Regional Liquor Sales in Iowa

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Abstract

This is the abstract.

It consists of two paragraphs

Keywords: ***Liquor, Liquor Sales.***

Problem

Liquor sales are highly variable and the objective of this report is to create a statistical model for the value and number of bottles of liquor sold by region within the state of Iowa. This will help us predict inventory and assist wholesale distributors and the State of Iowa adjust inventory projections accordingly.

Introduction

In February, the Distilled Spirits Council (DISCUS), announced that spirits had an estimated retail sales of nearly $72 billion in 2015. Additionally, DISCUS credits the continuous growth of the distilled spirits industry to several key factors - continuous fascination with American Whiskeys in the United States and abroad, innovations in flavors, permiumization across all spirits categories leading to consumer interest, improved regulatory and tax environment resulting in expanded market access and a relatively low number of state tax threats, and the growth of small distillers, which expanded grassroots and overall interest in the spirits category Del Buono (2016).

This establishes that spirit sales in the Unites States is a valuable market worth exploring for a more detailed and statistical understanding of sales and volume. We hope to more throughly understand what impact regional and season impacts might have on liquor sales. We will limit the analysis to Iowa which has also reported sales at a record pace during the last half of 2000 Boshart (2001). While this older information we do have data up to 2016 to review.

Research Background (Literature Review)

Methodology

The dataset contains the spirits purchase information of Iowa Class “E” liquor licensees by product and date of purchase from January 1, 2012 to current. The data set is provided by the Iowa Department of Commerce, Alcoholic Beverages Division, click here to view the data set at Data.Iowa.Gov.

discuss the key aspects of your problem, data set and regression model(s). Given that you are working on real-world data, explain at a high-level your exploratory data analysis, how you prepared the data for regression modeling, your process for building regression models, and your model selection.

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Experimentation and Results

describe the specifics of what you did (data exploration, data preparation, model building, model selection, model evaluation, etc.), and what you found out (statistical analyses, interpretation and discussion of the results, etc.).

Discussion and Conclusions

In another study conducted in 2012 in Idaho, the monthly revenue generated was examined rather than the yearly revenue generated. The continued growth was rather owed to the number of weekends a month has (five instead of four) and to the higher prices in neighboring states. In Washington, the voters approved an initiative that led the state to sell its liquor stores and add new distributor and retail fees, making prices in the neighboring states (Idaho and Oregon) look better. There were no changes made in marketing or pricing in response to the regulatory shift in Washington.

In 2011, Idaho lawmakers commissioned a report that found that the state could privatize liquor sales without a loss in the revenue. According to Jeff Anderson, leader of Idaho's liquor division, prices of liquor might also rise as a result of this.

conclude your findings, limitations, and suggest areas for future work.

Appendices

Supplemental tables and/or figures.

Session Info

- R version 3.3.2 (2016-10-31), `x86_64-w64-mingw32`
- Locale: `LC_COLLATE=English_United States.1252`, `LC_CTYPE=English_United States.1252`, `LC_MONETARY=English_United States.1252`, `LC_NUMERIC=C`, `LC_TIME=English_United States.1252`
- Base packages: base, datasets, graphics, grDevices, methods, stats, utils
- Other packages: pacman 0.4.1
- Loaded via a namespace (and not attached): backports 1.0.4, digest 0.6.10, evaluate 0.10, htmltools 0.3.5, knitr 1.15.1, magrittr 1.5, Rcpp 0.12.8, rmarkdown 1.2, rprojroot 1.1, rticles 0.2, stringi 1.1.2, stringr 1.1.0, tools 3.3.2, yaml 2.1.14

R statistical programming code.

Please see Final Project.rmd on GitHub for source code.

https://github.com/ChristopheHunt/DATA-621-Group-1/blob/master/Final%20Project/Final%20Project.Rmd

References

Boshart, Rod. 2001. “Liquor Sales in Iowa Set Record.” *Gazette*.

Del Buono, Amanda. 2016. “Keeping Spirits High.” *Beverage Industry* 107.4: 14–16, 18.