Abstract:

Using Big Data to investigate the influence of climate and demography on wine consumer habits

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Analysis of consumer preference is difficult due to the measurement uncertainty in these studies. For example, even expert wine judging panels have been found to be reliably score wines 10% of the time (Hodgson 2008). Big Data provides a contemporary source of market intelligence, allowing huge datasets of purchasing decisions to be interrogated against candidate variables to help elucidate the cryptic factors that lead to a transaction. We examined the buying habits of customers of two large Australian liquor retailers to determine whether there is a link between environmental conditions leading up to a purchase as well as whether purchase decisions were linked to geographic area within a single city. A number of clear patterns emerged including a significant link between temperature and wine variety preference. Notably, Shiraz was significantly negatively correlated with temperature, supporting the common-held role of the variety as a cold weather choice. Conversely, Sauvignon Blanc was significantly positively correlated with temperature, again supporting the perception that it is viewed as a refreshing wine. These and other correlations provide the industry with the ability to tailor promotions that are finely tuned to prevailing weather conditions. There were clear geographic distributions of wine preference across the city of Melbourne, Victoria, Australia. For example, Chardonnay was significantly linked to established suburbs in the west and east of the city, where as Riesling was significantly linked to burgeoning areas in the north and south, especially areas with a high proportion of single bedroom dwellings.

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