

Nested Logit Demand Graphs - All Purpose Flour

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Demand Specification

In this exercise, 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

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

Demand Estimates Using Prices - No Instrumental Variables

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

Warning: Removed 1 rows containing non-finite values (stat_bin).

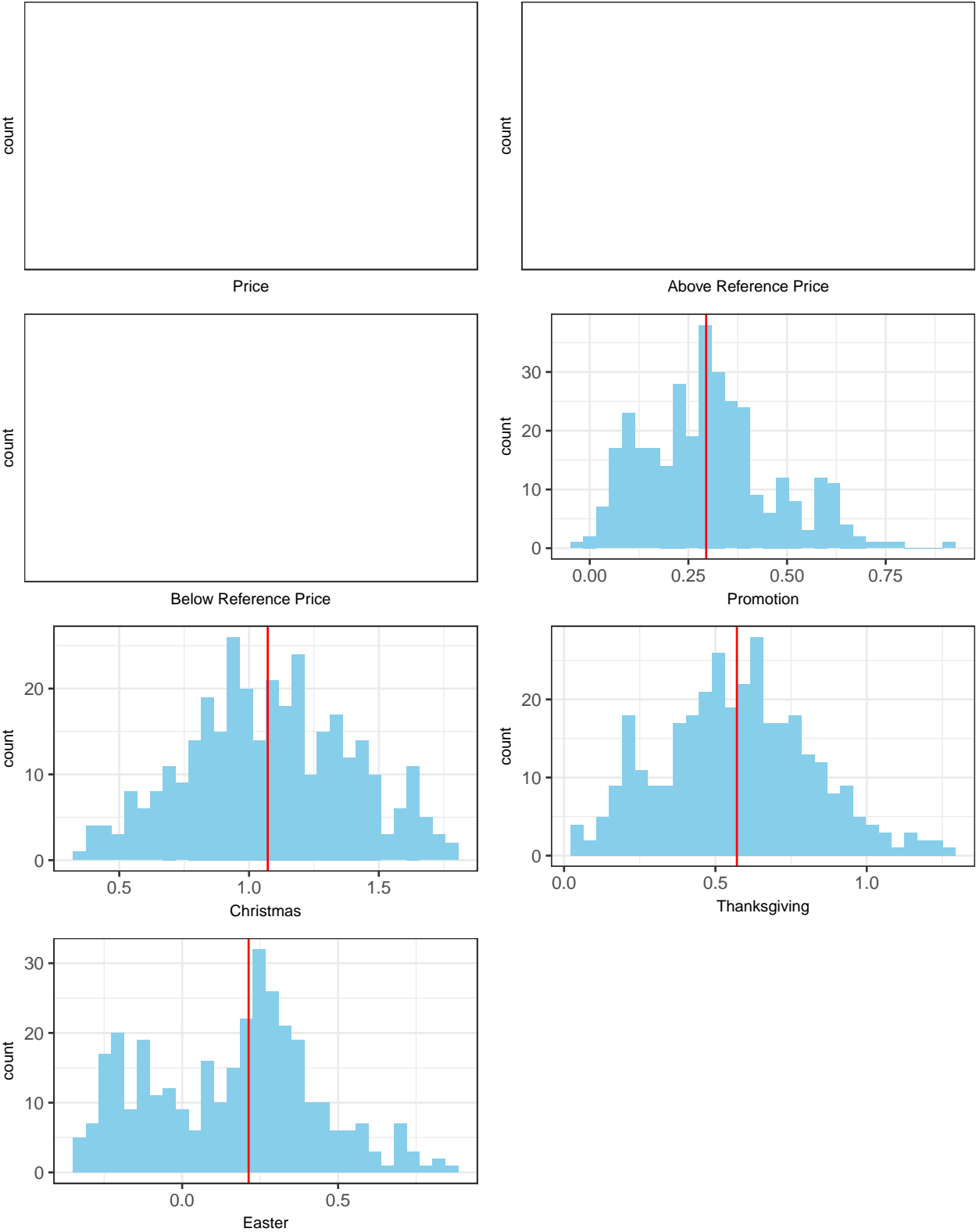
Warning: Removed 1 rows containing missing values (geom_vline).

Warning: Removed 1 rows containing non-finite values (stat_bin).

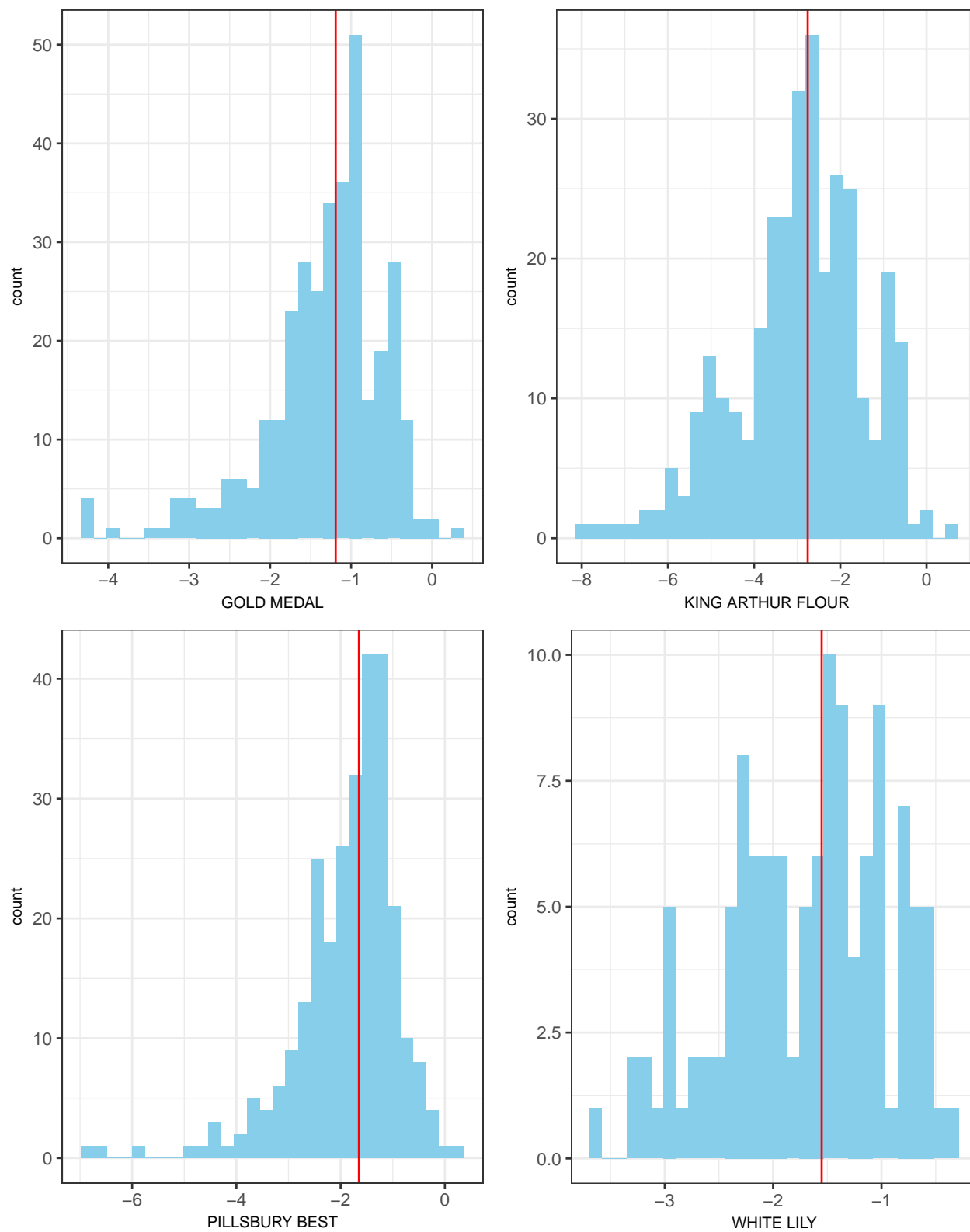
Warning: Removed 1 rows containing missing values (geom_vline).

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Warning: Removed 1 rows containing missing values (geom_vline).



[[1]]
NULL



[[1]]

NULL

Demand Estimates Using Prices - Hausman Instruments

Warning: Removed 1 rows containing non-finite values (stat_bin).

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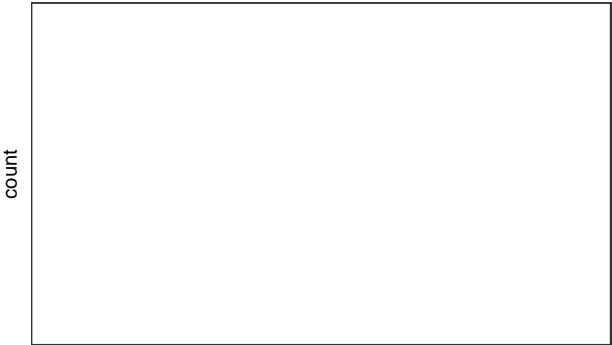
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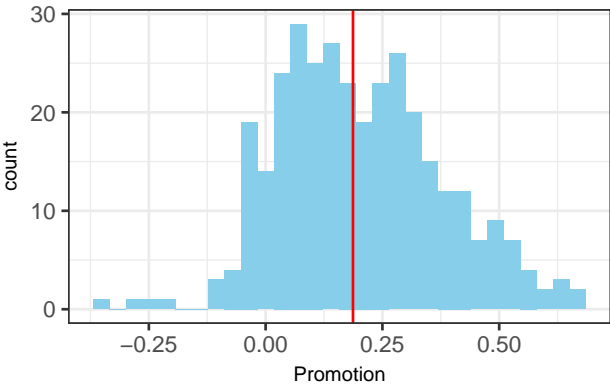
Price



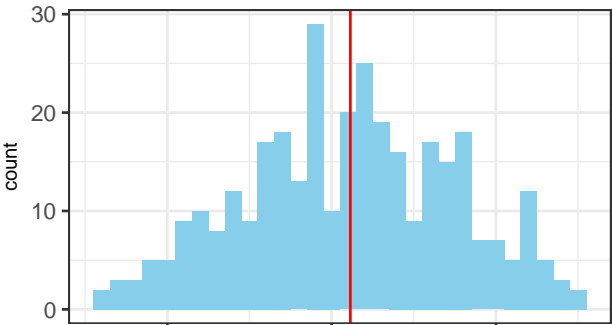
Above Reference Price



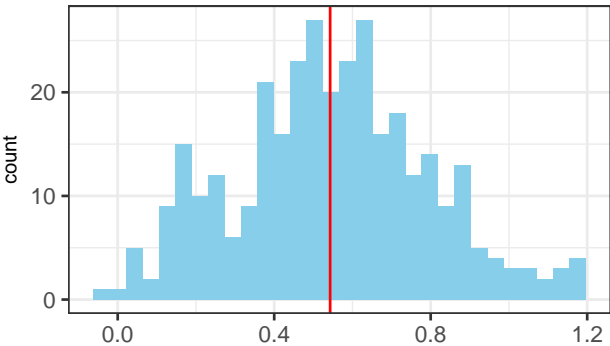
Below Reference Price



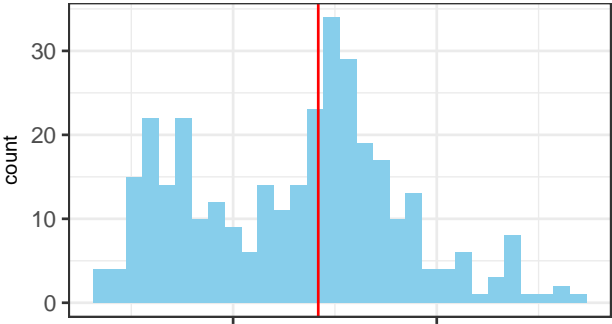
Promotion



Christmas

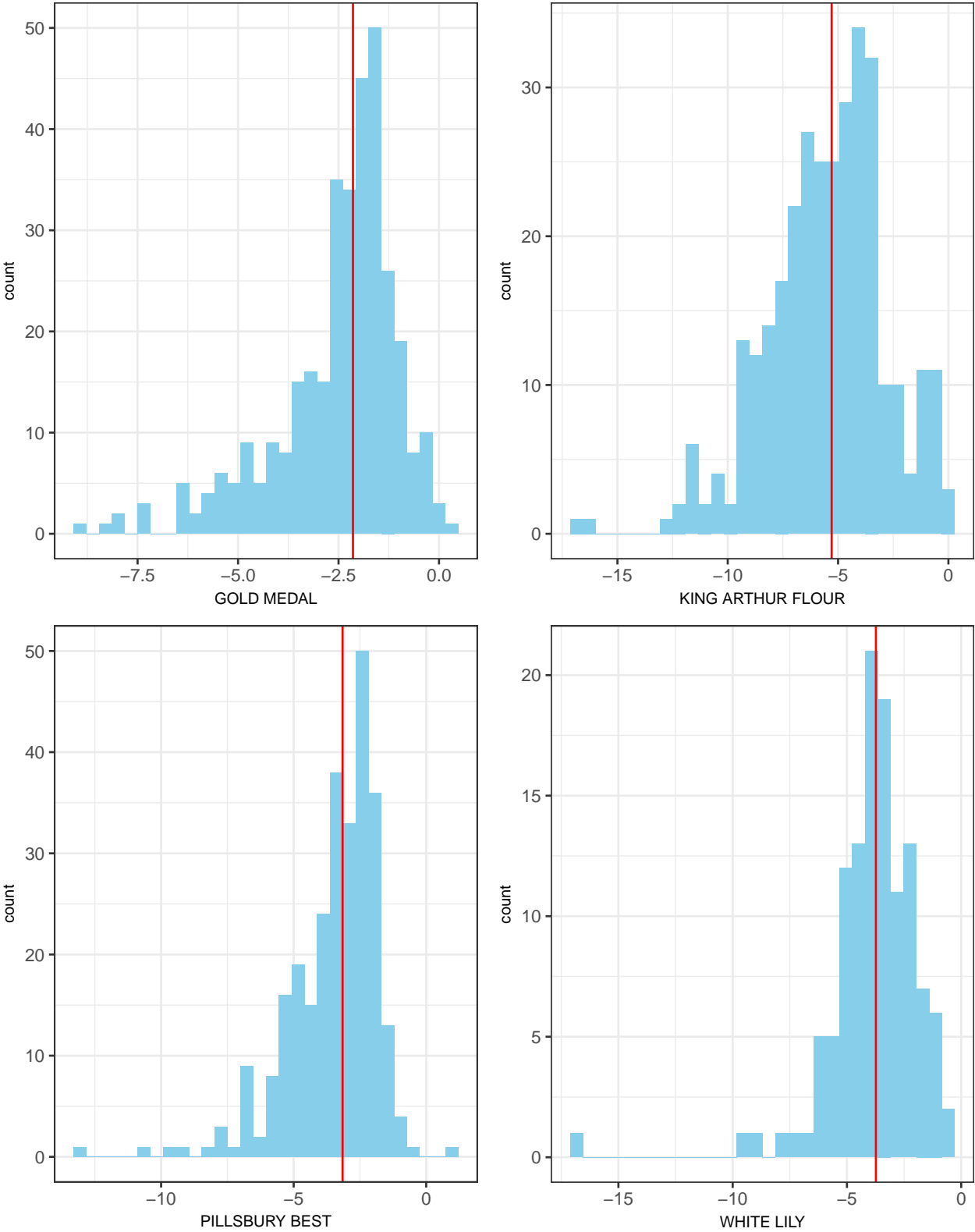


Thanksgiving



Easter

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NULL



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NULL