Descriptive Patterns in Wine Buying

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This research explores buying patterns in the Australian retail wine market, a complex and potentially highly fragmented product category. It addresses the question of whether product attributes such as variety, region of origin, country of origin, Australian state, brand and $2 price tiers, rather than brand alone, better describes the structure of this market. Stated preference studies have experimentally identified the important attributes utilised by consumers in their selection of wine. In this study, actual consumer purchase records are analysed in order to provide context.

The established knowledge of empirical regularities in buyer behaviour for brands is extended to attributes. The NBD-Dirichlet model, which predicts regularities in buyer behaviour, is used to compare ‘observed’ performance measures for attributes and their levels with their ‘theoretical’ Dirichlet estimates. The phenomenon of ‘double jeopardy’, the initial impetus for the development of the Dirichlet model, as well as the more recently described method of polarisation are used to identify the existence of 'excess loyalty', 'niche' and 'change of pace' behaviour. The duplication of purchase law and the calculation of deviations from it are used to describe how consumers share their purchase across the levels of each attribute. The stock-keeping units (SKUs), which number in the thousands for the Australian retail wine market, form the basis of this analysis.

The current literature on attributes, in general, and more specifically those of the Australian wine market does not address whether the empirical regularities that exist for brands can be extended to attributes utilising the Dirichlet and its products, the ‘double jeopardy’ phenomenon and the duplication of purchase law. Extant literature on polarisation for the evaluation of attributes in wine is limited by the a priori assumptions of a separate red and white wine category and a curtailed number of levels to facilitate computation. There is an absence of a comprehensive evaluation of wine attributes with no a priori categorisation or exclusion of levels. A comparison between the classic methods and the more recently described method of polarisation in terms of the characterisation of the Australian retail wine market, with particular reference to the evaluation of attributes and their levels, does not exist.

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 three-year period (October 2000-September 2003). The findings have been replicated across the three years. ‘Observed’ performance measures were calculated. It was shown that Chardonnay, Sparkling White, Shiraz and Cabernet Sauvignon accounted for almost 40% of the market and were purchased by over 50% of the sample. Nearly 20% of all wine that is purchased comes from the region of South Eastern Australia and it is purchased by roughly 2/3 of the sample. The regions of the Barossa Valley and the Coonawarra are purchased by more than 50% of the buyers. Australia accounts for 95% of all wine sold and is bought by 99% of the sample with over half of that wine coming...
from South Australia. 90% of all wine sold is in the bottom 95% of brands with only 6 brands having market shares of 1% or greater. 2/3 of all wine sold was between $8-$18 with the highest penetration for wines priced between $12-$16. Over all the attributes, purchase frequency and SCR (share of category requirements) varied with penetration, and sole loyalty rarely rose above 1%

The ‘theoretical’ Dirichlet estimates proved to be an excellent benchmark across all attributes except for brand. The ‘double jeopardy’ phenomenon generally held across all attributes and was utilised to identify the existence of ‘niche’ and ‘change of pace’ behaviour as well as ‘triple jeopardy’ in a small but significant number of attribute levels. The attributes were compared using DMD $\varphi_c$ polarisation: variety=Australian state>country of origin=$2 price tiers>Brand=region of origin. BBD $\varphi_p$ polarisation, comparing the top 20 levels attribute-wide, showed that the loyalty for red and white cask wine was higher than the $4-$6 price tier, which was followed by lambrusco and wines from Western Australia. Duplication of purchase shows that there generally appears to be one wine market, debunking the myth of separate red and white wine categories. It also demonstrated that there were two markets of wine based upon price, <$10 and >$20 and that buyers of wine between $10-$20 tended to purchase adjacent price tiers less frequently.

The calculation of ‘observed’ performance measures is beneficial, depicting the structure of a market for attributes in a more meaningful way than brands alone. The ‘theoretical’ Dirichlet estimates describe which attributes behave as expected and identify deviations, providing a greater context to the market. The graphical representation of ‘double jeopardy’ and polarisation demonstrates the existence of ‘excess loyalty’, ‘niche’ and ‘change of pace’ behaviour. Better positioning of wine can be achieved through the use of attributes rather than brands alone. The plotting of polarisation graphically does appear to be more powerful than ‘double jeopardy’. The duplication of purchase law is an excellent discriminator for the discovery of patterns of repeat buying beyond the consideration of brand.

It has been shown that the empirical regularities of buyer behaviour for brands have been extended to attributes in the Australian retail wine market. Greater insight into the use of panel data was achieved by a SKU-based approach to market structure and consumer behaviour. The attributes of variety, region of origin, country of origin, Australian state and $2 price tiers gave a more meaningful description of the structure of the Australian wine market rather than brand alone. The implications of this knowledge are not only valuable to marketing science, but also to small and larger wineries for positioning, new product development and label design. There is also great benefit for retailers, both brick and mortar and on-line, in category management.

The next stage of this research involves replications in different wine markets. Validation of these methodologies in other markets would be a valuable contribution to the field. European markets could provide context to this research by identifying if the structures of a market vary in 'new world' and 'old world' wine markets.