

Descriptive Patterns in Wine Buying

**Insights Obtained from the Evaluation of
Attributes**

Justin Cohen

B.A. (Psychology) Emory University,
M.B.A. (International Hotel and Restaurant Management)
Le Cordon Bleu/University of South Australia

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Abstract

This thesis explores buying patterns in the Australian retail wine market, a complex and highly fragmented product category. Brand alone provides a uni-dimensional picture. The biggest brands have small market shares making meaningful evaluation of market structure difficult. This research demonstrates what greater insights emerge when using product attributes such as variety, region of origin, country of origin, Australian state and \$2 price tiers.

The main contribution of this work is to verify that the simple law-like findings of Ehrenberg's (1988) single and multi-brand buying and the outcomes of double jeopardy and duplication of purchase analysis can be applied to attributes. Attributes of wine in Australia can thereby be added to the Ehrenberg, Uncles and Goodhardt (2004) table of the various conditions under which these generalisations hold.

There has been previous academic research on polarisation for wine attributes by Jarvis (2006), but it is limited by a priori assumptions of a separate red and white wine category, the exclusion of 'light' buyers and a curtailed number of levels. This thesis explores how much these previous limitations matter.

Method

Stock-keeping units (SKUs), which number in the thousands, formed the basis of the analysis. Revealed preference data was obtained from a sample (n=4,768) from a loyalty program of a high-end retail chain in Australia over a 3-year period (October 2000-September 2003). The findings were replicated across the 3 years to support their generalisability.

The structure of the market was explored in light of well-established knowledge about how brands and attributes are repeatedly bought and how they share customers. The NBD-Dirichlet model, which predicts such patterns in buyer behaviour, was employed to compare 'observed' performance measures for attribute levels with their expected 'theoretical' norms. The law-like pattern of double jeopardy, an impetus for the development of the Dirichlet model, as well as the method of polarisation were used to identify the existence of 'excess loyalty', 'niche' and 'change of pace' patterns. The duplication of purchase law was utilised to explore how consumers share their purchases across the levels of each attribute.

Results

'Observed' performance measures were calculated for each of the attributes and provided a simple, accurate depiction of the structure of the market in a more meaningful way than brand alone. Sixty percent of all wine sold was in the top 5% of brands. Chardonnay, Sparkling White, Shiraz/Hermitage and Cabernet Sauvignon accounted for almost 40% of the market. The top five regions were South Eastern Australia, Barossa Valley, Margaret River, Clare Valley and Coonawarra. Australia dominates the market and accounts for 95% of all wine

sold. South Australia produces over half of the wine purchased in Australia. Two-thirds of all wine was priced between \$8-\$18.

The 'theoretical' Dirichlet estimates provided context for the 'observed' measures and proved to be a good benchmark across all attributes. The 'double jeopardy' phenomenon generally held in each instance. Polarisation appeared to be more powerful than double jeopardy in stratifying the market into the managerially useful deviations of 'excess loyalty', 'niche' and 'change of pace' behaviour, which were largely similar for both methods. 'Excess loyalty' is exhibited by Chardonnay, South Eastern Australia and \$8-\$10 price tiers. 'Niche' is demonstrated by white and red cask wine, Margaret River, Western Australia, Vintage Cellars own brand and \$4-\$8 price tiers. Most small attribute levels display 'change of pace' behaviour illustrating lack of sustainability. The detailed findings of this study and that of Jarvis (2006), using the same data set, differ. However, both studies showed higher loyalty to attributes, suggesting that attributes rather than brands drive market structure.

Duplication of purchase was a better discriminator than the other methods for the discovery of consumer-buying based patterns. The presence of one wine market was demonstrated, dispelling the industry assumption of separate red and white wine categories. It also discovered that there were two markets of wine based upon price, <\$8 and >\$20 and that buyers of wine between \$10-\$20 tended to purchase adjacent price tiers less frequently than expected. This is a departure from the findings of Romaniuk and Dawes (2005) and Murphy (2006), who used consumer recalled purchase data.

Value of these Results

Greater insight into the use of panel data was achieved by a SKU-based approach. The attributes of variety, region of origin, country of origin, Australian state and \$2 price tiers provided a more meaningful description of the structure of the Australian wine market rather than brand alone. Wineries will benefit from understanding the most salient attribute levels and the ability to differentiate between the attribute levels that display potentially lucrative 'excess loyalty' and 'niche' positions as opposed to unsustainable 'change of pace' behaviour. In this way, products can be developed, positioned, promoted and front and back label design improved, based upon accurate, verifiable information provided by each attribute rather than preconceived notions. The identification of competitors, as well as submarkets, among the attributes will greatly assist retailers in the most effective shelf-space design. Online sales may be enhanced by the suggestion of complementary products.

Limitations & Future Research

The data analysed in this thesis represents a more involved consumer from a higher-end retail chain than the industry average. This description of the Australian wine market was not representative of the industry-based overview of the structure of the retail wine market at the time of this research. This study nevertheless provides the foundation for a future stream of research to replicate and extend the application of the Dirichlet to attributes in other wine markets

and product categories consisting of a large number of attributes and levels, such as automobiles, confectionary, fashion wear, perfume and cosmetics.