values were expressed as a percentage and plotted as Cartesian pairs in excel.

The elasticity values were then used with the retailer's cost of goods to generate an optimal price to maximise the retailer profit. A number of scenarios were presented to the retailer with pricing options to achieve different levels of category growth and retailers profit.

3.3.1 Use with Retailer

The elasticity and associate modelling was reasonably influential with the retailer. The retailer agreed to reduce the retail price on two items based on the anticipated increase in sales shown in the modelling.

4 Conclusions/recommendations

4.1 General Recommendations

Many of the data sets had significant technical issues or limitations which significantly impacted the usefulness of the results. Ability for short term tactical changes such as promotional pricing remain a much easier outcome rather than longer term collaborative strategic settings for investable innovation directions for new product development and shopper segmentation and it remains a key capability development for vendors / brandowners and retailers to better "learn from data".

This case study shows that no existing tool taken from grocery that is currently available when applied to meat is effective in taking category data analysis beyond a ranging and pricing discussion into a more structured innovation opportunity identification framework in terms of business model design and product development (beyond identifying "needs state") and further refinement and capability development is required.