Bordeaux 2016 Abstract Submission

Title
Product Diversity and Consumer Choice in Markets for Wine, Beer, and Spirits

I want to submit an abstract for:
Conference Presentation

Corresponding Author
Brad RICKARD

E-Mail
bjr83@cornell.edu

Affiliation
Cornell University, Ithaca, NY USA

Co-Author/s

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<tr>
<th>Name</th>
<th>E-Mail</th>
<th>Affiliation</th>
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<td>Olivier Gergaud Gergaud Olivier (<a href="mailto:olivier.gergaud@kedgebs.com">olivier.gergaud@kedgebs.com</a>)</td>
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<td>Herve Remaud Herve Remaud <a href="mailto:herve.remaud@kedgebs.com">herve.remaud@kedgebs.com</a></td>
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<td>Cornell University</td>
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Keywords
Alcohol, Demand for variety, Entropy Index, Product diversity, Wine

Research Question
This research provides an empirical examination of consumer demand for variety in the alcoholic beverage category.

Methods
We estimate the impact of total expenditures, prices, and preferences across product sub-categories on the diversity of alcoholic beverages, measured using the Entropy Index.

Results
Our results show that the demand for variety in beer markets is driven across sub-categories and in wine markets it is driven by prices.

Abstract
Introduction. Consumers are reported to make over 200 food choices each day, and it is expected that many of these choices are routine, guided by some degree of habitual choice behavior, and result in little diversity in the basket of products. However, some food choices, and we argue that choices about alcoholic beverages, likely involve more cognitive effort by individuals and exhibit a more diverse set of products. In addition, these food and alcohol choices that are less automatic are expected to be done in ways that might be characterized as variety-seeking among many consumers. The purpose of this research is to provide an empirical examination of consumer demand for variety in the alcoholic beverage category. Our objective is to measure the diversity of...
choices made by consumers and to better understand the nature and sources of such diversity separately for beer, wine, and spirits.

Data and Methodology. Here we are interested in examining the diversity of alcoholic beverage products purchased by consumers. We expect that the nature of diversity patterns differs by alcoholic beverage, and that wine consumers are most likely to purchase products across price points. To test our hypothesis, we use the Nielsen Homescan dataset that describes food and beverage purchasing patterns for approximately 70,000 households in 2012. These data include detailed purchasing information that describes the brand, package size, price, and the product category for each product (UPC-level data). Furthermore, the Homescan data include a plethora of socio-economic information about the households in the panel, and about the locations where the products were purchased. We use these household-specific data in the empirical estimation work to identify links between the demand for variety of alcoholic beverages and household characteristics. The dependent variable in our model is the diversity of the alcoholic beverage products purchased by a household in a given year, as measured by the Entropy Index. The Entropy Index is a measure between 0 and 1 that increases as the consumption shares of all possible products are equally distributed. A well-designed index for diversification should a) vary directly with the number of different products, b) vary inversely with the increasing unequal distribution of products, c) vary directly with the dissimilarity or heterogeneity of products, and d) if possible, be bounded between zero and unity.

The Entropy Index is a measure between 0 and 1 that increases as the consumption shares of all possible products are equally distributed. The key explanatory variables of interest include the level of consumer engagement in the beverage category, prices paid for products, the distribution of products purchased across sub-categories, and demographic information about the households. In our model we include 12 sub-categories in the wine market (that include different styles of domestic and imported wine), 6 sub-categories in the beer market, and 14 sub-categories in the spirits market.

Results. Summary statistics show that the score measuring the diversity of wine purchases is greater than the scores for beer or spirits; however, there is a substantial level of diversity in all three categories relative to many food categories (including cheese). We are particularly interested in the role of prices and the level of product engagement on the diversity, and therefore run different specifications that model these effects in different ways. In two versions of the model we examine the mean price plus the difference between the minimum and maximum price in the consumer’s basket of products. In the other two versions we create a price diversity score to capture the breadth of prices for products in the household’s basket. Alternative specifications model consumer engagement using i) annual total expenditures on the alcoholic beverage category, and ii) the number of purchase trips annually where the alcoholic beverage was purchased. In our estimation work we control for consumers’ general demand for variety by including the diversity of cheese purchases as an explanatory variable. Our results show that, relative to the other beverage categories, the demand for variety in beer markets is driven across sub-categories, in wine markets it is driven by prices, and in spirit markets it is driven by the level of consumer engagement in the category.

Conclusion and Marketing Implications. In food and alcoholic beverages consumers have many products to select, and over time the set of choices continues to increase. Marketers of new alcoholic beverage products continue to look for new customers, and new ways to reach existing consumers. Sales could be expanded by offering products in additional sub-categories, across price points, and to consumers with evolving preferences towards more sophisticated products. The most common approach to growth among alcoholic beverage companies is to offer additional labels at higher and lower price points. Overall, our findings show that wine consumers’ product diversity scores are most influenced by a set of differentiated prices, and this suggest that wine consumers are the most likely to experiment with new wines across a larger range of prices.