

# Discuss whether the excise rate has an impact on the consumption of RTDs?

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June 2023

RTDs are an alcoholic beverage and subject to an excise that is paid per liter of pure alcohol. Using the liters of pure alcohol equivalent cleared as a proxy for consumption, I show that excise rate increases that are not indexed to inflation impact consumption, while increases that are indexed have little impact

To examine the impact of a change in the excise that is not indexed to inflation, I consider the rate increase on 27/04/08 from \$39.36 to \$66.67 per liter of pure alcohol (69.4%). This resulted in a week-to-week decrease in consumption of 47.5%. This might suggest that excise increases reduce consumption. However, it's possible that this is a short-term effect, as consumers chose to 'stock up' in anticipation of a price increase.

To consider long-term effects, I conducted a regression with discontinuity, showing that an excise rate increase has a persistent impact on consumption. As Figure 1 shows, after the implementation of the 2008 excise increase, there was a persistent decrease in consumption with mean consumption falling by 32%. This relationship is robust to outlier removal. Given the similarity of trends observed in the data before and after, there is reason to believe this reduction is primarily attributable to the rate increase, thus suggesting that an unindexed excise increase reduces the consumption of RTDs.

To examine indexed rate increases, I consider the excise rises from 27/04/08 to the end of the financial year 2015 (see Figure 2). In this period, the rate rose incrementally from \$66 to \$80, but there was little change in consumption. In the analysis, consumption and excise rate were weakly, negatively correlated with a Pearson correlation of  $-0.21$ , suggesting that there is little correlation between indexed excise increases and the consumption of RTDs.

Figure 1: Discontinuity Analysis of Weekly RTD Consumption Before and After a 70% Excise Increase.

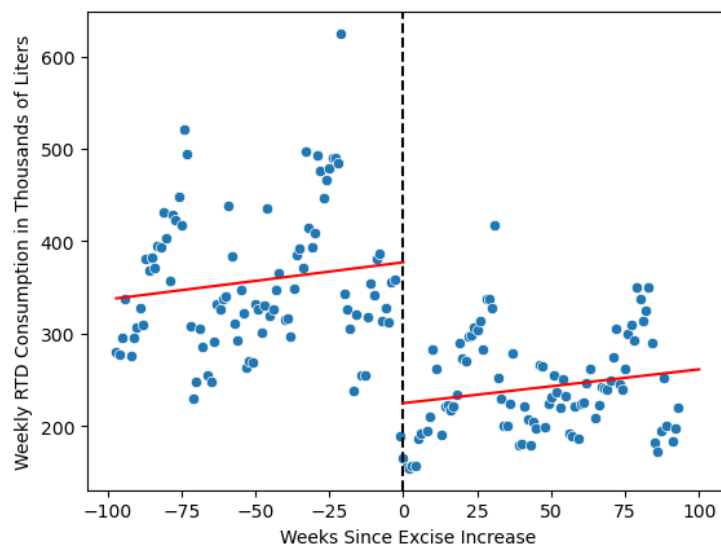


Figure 2: Weekly RTD Consumption for Exise Rates Between \$66 and \$80

