



GIVE VOICE TO YOUR DATA

# A Case Study

## How to use Data Analytics to Optimize Promotional spends by your brands in travel retail

Proposed by: Voiceback Analytics



**Voiceback Technologies** is focused to provide Data Analytics based solutions to business problems.

***“We get the data to speak”***

A hand is shown in the lower-left foreground, pointing towards a digital screen. The screen displays a financial candlestick chart with green and red bars and a yellow trend line. In the background, an offshore oil rig is visible on the ocean. The overall image has a blue-tinted, semi-transparent overlay.

Depletion Data  
Analytics for brands  
operating in Travel Retail

**DATA**  
is the new oil

*Analytics is the refinery*

# Context of the problem

- Major brands run their travel retail divisions centrally and sell directly to their customers – various duty-free stores
- Duty Free Business focusses on various promotions. The promotions come as a price promotion or a Gift Promotion
- The cost of the promotion is borne by brand and the operator in an agreed percentage share.
- The promotion helps in growing the sales but it has a cost attached to it. The eventual growth in sales can determine if the promotion was successful or not. A promotion which does not help grow the sales destructs value for you and your partner.
- In this presentation, we show how Predictive Analytics can be used to optimise the cost of promotion by identifying which SKUs should be promoted from your basket

# Problem Overview & Methodology

**Problem** : How to optimize promotion costs by measuring sensitivity of sales to promotion discounts ? - discounting only those SKUs where promotion gives sales growth .

**Data** : 60 months of data was processed. Raw data had volumes, Values for each SKU for each month. Average price per unit was calculated from volume and value numbers.

## **METHODOLOGY**

**Price volume correlation** :- as a measure of price sensitivity to volume

**Sales Variance** :- Reported sales in qty was analyzed on time series. Seasonal and Trend variance was removed and Residual variance was analyzed as a measure of Tactical response to sales.

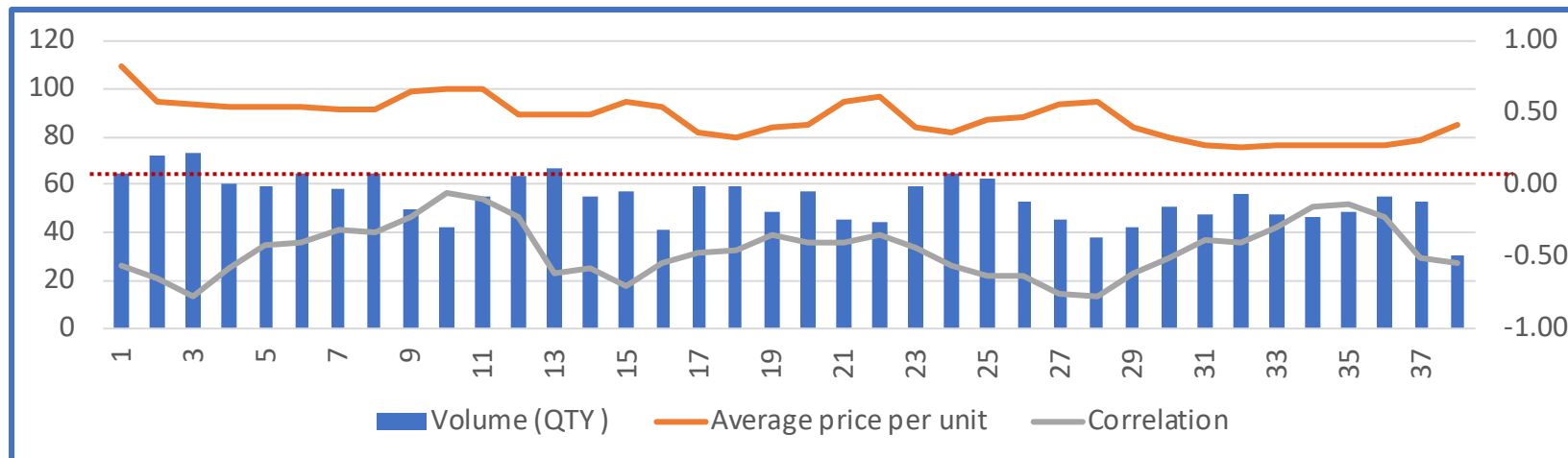
# Correlation as a measure of Impact of Discount

## Correlation between Volume and Price (after promotion discount)

- Period : for trailing 12 months.
- Graphs : correlation coefficient trend for each month.
- Output : The last observed correlation over the past 12 months was extracted for all the brands.

## Correlation Ranges

- -1 to -.4 negative correlation : Volume Increases on discounts
- -.4 to +.4 low correlation : Little or no increase on volume on discounts
- +.4 to +1 positive correlation : Volume decreases on discounts



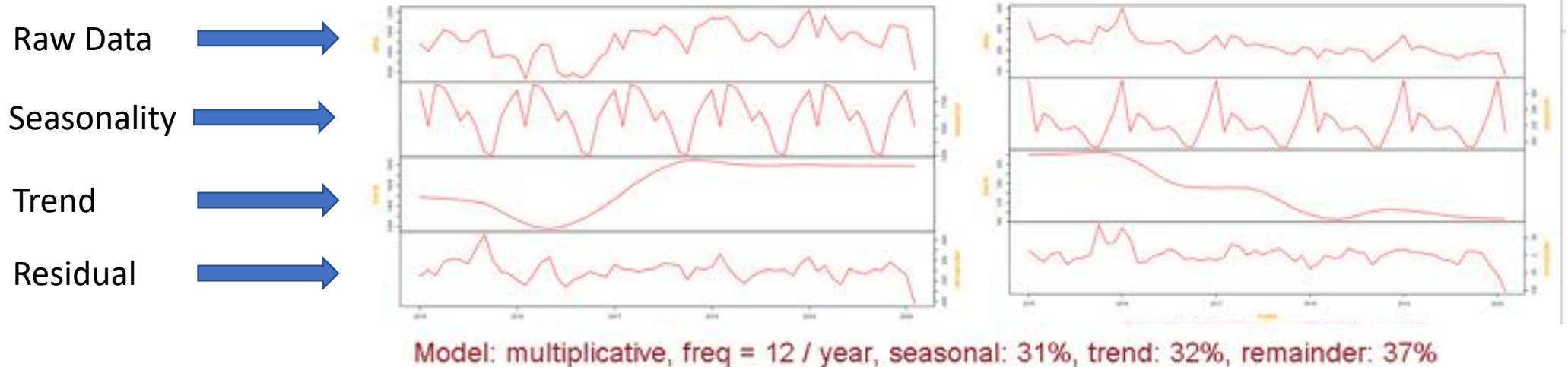
# Variance of Sales in quantity

## Times series analysis was done on the sales quantity

- Total Variance = Trend + Seasonality + Residual Variance

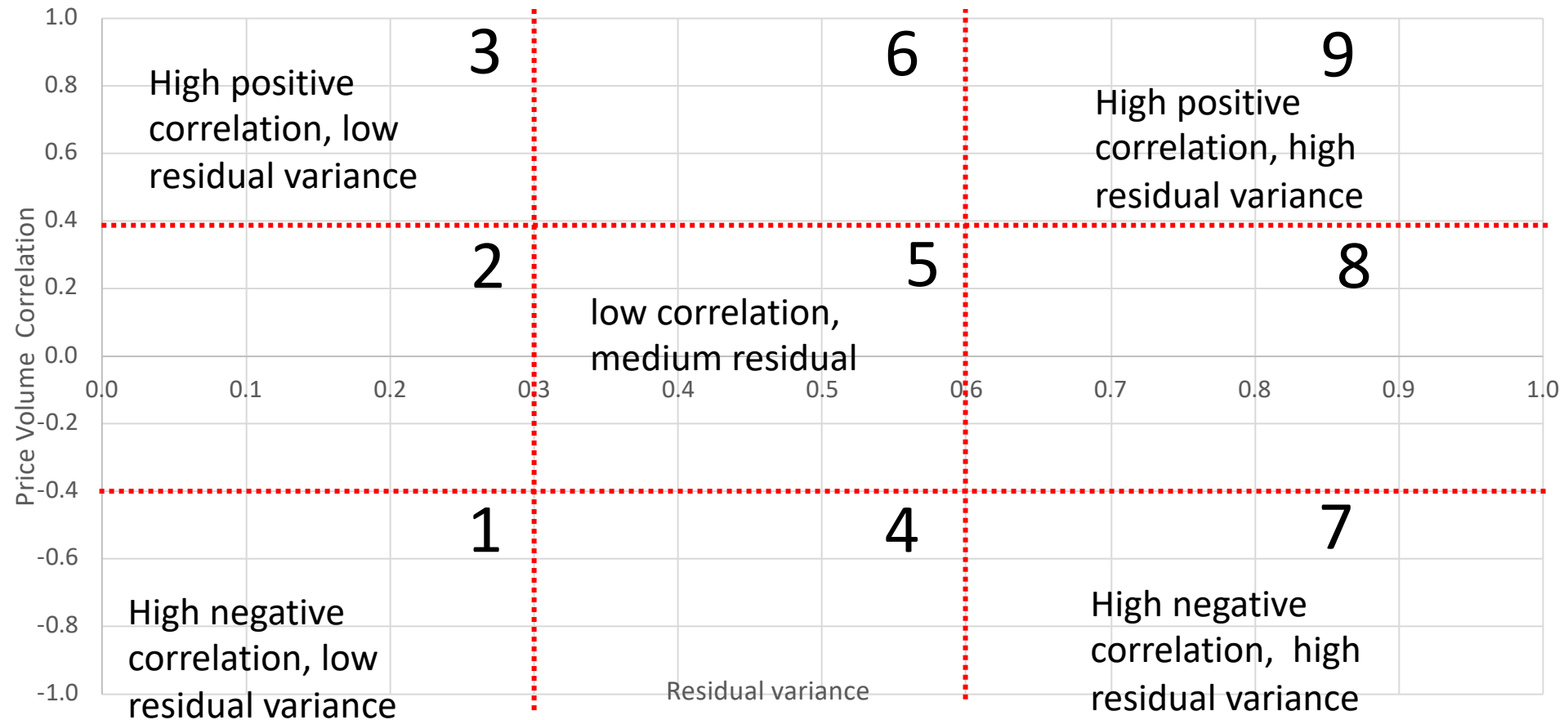
### Residual Variance

- Sales Variance due to Tactical Activities (promotion being done by us, by competition or by a competitive airport). This variance in %age indicates the impact of tactical activities on sales
- Variance in sales which **cannot** be explained by **basic trend or by seasonality**. Seen as “Reminder” in the graphs below.
- The Residual Variance for all brands was extracted and plotted.



# Structure for brand map

- A 3 x 3 matrix was created for these two variable.
- Total Variance = Trend + Seasonality + Residual Variance
- Correlation of Sales to price indicating response to discounts



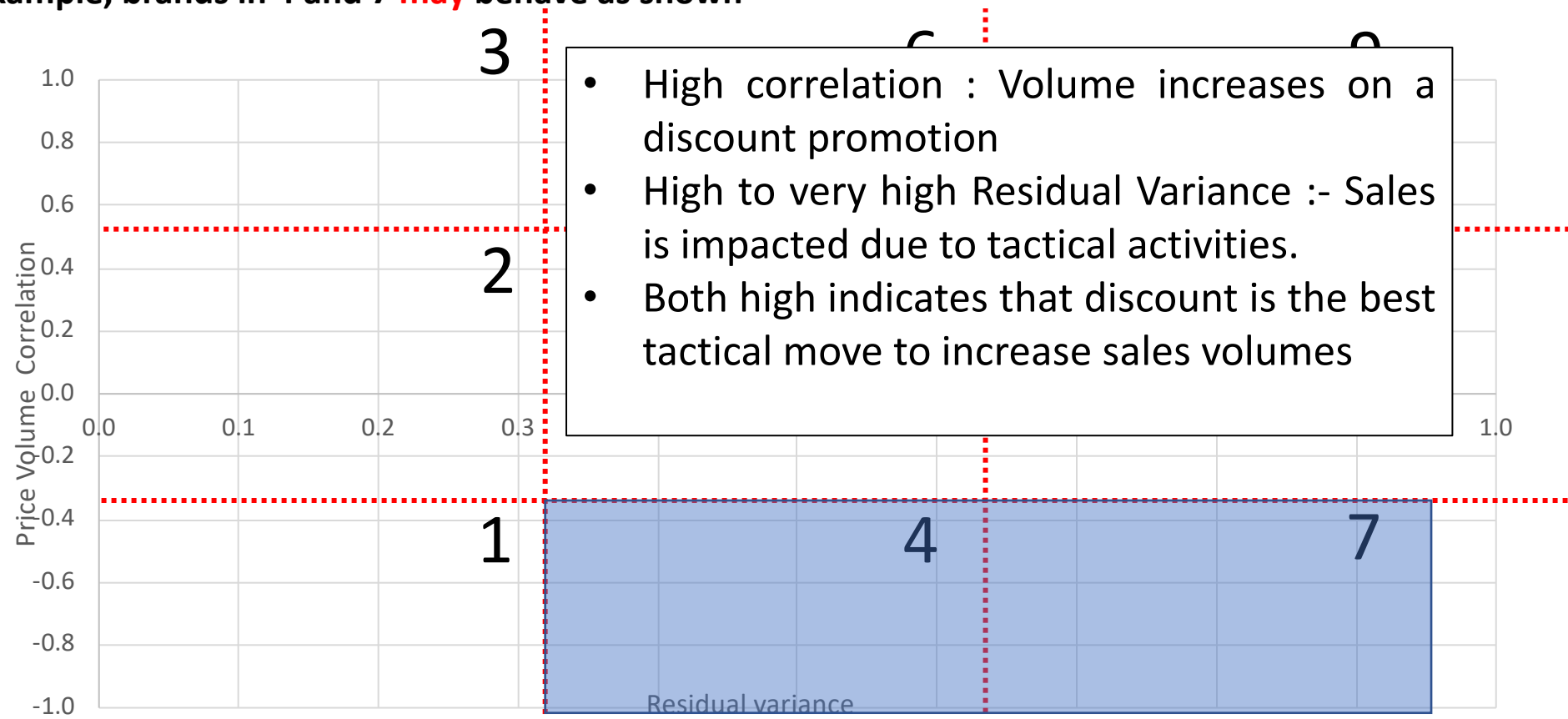


# How to read the grid ?

## Each cell from 1 to 9 in this grid

- has to be interpreted differently.
- has to be mapped with on-ground variables like display space, GWP, Promotion
- Has to be mapped on which of the two Seasonality or Trend, governs the variance
- would have a different strategy for the brand.

For example, brands in 4 and 7 **may** behave as shown



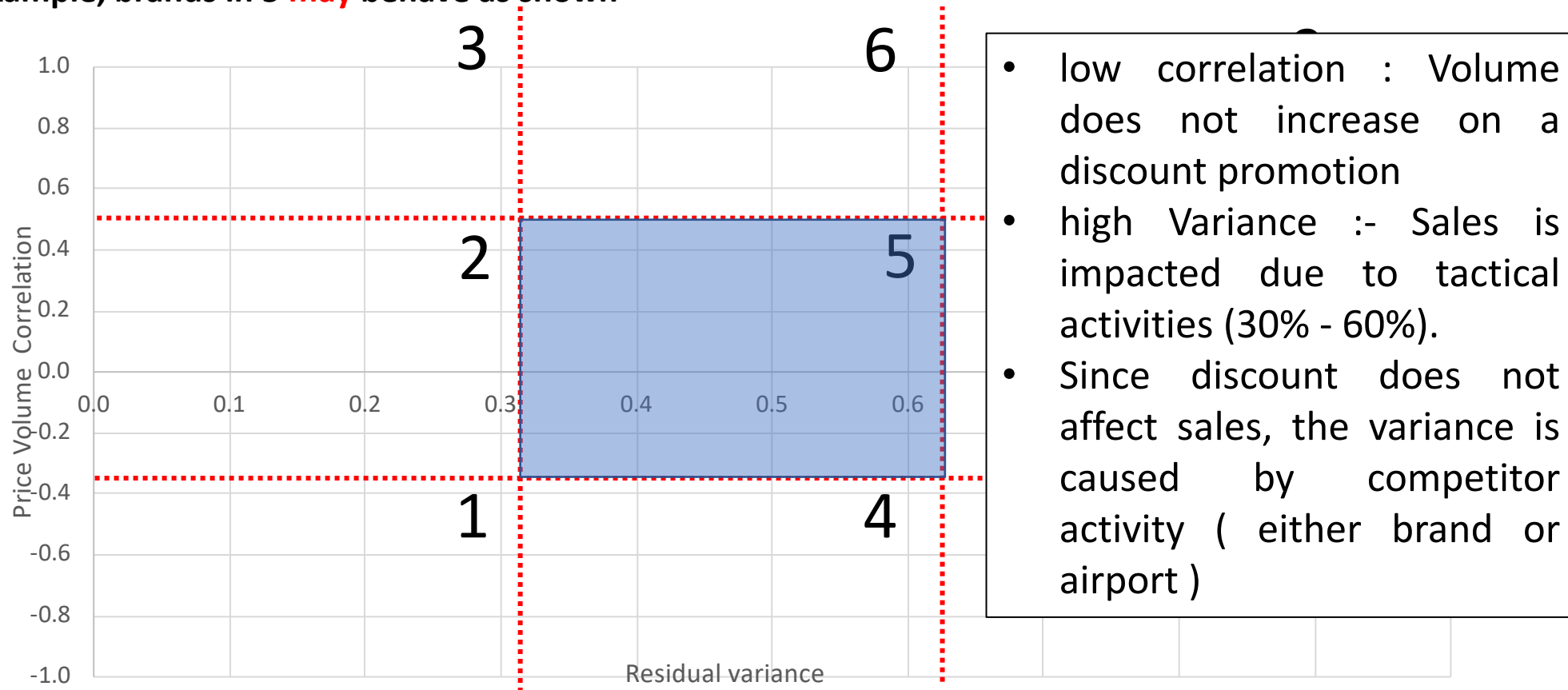


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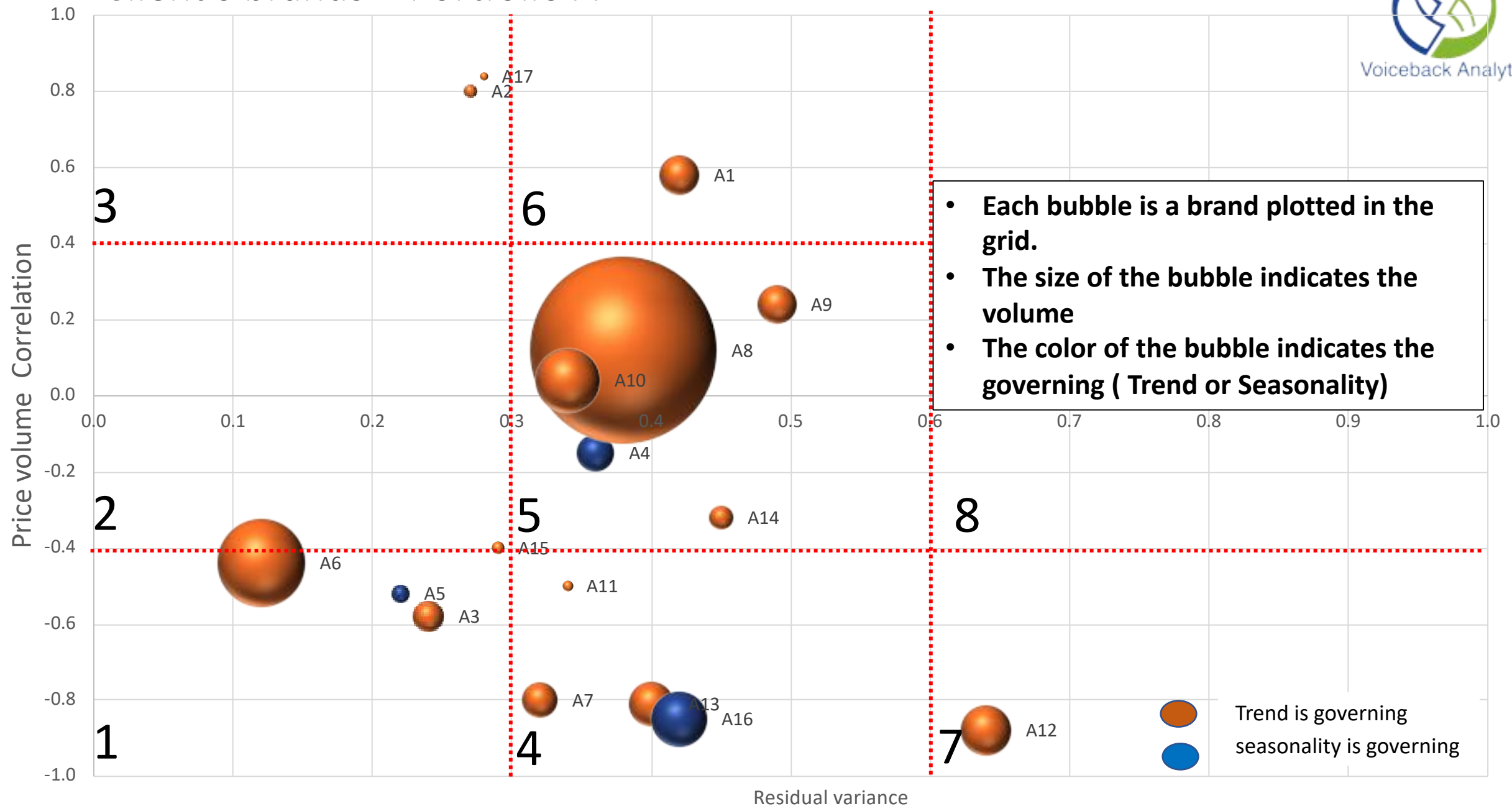
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For example, brands in 5 may behave as shown



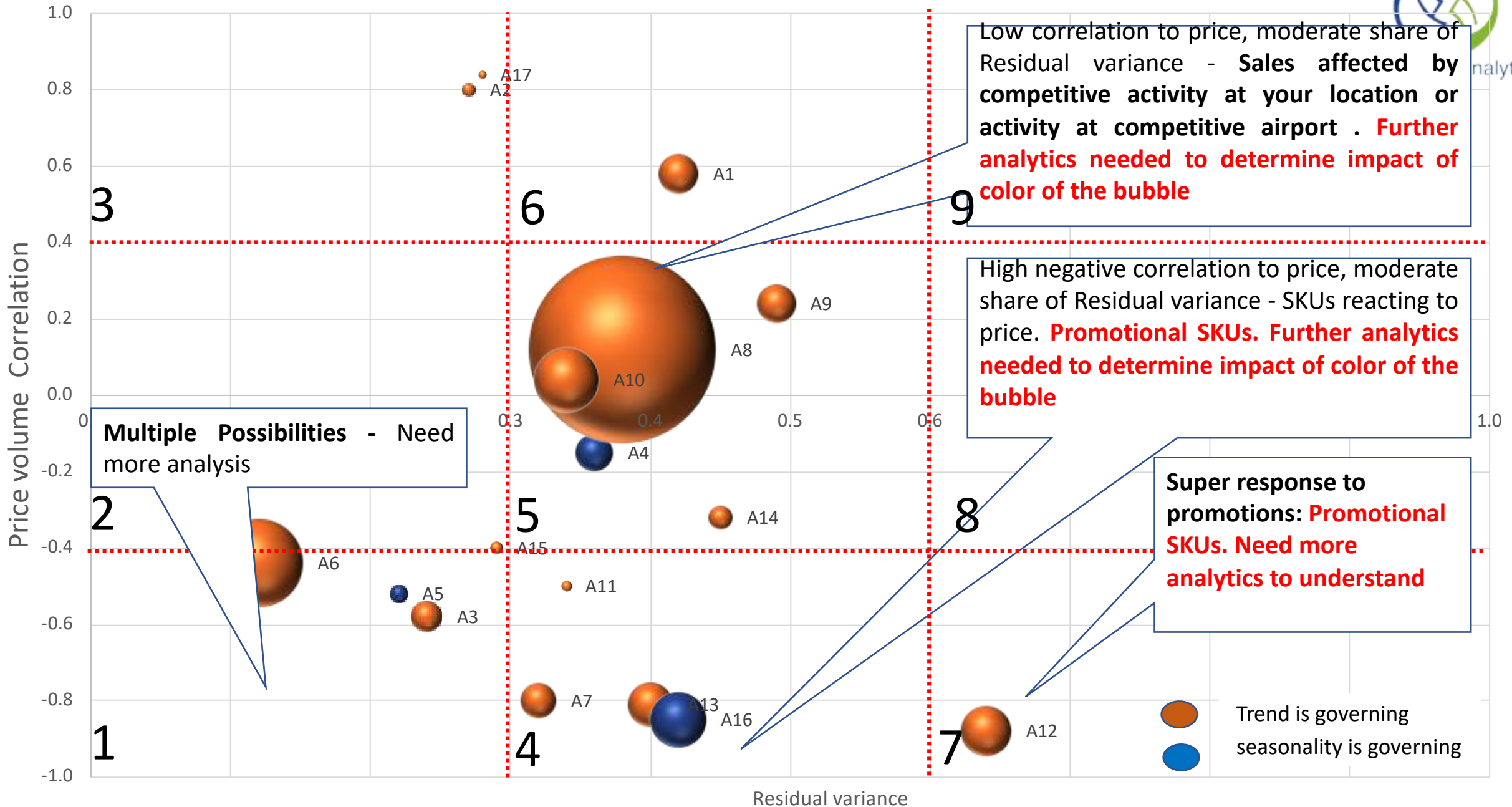


# Client's brands – Portfolio A



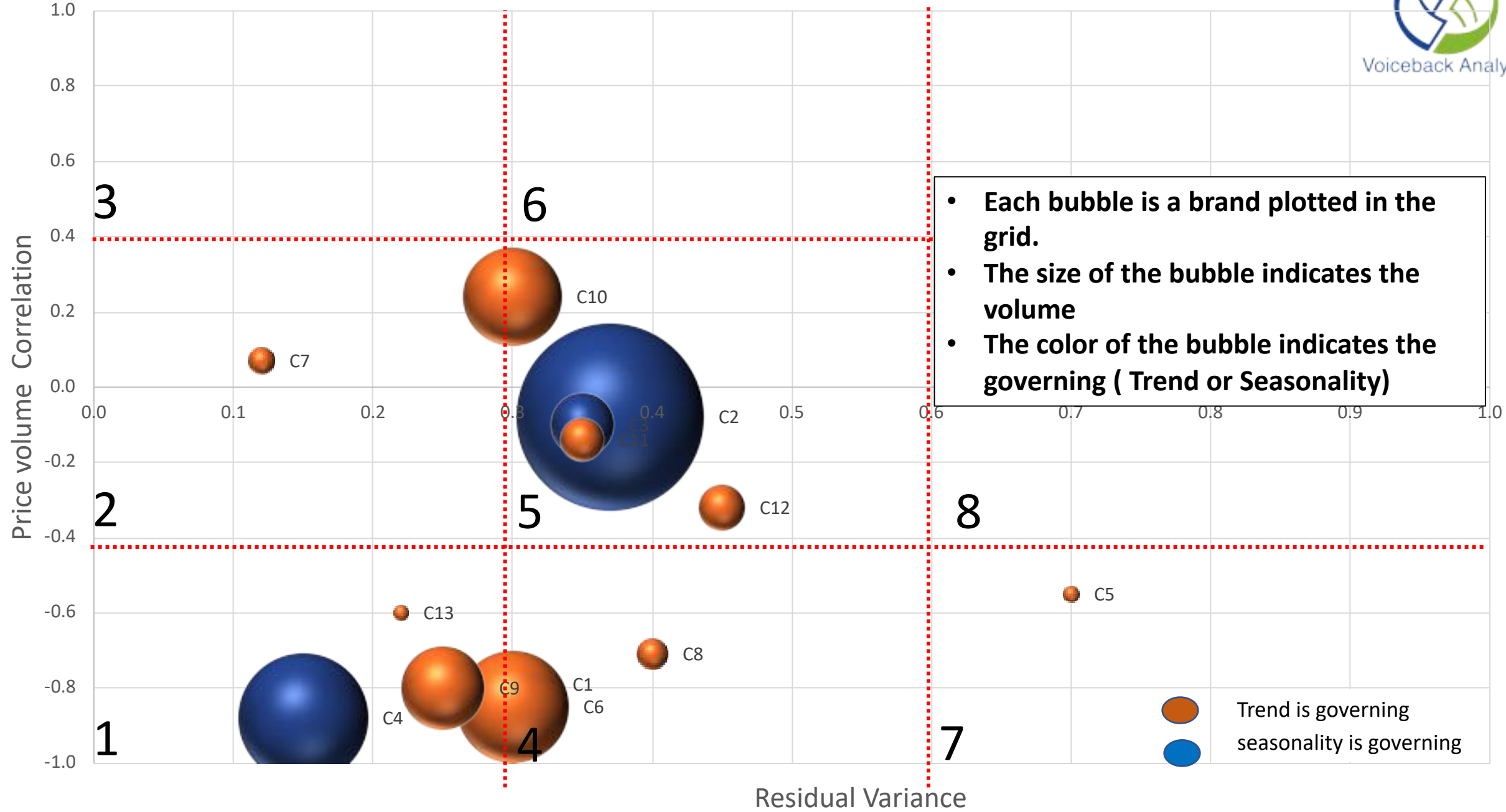


# Client's brands – Portfolio A



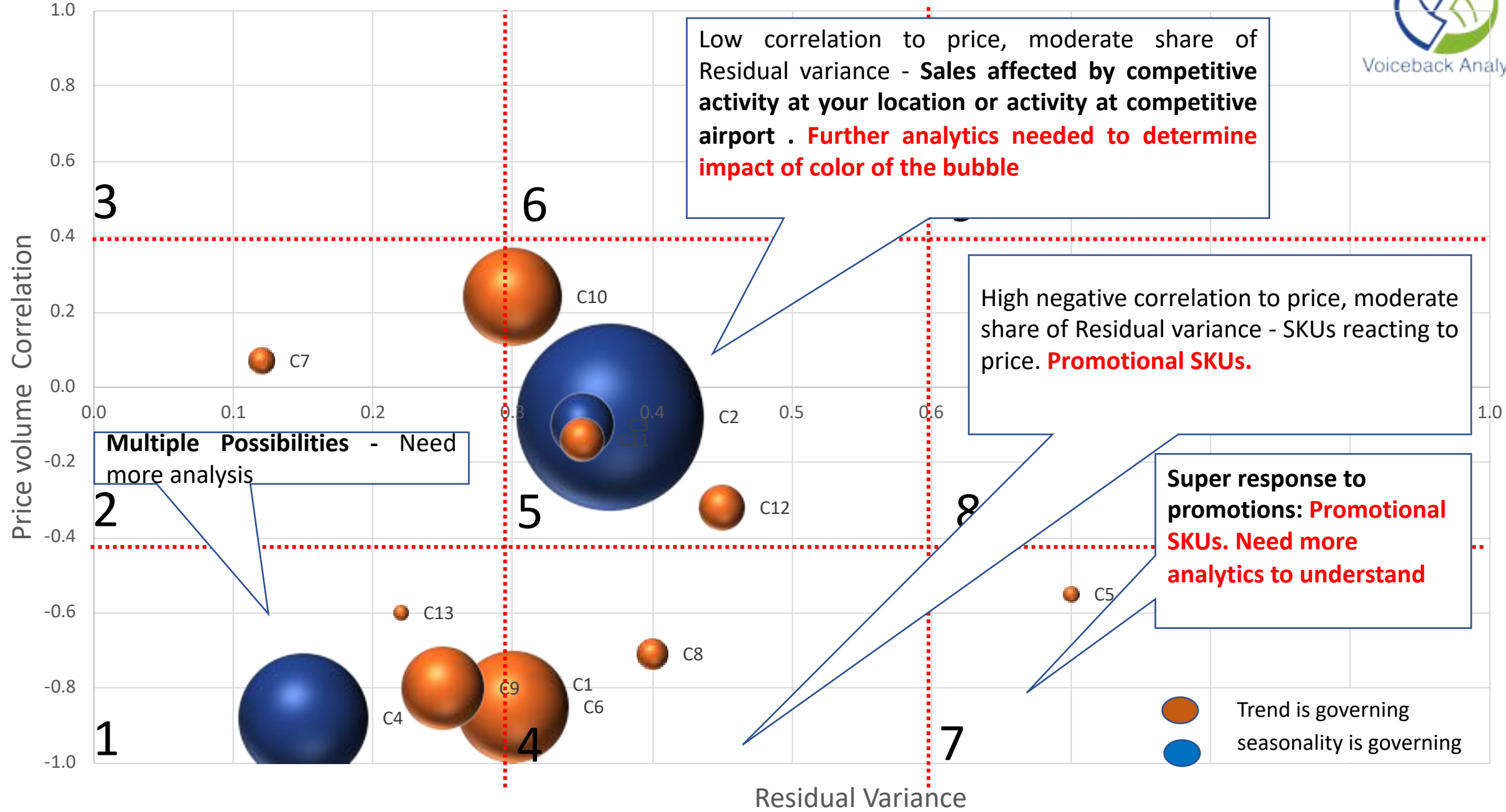


# Client's brands – Portfolio B





# Client's brands – Portfolio B



# Conclusion

**These graphs were then combined with further analytics. Additional variables were studied to develop the final recommendations.**

**Results :-** The company was able to manage the promotions in a better way. The promotion budgets as a %age of sales came down leading to a direct increase in operating margins without affecting the sales trajectory.

## **Few direct actions taken were**

- a) Actual increase of price / reduction of promotion on SKUs which don't get influenced by price
- b) Significant deeper discounts on Promotional SKUs resulting in sales growth
- c) Improvement on other Retail Indicators rather than promotions. These were shelf space optimization & staff incentive optimization.
- d) Closely monitoring competition landscape both within own location and other locations to simply chase competition moves on certain SKUs

## **Other Applications**

- a) The same analysis can be used for Demand Forecasting at a location
- b) It can be used for studying brand life cycle evolution
- c) New launch and new SKU behavior can be predicted using the same grids by predicting a position on the grid for new launches.



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**THANK YOU !**

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