# Nested Logit Demand Graphs - All Purpose Flour

Xiliang Lin 3/9/2017

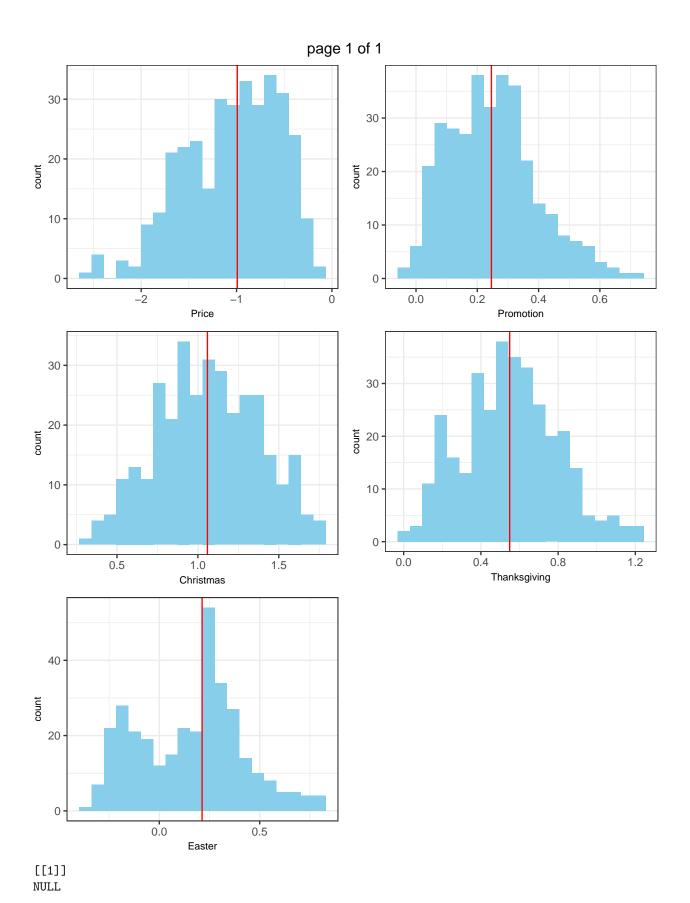
#### **Demand Specification**

In this excercise, I estimate demand based on a panel specification. The demand is estimated at market level with defined as the combination of DMA and Chain. We restrict to market with at least 3 stores in the top 90 percent of stores in terms of sales in the category. For each market and brand k, we run the regression

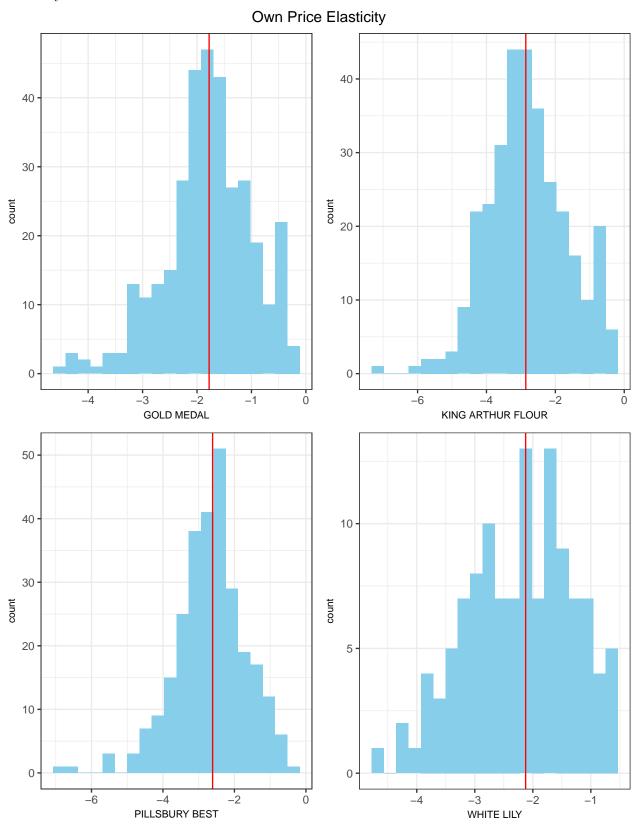
$$u_{ijt} = \alpha_j + \beta_1 \ln p_{ijt} + \beta_2 \mathbb{I}_{p_{ijt} \ge p_{sj,t-1}} (\ln p_{ijt} - \ln p_{sj,t-1}) + \beta_3 \mathbb{I}_{p_{ijt} < p_{sj,t-1}} (\ln p_{ijt} - \ln p_{sj,t-1}) + \beta_4 \text{promotion} + \xi_{jt} + \varepsilon_{ijt}$$

#### Demand Estimates Using Prices - No Instrumental Variables

Plot the estimates regardless of statistical significance. Results are shown below:



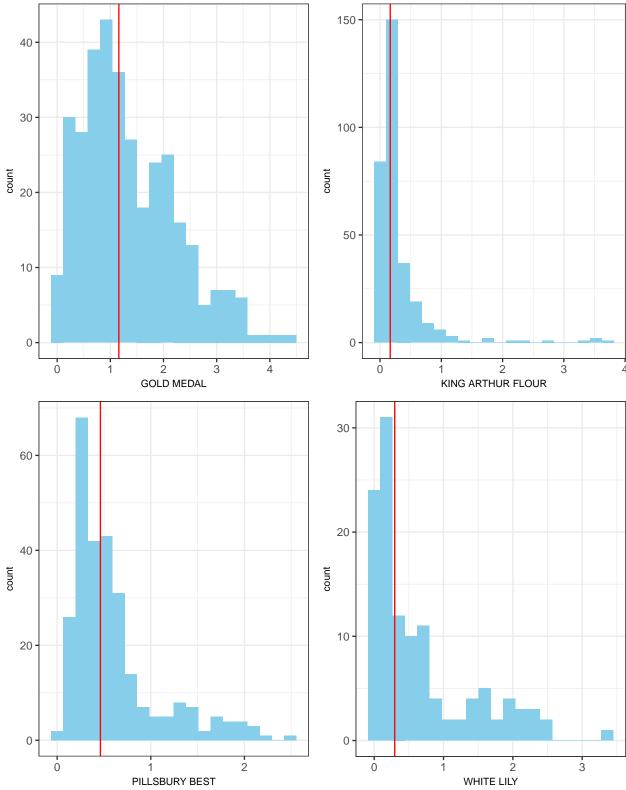
### Elasticity Estimates:



[[1]]

NULL

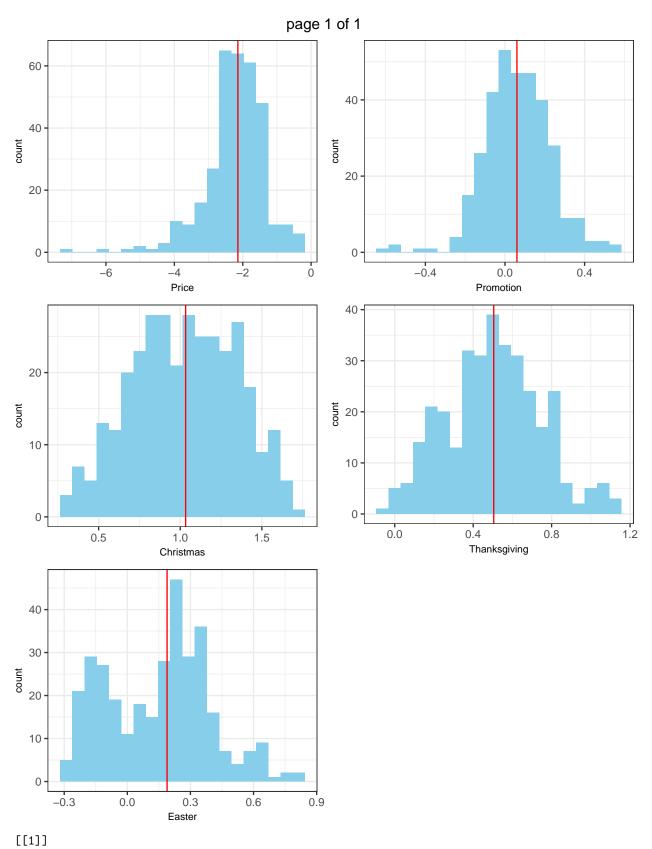




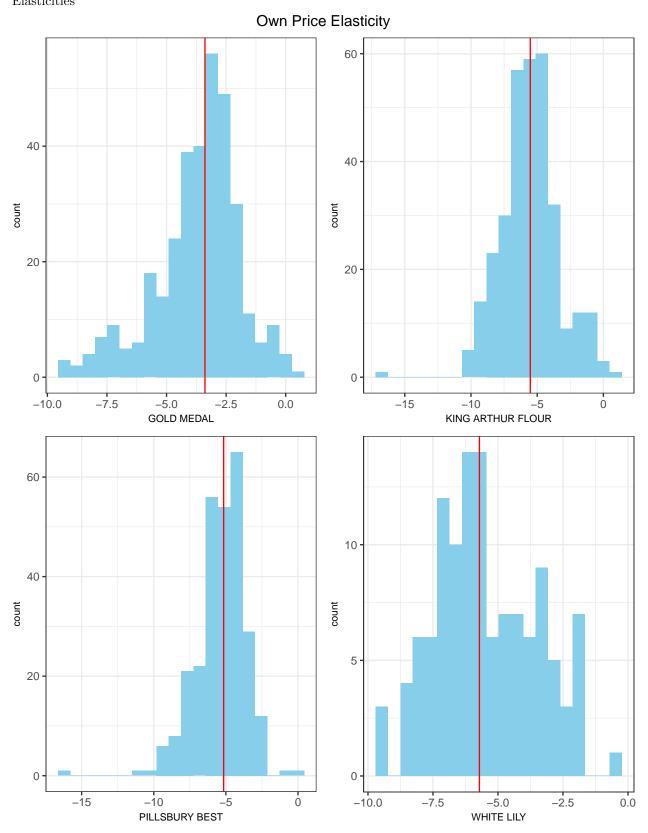
[[1]]

NULL

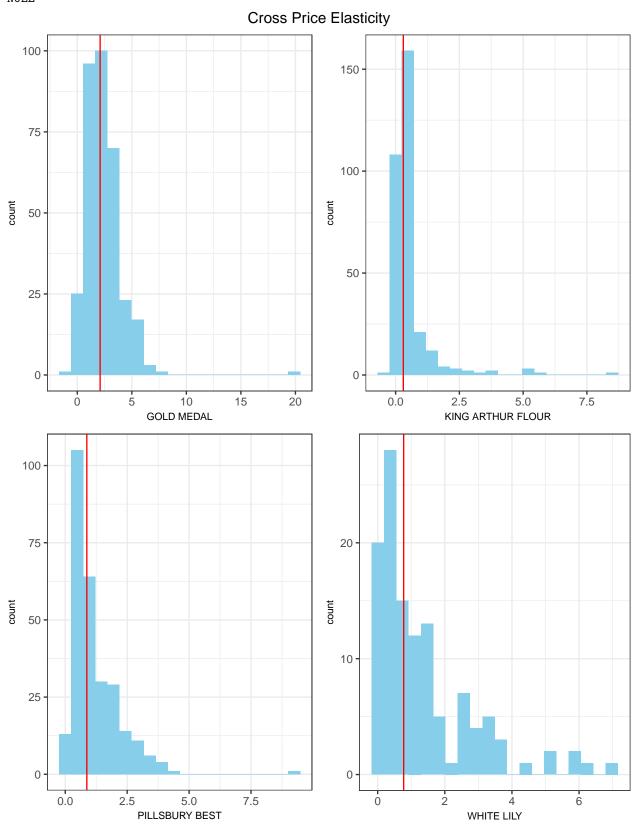
## Demand Estimates Using Prices - Hausman Instruments



NULL Elasticities



[[1]] NULL



[[1]] NULL