Repettoire and frequency of consumption in wine: Are heavy buyers more loyal to product attributes?

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Abstract

Frequency of consumption has always been an important criterion for characterising and segmenting buyers. The aim of this paper is to provide a deeper understanding of the repertoire and loyalty structures between heavy and light wine buyers. Based on a study conducted with stated preference data, basic brand performance measures are estimated through Juster purchase probabilities of brand choice. The polarisation index $\phi$ (phi) is used as a measure to model loyalty. Results show that light buyers have a wider repertoire than heavy buyers, buying more small brands. In terms of loyalty, heavy buyers are more loyalty prone than light buyers, both as regards the brand name and the wine attributes examined in this study.

Keywords: brand loyalty, polarisation, heavy buyers, light buyers, wine

Track: Product and Brand Management
1. Introduction

A large body of early marketing literature has focused on researching consumers based on frequency and volume they purchase or consume (e.g., Cook & Mindak, 1984, Twedt, 1964). Viewed from this perspective, Twedt (1964) was among the first scholars to characterize and distinguish buyer segments grouping them into heavy, light and non-buyers. One of his key findings was that the heavy buyer group (i.e., “heavy half”) accounted for approximately 80% of the purchases. Since then, this phenomenon is known as the Pareto Effect (or “80/20 rule”), and has been among the best known empirical generalisations in marketing. Another generalization related to light and heavy buyers is the tendency of big share brands to slightly “monopolize” light category buyers. This phenomenon is known as Natural Monopoly Effect (McPhee, 1963).

A large body of literature in this field has primarily focused on exploring the profile of these segments. The main reasoning is that heavy buyers comprise the main target segment for companies, while being those rewarded from loyalty programs (Liu, 2007). On the other hand, a better understanding of light- and non-buyers helps in developing strategies to better target these segments. Clancy and Shulman (1994) suggest that heavy buyers are price conscious; deal prone; disloyal to the brands they buy; some are very loyal to the brands they buy; may have demographic and media use profiles similar to everyone else in the category; and as a segment, may be more heterogeneous than homogeneous. However, such characteristics are not always consistent (Wansink & Park, 2000).

In the case of wine, heavy buyers are also said to have different characteristics from light buyers (Goldsmith & d’Hauteville, 1998). In this paper the aim is to compare heavy and light buyers of wine in terms of their repertoire and loyalty. Apart from the importance of wine as a product category, the reasoning behind this selection is twofold. First, wine as a product category is often characterised as difficult and confusing for buyers. Therefore, heuristics other than the brand name often play an important role, simplifying the decision-making process (Bettman, Luce & Payne, 1998). In the case of wine, such heuristics can be price, label information, variety, vintage, medal, etc. Certain studies have explored the importance of such cues on consumers’ wine choice (e.g., Fotopoulos, Krystallis & Ness, 2003; Jarvis, Rungie & Lockshin, 2007). Second, the wine market is differentiated and competitive, with an enormous number of niche brands that make consumer choice even more complex. Therefore, the unique character of wine as a product category may have an influence on consumers’ structure of repertoire and loyalty. Moreover, it is interesting to investigate whether established norms from previous research are followed in such a product category or they deviate. In this respect, this paper addresses two research questions: a) are there any variations in the repertoire between heavy and light wine buyers?; and b) are heavy buyers of wine more loyal than light buyers, and to which wine attributes?

2. Material and Method

2.1 Brand performance measures and the Juster Scale

Brand performance measures (e.g., market share, brand penetration, average purchase frequency) are usually obtained from consumer panels. However, panel data can be expensive and time-consuming to acquire and process and they are not readily available for certain product categories and for certain markets (Uncles & Lee, 2006). An alternative approach to empirically estimating similar measures is by using the Juster probability scale according to which respondents are asked to rate the probability of purchasing selected brands within a
product category in a future purchasing period (“How many times are you likely to purchase/use <brand j> in the next <period of time>?”). Answers are provided on an 11-point probability scale ranging from 0 to 10, where 0 denotes “no chance, almost no chance (1 in 100)” and 10 denotes “certain, almost practically certain (99 in 100)”. The attraction of the Juster scale is its use to develop estimators for a set of various brand performance measures (Wright, Sharp & Sharp, 2002). In addition, the Juster scale is preferred over other purchasing intention measures, since it has been proven to be more reliable and precise, constituting a direct means of estimating real purchasing behaviour (Wright & MacRae, 2007).

2.2 Use of polarisation to model loyalty

Estimates of the Juster scale can be used as input to fit the Dirichlet model of purchase incidence and brand choice (Fader & Schmittlein, 1993; Wright, Sharp & Sharp, 2002). The Dirichlet model is one of the most widely used methods for studying behavioural loyalty, as it has been shown to provide useful benchmarks and offer a natural baseline for the repeat-purchase loyalty each brand enjoys (Ehrenberg, Uncles & Goodhardt, 2004; Goodhardt, Ehrenberg & Chatfield, 1984).

A measure to model loyalty (or repeat purchase) stemming from the Dirichlet model is the polarisation index \( \phi \) that was initially proposed by Sabavala and Morisson (1977). Polarisation \( \phi \) is estimated by the following equation: \( \phi = 1/(1+S) \), where \( S \) is a parameter of the Dirichlet model (see Ehrenberg, 1988). Both indices (\( \phi \) and \( S \)) capture changes in heterogeneity of consumer choice as purchase incidence changes. The primary benefit of \( \phi \) is that it is easier to interpret, since it varies from zero to one, whereas \( S \) varies from zero to infinity. Values of \( \phi \) close to zero indicate pure homogeneity in consumer choice, denoting high switching levels within a product category, where all buyers have the same propensity to buy individual brands. Values of \( \phi \) close to one signify the existence of maximum heterogeneity, indicating high levels of loyalty in a product category within which each consumer buys only his/her favourite brand (Fader & Schmittlein, 1993; Stern & Hammond, 2004).

2.3 Survey design

A web-based survey was undertaken in Greece during March 2009. For the purposes of the study, brand performance on a set of 40 wine brands was investigated using the Juster scale. The period for measuring the probability of purchase was set to four weeks. Four Greek wine varieties were chosen (two white varieties: “Asyrtiko” and “Mosxofilero”; and two red varieties: “Agiorgitiko” and “Xinomavro”) and 10 known brand names were selected from each variety according to their retail sales. In order to simplify the selection of brands, no reference to vintage was made.

In total, 408 respondents participated in the survey, from which 203 answered questions referring to red wine varieties and 205 to white wine varieties. Along with the Juster scale, pictures of the brands were shown to the participants to further stimulate brand recognition and increase realism. In addition, brands were shown to participants randomly to avoid any order bias effects.

Prior to analysis, the sample was segmented to heavy and light buyers according to their stated frequency of buying (red or white) wine. Heavy buyers were those reporting buying wine at least once a week, whereas light buyers those reporting buying wine at least once a month. Those reporting buying wine less often were excluded from the survey. Heavy buyers
for red wine were 61 respondents (30.0% of the red wine sample) and for white wine 59 participants (28.7% of the white wine sample).

Finally, each brand was categorized based on the following attributes: a) price tier (low, medium, high); b) winemaker (small, medium, large corporate size); and c) certification (VQPRD wine or not). All estimations were performed in MATLAB and the DIRICHLET software (Kearns, 2000).

3. Results and Discussion

3.1 Are there any variations in the repertoire between heavy and light wine buyers?

To assess whether the leading three brands differ, their market shares are compared across the two groups (see Table 1). In at least three of the four varieties the market leaders are very much the same for both groups. On the other hand, the market followers usually have different ranking across frequency groups.

Table 1. Leadership among brands per wine variety by market share

<table>
<thead>
<tr>
<th></th>
<th>Heavy buyers</th>
<th>Light buyers</th>
<th>Heavy buyers</th>
<th>Light buyers</th>
</tr>
</thead>
<tbody>
<tr>
<td>White varieties</td>
<td>Asyrtiko</td>
<td>Mosxofilero</td>
<td>Asyrtiko</td>
<td>Mosxofilero</td>
</tr>
<tr>
<td>Market share rank</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>14% Brand 2</td>
<td>12% Brand 2</td>
<td>19% Brand 1</td>
<td>22% Brand 1</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>13% Brand 8</td>
<td>11% Brand 9</td>
<td>12% Brand 10</td>
<td>11% Brand 10</td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>13% Brand 1</td>
<td>10% Brand 1</td>
<td>11% Brand 3</td>
<td>8% Brand 8</td>
</tr>
<tr>
<td>Total Market Share</td>
<td>40%</td>
<td>33%</td>
<td>42%</td>
<td>41%</td>
</tr>
</tbody>
</table>

In almost all varieties the total market share of the leading brands for heavy buyers is comparable to that of the light buyers. However, market share differences between the two groups for the total number of brands reveal an interesting trend (see Table 2). Big brands (brands over 10% market share) are bought more often by heavy buyers, since 11 brands out of 13 (85%) have higher market shares in the heavy buyer group. Conversely, small brands (market share below 10%) are monopolized by light buyers, since 22 brands out of 27 (81%) have a higher market share in the light buyer group.

Table 2. Changes in Market Shares across Brands

<table>
<thead>
<tr>
<th>Brands with Market Share...</th>
<th>Total no. of brands</th>
<th>No. of brands in which Market Share for heavy buyers is...than for light buyers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Bigger</td>
</tr>
<tr>
<td>&gt;10%</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>&lt; 10%</td>
<td>27</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>16</td>
</tr>
</tbody>
</table>
In conclusion, buyers from both groups buy leading brands (which, of course, is one reason why these brands remain big). However, heavy buyers tend to buy more often big brands whereas light buyers buy more often small brands. This is an interesting finding that goes against the Natural Monopoly effect which suggests that big brands “monopolize” light buyers (Ehrenberg, Uncles & Goodhardt, 2004). In other words, consumers who buy wine less frequently or even occasionally have a tendency to choose among small, less known brands.

3.2 Are heavy buyers of wine more loyal than light buyers and towards which wine attributes?

Table 3 presents the polarisation indices $\phi$ for the four wine varieties under investigation. A general observation is that values of $\phi$ are very low across all varieties, indicating the high variety seeking that wine exhibits as a product category. Nevertheless, small differences in values of $\phi$ are actually meaningful enough to signify some important findings. At the brand name level, heavy buyers have higher values of $\phi$ than light buyers across all four varieties. This further indicates that light buyers are more variety seekers than heavy ones, irrespective of the wine variety.

<table>
<thead>
<tr>
<th>Category</th>
<th>Asyrtiko</th>
<th>Mosxofilero</th>
<th>Xinomavro</th>
<th>Agiorgitiko</th>
</tr>
</thead>
<tbody>
<tr>
<td>All brands</td>
<td>Heavy</td>
<td>Light</td>
<td>Heavy</td>
<td>Light</td>
</tr>
<tr>
<td></td>
<td>0.05</td>
<td>0.02</td>
<td>0.05</td>
<td>0.02</td>
</tr>
<tr>
<td>Price tiers</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.06</td>
<td>0.07</td>
<td>0.06</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>0.09</td>
<td>0.02</td>
<td>0.08</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>0.08</td>
<td>0.07</td>
<td>0.02</td>
<td>0.02</td>
</tr>
<tr>
<td>Certification(*)</td>
<td>VQPRD</td>
<td>No VQPRD</td>
<td>Winemaker(**)</td>
<td>Big</td>
</tr>
<tr>
<td></td>
<td>0.12</td>
<td></td>
<td>0.03</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>0.21</td>
<td></td>
<td>0.02</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>0.02</td>
<td></td>
<td>0.13</td>
<td>0.17</td>
</tr>
<tr>
<td></td>
<td>0.02</td>
<td></td>
<td>0.02</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>0.02</td>
<td></td>
<td>0.29</td>
<td>0.17</td>
</tr>
</tbody>
</table>

* All brands from Xinomauro variety had a VQPRD label.
** Medium size winemakers only included Asyrtiko and Agiorgitiko varieties.

In the case of wine attributes, heavy buyers show higher values of $\phi$ for almost every attribute, exhibiting higher loyalty to product attributes than light buyers. Comparing which attributes exhibit higher loyalty, there are no clear observed patterns that can be generalised. For “Mosxofilero”, winemaker is a more important attribute in terms of loyalty exhibited. In the case of “Asyrtiko”, certification seems more important. This suggests that the importance of attributes in building customer loyalty varies across wine varieties.

Finally, in the case of attribute levels, heavy buyers show higher loyalty than light buyers towards almost every attribute level examined. Some generalisations from the findings could be drawn at this point. For all varieties, heavy buyers are more loyal to medium price tiers than light buyers, justifying past research findings (e.g. Jarvis, Rungie & Lockshin, 2007). Moreover, heavy buyers exhibit higher loyalty to VQPRD wines of the two white varieties. In case of winemakers, results are variety-dependant with no clear trend. Finally, it is interesting to note that light buyers are more loyal to small rather than large winemakers and are not
price sensitive to a specific tier. Therefore, light buyers tend to choose among less known brands from small winemakers, without being very price conscious.

4. Conclusion

This paper addresses two main research questions with respect to repertoire choices and loyalty behaviour of two groups of wine consumers, namely heavy buyers and light buyers: a) whether there are any variations in the repertoire between heavy and light wine buyers; and b) whether heavy buyers of wine are more loyal than light buyers and to which wine attributes.

Our findings suggest that light buyers are not monopolized by market leaders, while being connoisseur seeking variety in the wine brands they buy. In other words, light buyers of wine prefer to keep a relative wider repertoire switching between small brands, rather than choosing among large brands. This suggests that the category of wine deviates from the “law-like” Natural Monopoly Effect.

With respect to loyalty, findings suggest that wine buyers have an extensive variety seeking behaviour, something that is in line with previous studies conducted on wine (e.g. Jarvis, Rungie & Lockshin, 2007). Nevertheless, it is noticeable that loyalty trends among product attributes seem to be variety-dependant. In relation to frequency of consumption, heavy buyers are more loyal than light buyers both as regards the brand name and at the attribute-based level. Moreover, heavy buyers are price-conscious and are loyal to medium price tiers. On the other hand, light buyers may be more loyal to small winemakers, which may be the result of their variety-seeking behaviour.

All of the above can lead to managerial implications for wine marketing. First of all, light buyers comprise an important target group for small share brands. Towards this aspect, winemakers of small brands should acknowledge this fact, trying to meet expectations of light buyers as well. In addition, direct marketing strategies could be adapted for each group individually. For example, for attributes that heavy buyers show high loyalty to (e.g. medium price tiers), reinforcing techniques such as strong branding and heavy advertising could be used. On the other hand, for those attributes that do not exhibit high loyalty, variety seeking techniques, such as sales promotions and featuring, could be applied instead. To conclude, wine practitioners could determine which product attributes “stimulate” loyalty and consequently create tailor-made products and apply strategies that fit each market better.

This study has limitations that point to propositions for future research. First of all, the cut-off point for categorizing buyers between heavy and light is arbitrary, which may have had an impact on the study findings. Second, the polarisation indices observed in the study were low, not allowing for more accurate comparisons of loyalty levels between wine attributes. This was primarily due to the small time period used to estimate loyalty (i.e. 4 weeks) in connection to the low purchase frequency rates that wine as a category exhibits. Nevertheless, the present methodology has a trade-off, since extending the time period would introduce bias in the purchase intention statements. To conclude, more studies are needed to bring further support to the present findings. Finally, future studies should target in combining results obtained from stated and revealed preference data in order to enhance validity.
References


