Price elasticity analyses

Restaurant chain

Evaluated price sensitivity of top-line metrics such as guest count, units sold etc. for historical price events to determine optimum prices by item and location

Pre-owned fast food restaurant chain needs price sensitivity analysis

Picture this…

You're looking to assess the price sensitivity of top-line metrics for historical price events to determine optimum prices by item and location. Currently, you understand the impact of the price changes for multiple events at an item and location level, based on various traffic and revenue metrics.

You turn to Accordion

We partner with your team to evaluate price sensitivity of top-line metrics such as guest count, units sold etc. for historical price events to determine optimum prices by item and location, including:

- Analyzing the transactional data for 3 months before and after each price action event for every item and location
- Tracking various metrics such as check count, Pmix (transaction share of item), check size, guest count and PPA (per person average revenues)
- Segmenting each item and location in to 'not sensitive', 'moderately sensitive' and 'highly sensitive' groups for each price action event
- Aggregating the analysis to determine locations and items that are sensitive at an overall level

Your value is enhanced.

You have determined that ~40% locations are potentially price sensitive. You have transactions share of item that is more elastic, compared to guest count and ticket size per person implying that customers continued to visit the locations but changed the item ordered. This analysis informed the future price changes and locations at which price action can be initiated.

SALES INCENTIVE PLAN FOR BDMS

KEY RESULT

- ~40% locations are potentially price sensitive

VALUE LEVERS PULLED

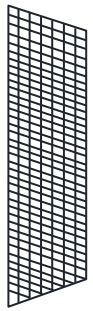
- Price sensitivity analysis

Overall methodology for estimating price sensitives

Data cleansing and aggregation

Excluded transactions with zero revenues in net and gross values[1]

Raw data
- 100 locations
- 610 million rows of transaction data



Clean data
- 100 locations
- 240 million rows of transaction data

Key item and location selection

Identify price change events → Selection of **key items** (based on 2016 revenues) → Selection of **locations** that were operational 6 months prior and after the price action

Calculation of sensitivities and aggregation

Calculate **price change %** for each event by location

Calculate **impact metrics for each event** by item and location

Define weights for each impact metric[2]

- Calculate **event level elasticity of each impact metric**[3]
- Calculate average elasticity for each metric by taking **volume weighted average across all events** at a location

Calculate **aggregated elasticity** for the location

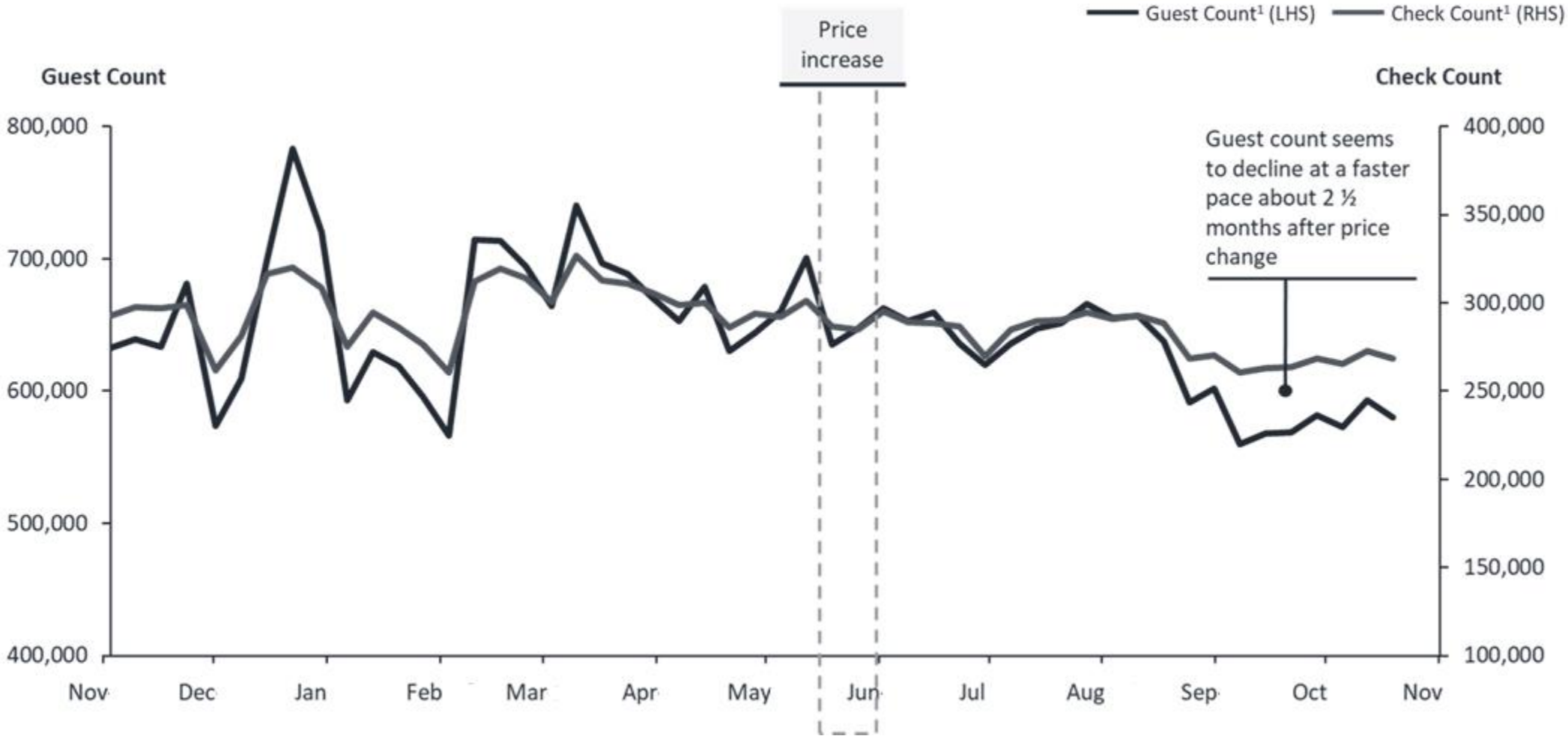
Define cut offs for elasticity for **sensitivity segments**

Segment locations by sensitivity

1. Zero revenues for categories such as “addons”, “Giftcard”, “charged sides” etc. were excluded
2. Key metrics include Guest count, Check count, Check size, PPA (Revenues per guest), # of items sold, Item Pmix (share of transactions for the item), Item check count, Item check size
3. Calculated as % change in impact metric per % change in price

Traffic and guest count trends

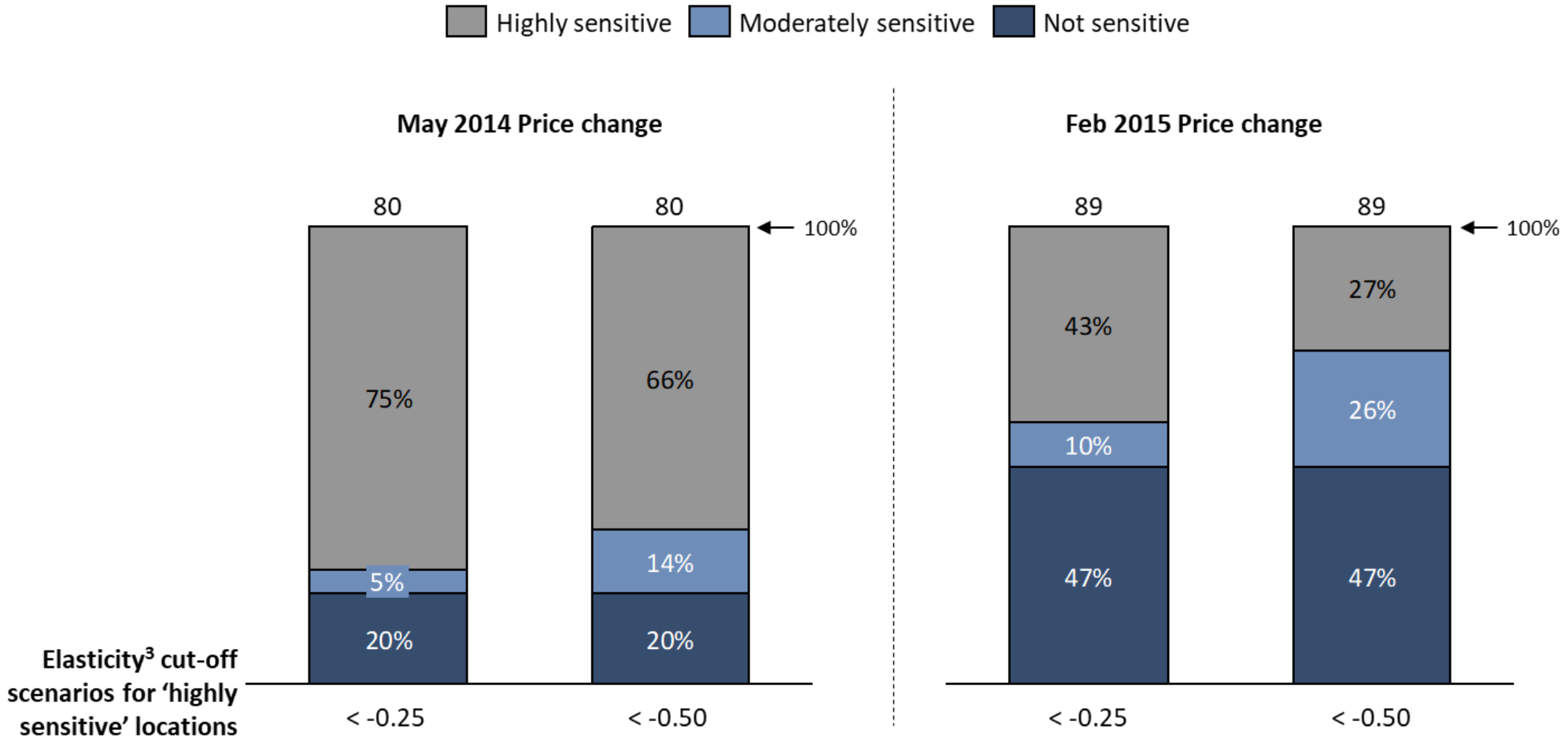
Weekly traffic (Nov 1, 20XX – Oct 19, 20XX)



1. Only includes the restaurants that were open six months prior and after the price change in May 2014

40-75% of locations are price sensitive based on the analysis

Distribution of locations[1] by sensitivity[2] (3 months pre and post price change), %



1. Only includes the locations that witnessed a price change and were open six months prior to the price change
2. Sensitivity calculations include top-40 items selected based on 2014 revenue
3. Weights used: Pmix (10%), PPA (10%) and Guest Count (80%); Elasticity is calculated by comparing 3 mo. pre and post price change

Item level price sensitivities at each location