

## Pricing Improvements for an Online Wine Retailer

*Secretariat worked with a leading multi-channel retailer to explore the return on investment of a potential expansion into brick and mortar operations. Secretariat evaluated economic and strategic issues in pursuing the expansion strategy.*

### SUMMARY

A leading national online wine retailer was seeking to improve its competitive edge using pricing strategies in a highly dynamic online selling environment. Historically, they used a cost-plus pricing model, yet the retailer was interested in alternatives that would increase website traffic, improve profit margins, and enhance customer perception of value. Intensity designed, implemented, and tested

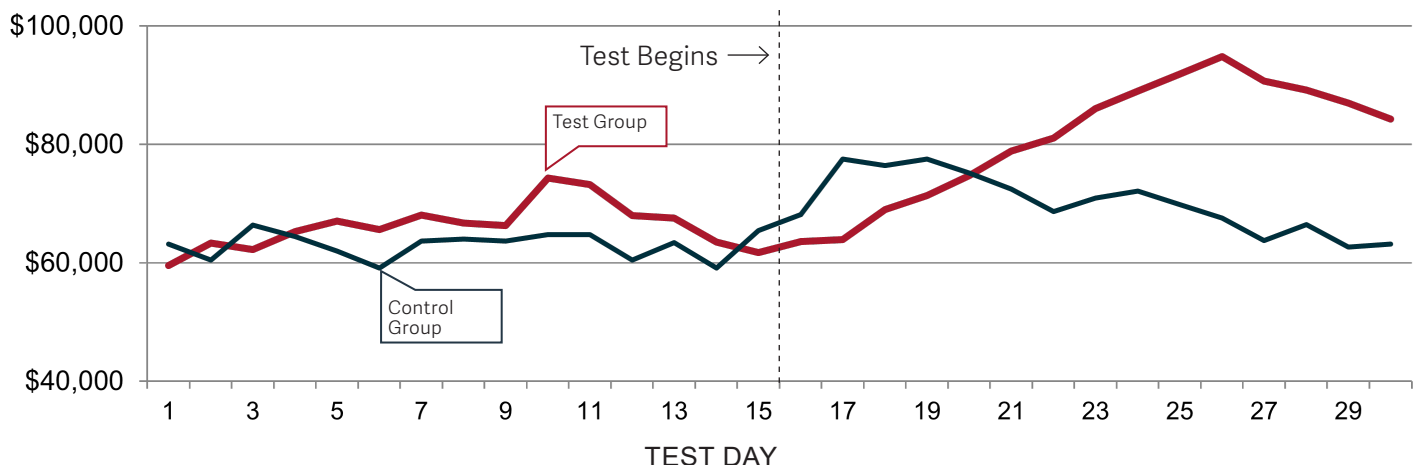
a new pricing strategy for the online retailer. Our strategy involved dynamically pricing bottles based on: (1) competitor pricing and (2) consumer interest. We developed a dynamic pricing model with carefully designed regional experimentation to determine optimal pricing strategies for each bottle and geography. Intensity's recommendations realized the following benefits to the client:

**A 5% INCREASE IN REVENUE  
AND 7% INCREASE IN GROSS  
PROFITS (SEE FIGURE 1)**

**A DYNAMIC PRICING STRATEGY  
BASED ON REAL-TIME SUPPLY  
AND DEMAND**

**IMPROVED CUSTOMER  
PERCEPTION OF PRICING**

### Gross Profits



**Figure 1** shows the change in gross profits after testing began. Relative to the baseline period, the test group (region 1) outperformed the control group (region 2) by 5% in revenue and 7% in gross profits.

## THE CHALLENGE

The historical pricing strategy by the online retailer was driven primarily by bottle cost, with some adjustments based on anecdotal experience. While cost-based pricing has some advantages, it ignores important aspects of demand and competition, including willingness to pay, price elasticity, and competitor prices. Said another way, cost and customer value are not always related. The difference between cost and value is magnified in the online retail market, where customers can easily compare prices among competitors.

Accurately pricing thousands of goods based on changing demand is complex and requires careful strategy and execution. Price bottles too low and you risk losing profits; price bottles too high and you risk not only low sales volume, but also lost customers and reputation damage. In addition, evaluating the effects of substitution, cross-sells, upsells, and changes to customer value can be challenging. Intensity was hired to assist with the design, test, and implement a new pricing strategy in order to improve and drive growth in revenues, profits, and customer value.

### OUR APPROACH

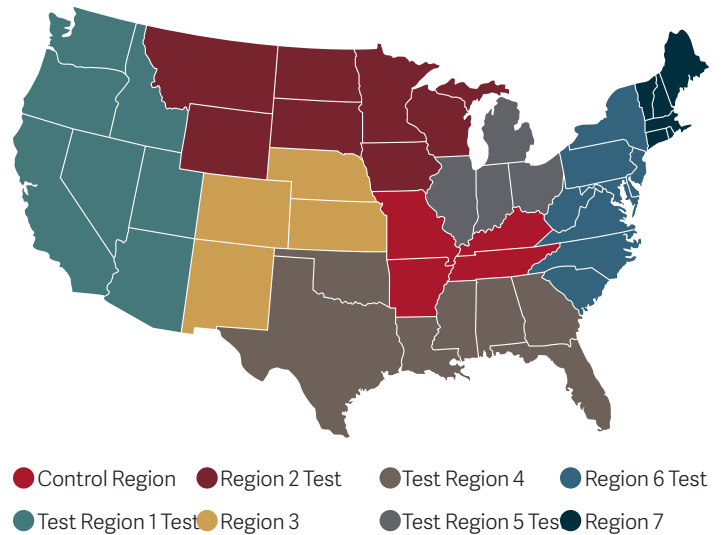
Intensity's approach included the following basic steps:

- 1 Conduct an initial evaluation to determine potential value from improved pricing
- 2 Carefully design price tests to account for unique demand and competition of each bottle
- 3 Implement the test in strategically selected test and control regions
- 4 Analyze the results
- 5 Make pricing recommendations
- 6 Develop dynamic pricing models based on results

## OUR IMPLEMENTATION

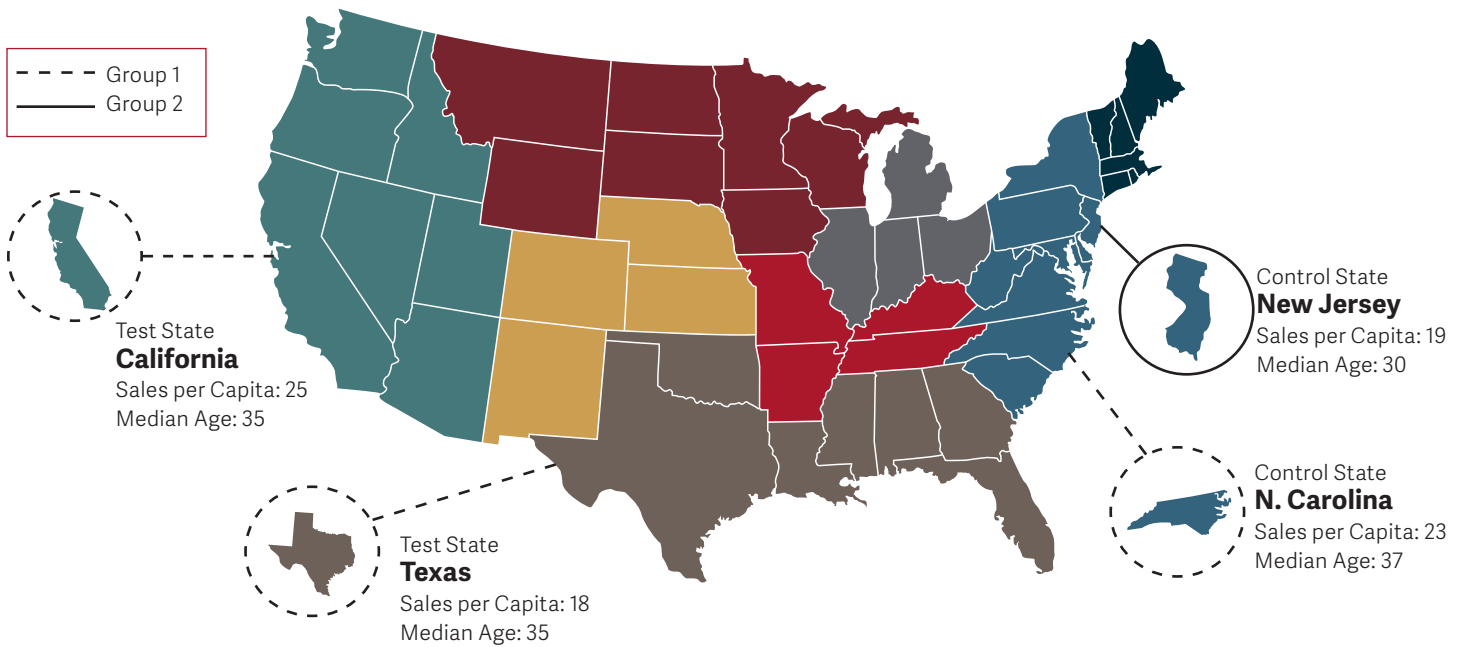
Intensity began by collecting and analyzing data on thousands of competitor bottle prices compared to our client's, including both price and consumer interest. Intensity confirmed that the client was consistently pricing higher than its competitors, and that there was real value in determining which bottles to lower price (driving volume) and which bottles to maintain high prices (driving margins).

Intensity partitioned the United States into seven testing regions and varying combinations of "price rules." Price rules offer formulas for dynamically pricing thousands of products based on bottle type, bottle cost, and competitor prices. For example, some bottles were priced relative to the average price sold by competitors to drive volume, while others were priced higher to drive margins. Geographical testing was designed to yield statistically significant results following the test period. *See Figure 2.*



**Figure 2** shows the United States split into seven test regions and one control region. Regions are coded by color.

Intensity controlled for state-by-state differences in the online wine market by identifying pair-wise combinations of states with similar characteristics in different testing regions. We identified similar states by collecting and analyzing data on a wide variety of factors, including competition in the online wine market, government regulations on alcohol sales, overall wine sales per capita, demographics, and historical client sales. *See Figure 3.*

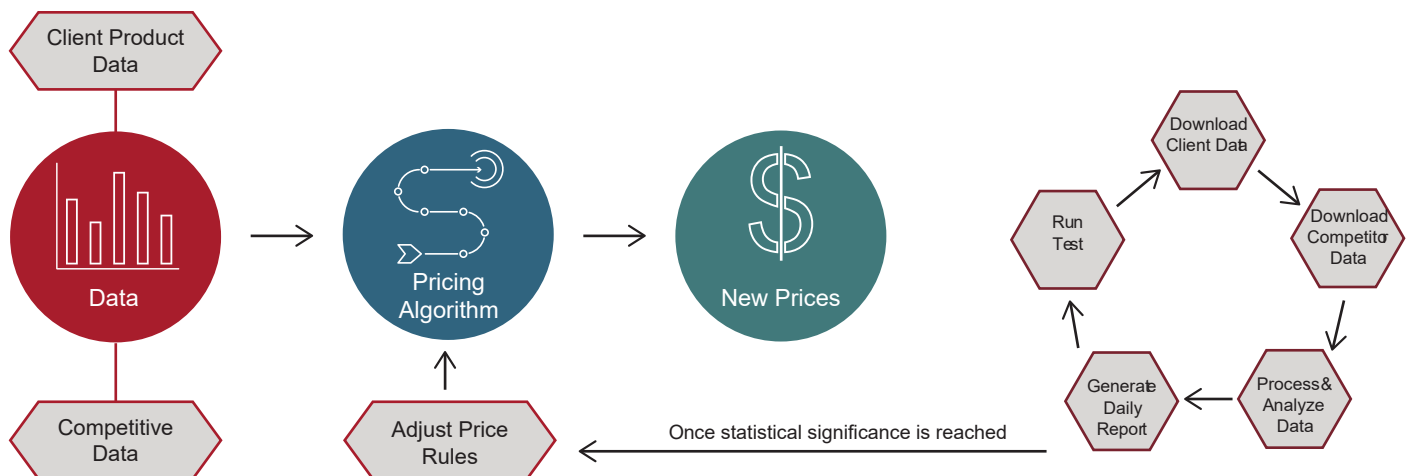


**Figure 3** shows two pairings of states with similar characteristics. States were paired based on similarities across a wide set of factors. For example, CA and NC were paired based on several similarities, including wine sales per capita, median age, and restaurants per capita.

## VALUATION APPLICATIONS

Intensity generated daily reports to provide client visibility into performance of the experiment over time. We were able to review results in real time and identify statistically significant changes to improve pricing immediately. Once

improved prices were determined, we updated the price rules in underperforming regions while maintaining the price rules in the better-performing test regions. See *Figure 4*.



**Figure 4** shows the price optimization process, whereby prices are initially determined based our pricing algorithm; results are monitored daily and price rules are adjusted once statistical significance is achieved.

Intensity evaluated business performance on several key metrics: (1) revenue, (2) gross profits, (3) units sold, and (4) website traffic. To account for substitution, cross-sells, and improvements in customer perceived value, Intensity focused on segment-level results rather than individual products. For example, lowering the price of a popular and competitive bottle may reduce profits for that product, yet may improve segment margins as customers increase visits and purchase higher-margin items. In the best performing test region, there was improvement on every key metric. For example, comparing difference-in-difference results from the control relative to the 28-day baseline, the best performing region realized a 5% increase in revenue and a 7% increase in gross margin dollars. See Figure 5.

**“Intensity’s insights and recommendations helped us sharpen prices for our customers while also protecting profitability. And they were a true pleasure to work with.”**

— Richard Bergsund, CEO of wine.com

### CONCLUSION

Intensity helped our client switch from a cost-plus pricing model to dynamic pricing based on constantly updating measures of consumer demand and competition. We recommended changes to thousands of bottle prices, raising some while lowering others, with approximately 35% of bottles increasing in price, 40% of bottles decreasing in price, and 25% remaining unchanged.

Projected improvements increased revenue by 5% and gross profits by 7% on an annual basis. Measures of customer value also increased as more web traffic was driven by lower priced focus bottles. Intensity continues to engage the client with ongoing price testing to enjoy improved revenues and customer perception of value into the future.

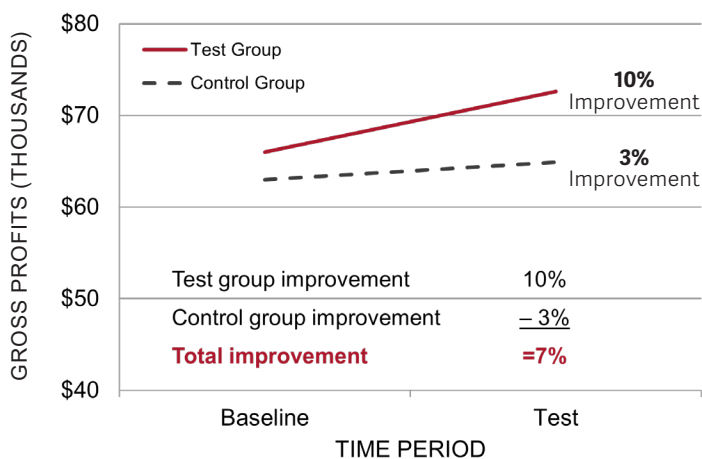


Figure 5 illustrates the profit improvement of 7% by comparing the improvement in the test group (10% from baseline to test period) to the improvement in the control group (3% from baseline to test).

All figures described herein are for illustrative purposes only and have been altered to maintain client confidentiality.

## We would like to hear from you

Whether you are interested in speaking to one of our experts or learning more about our exciting careers, we look forward to hearing from you.

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