



VOLUME FORECASTING IN DISCOUNT MARKETS

1.0 INTRODUCTION

Forecasting how demand for all gasoline grades at every site varies depending on the prices of the site in question and its competitors is difficult without accurate up-to-date data. How can the volume forecasts deal with competitors who offer price discounts, either via loyalty schemes - "Loyalty card holders get 3 cents off a gallon of gas" or promotional events where gasoline is discounted heavily on particular days, for example "Mad Mondays"? Does the volume forecast need to look at the advertised (pole-sign) price, the discounted price or both? What if a competitor gives a discount based on c-store purchases - "Buy 4 cans of soda and get 2 cents off a gallon of gas"? As a result of research and analysis with a number of customers, it turns out that in most cases PriceNet *can* easily handle these discounts schemes and deliver reliable volume forecasts.

2.0 ELIMINATE COMPLEXITY

Anyone involved in pricing retail gasoline knows that sales are affected by lots of different factors, including the site location, its' facilities and quality of service. Figure 1 below shows some of these factors. Given enough time and data it would be possible to analyze each factor and determine the contribution it makes to the station's sales. The problem is that in dynamic markets "enough time" is not workable in reality because by the time the analysis was delivering meaningful and usable results the market would have moved on.

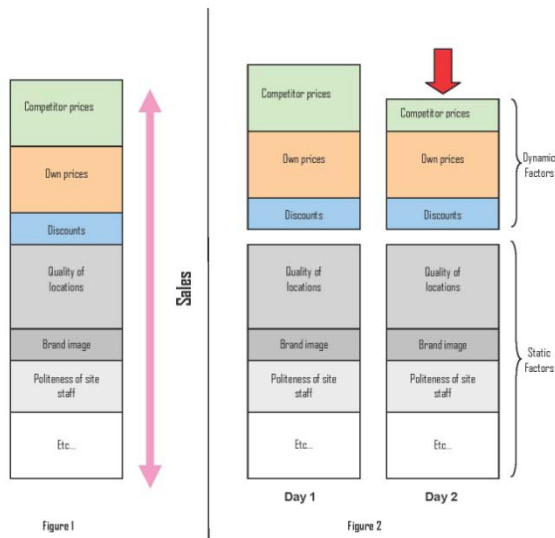
The key to resolving this complexity is to understand the impact of the static factors once and then focus only on the variable factors that result in changes to daily volume demand. For example, once a retail outlet is built and operational, the quality of its location is essentially fixed and so the contribution to sales from location can be considered fixed from day to day (unless and until any site improvements are carried-out).

The same is effectively true of factors like quality of service and staff politeness. It is true that these can be improved through training, but the time-scales are long compared to the more dynamic factors like price changes. As long as the volume forecasting model updates itself on a day-to-day and week-to-week basis, many of these more static factors will be captured and understood.

Critically, the same is also true of permanent discounts such as loyalty card discounts. It is true that a good loyalty scheme has an impact on the price sensitivity of consumers but this is a fixed effect, particularly since the relative discount or reward is usually fixed for the period of the scheme or at worst only changes very infrequently.

Prices however are different. They are liable to change on a daily basis or, in some markets, sub-daily. There is no escape from the fact that any volume forecasting model has to understand directly how price changes affect sales.

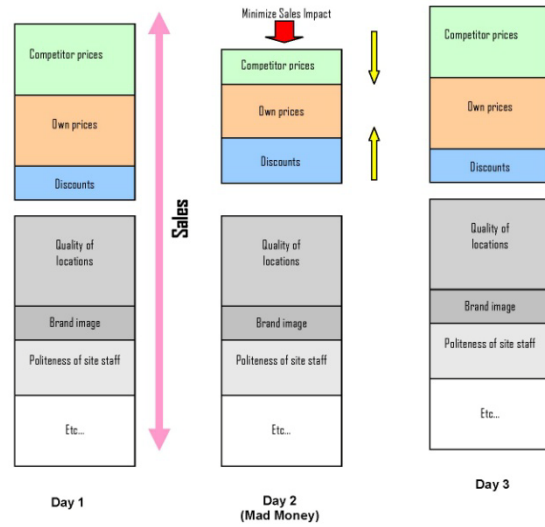
The result is an ability to incorporate the loyalty card discount effect by developing and maintaining the price sensitivity models over time studying how your sales volumes change as a result of changes in a competitors' advertised price (and hence discounted loyalty price) and updating the price sensitivity model accordingly.



3.0 DISCOUNTS THAT CHANGE OVER TIME

It is common for gasoline retailers to offer weekly events where discounts are given to all consumers (e.g. "Mad Mondays"). These break the rules described above since they do change from day to day. However, from week to week they do not change - one Mad Monday has the same discount level as the previous ones. PriceNet takes advantage of this by allowing the user to set up a different volume forecasting model for different days of the week. The system will automatically use the correct price sensitivity model depending on what day of the week it is.

This means that volume forecasts will be accurate and reliable even on Mad Mondays. Even more importantly, PriceNet can automatically recommend price adjustments on Mad Mondays to reduce the impact of a competitor's discount on your sales. And because it understands the different price sensitivity that is in place, it will do it intelligently and in a controlled way (see Figure 3).



4.0 C-STORE DISCOUNTS

These discounts are the hardest of all to model as they can have variable take-up by customers and hence their impact is difficult to predict. Not only do these promotions come and go on an irregular basis, they also bring in the complex relationship between C-Store and gas sales. We are actively developing extensions to PriceNet to identify and analyze the sensitivity of store sales to gas pricing and hence overall site profitability.

From the gas sales point of view, these types of promotions rarely have a significant impact – if you get a gas discount for buying 4 cans of soda it's more likely to make you buy more soda, not more gas. If the promotion is so good that it will have an impact on gas sales, a pricing system still adds value by providing the gasoline pricing team with a platform to analyze the effect on gas volumes and then tailor pricing tactics to provide an effective response to the promotion. This is also helped through an automated pricing system being able to take care of the more "run-of-the-mill" gas pricing decisions through pricing rule

automation and process efficiency, leaving the Pricing Team with more time to study new or adjusted pricing tactics and carry out "what-if" scenarios.

days by analyzing their impact on price sensitivity and hence volume sales. The capability to deliver reliable volume forecasts for these specific promotional events can then be used to determine the pricing tactics you need to adopt to minimize the impact on your sites volume performance.

5.0 CONCLUSIONS

Implementing a volume forecasting system can incorporate marketing tactics such as loyalty schemes and discount

ABOUT KSS FUELS

KSS Fuels is the leading global provider of pricing software, analytics and consulting services to fuel retailers and wholesalers in the oil & gas, convenience store, grocery and retail industries. Providing "Knowledge beyond the numbers," KSS Fuels helps fuel marketers and distributors implement effective pricing solutions and increase profitability through the use of knowledge and numbers. The company's US headquarters are located in Florham Park, New Jersey, and its international headquarters are based in Manchester, United Kingdom. For more information about KSS Fuels, please visit www.kssfuels.com.

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