

# Solutions

## Optimal **Promotion** Selection

Jeffrey N. Savitz

*Promotions can be an important element of any successful marketing program.*

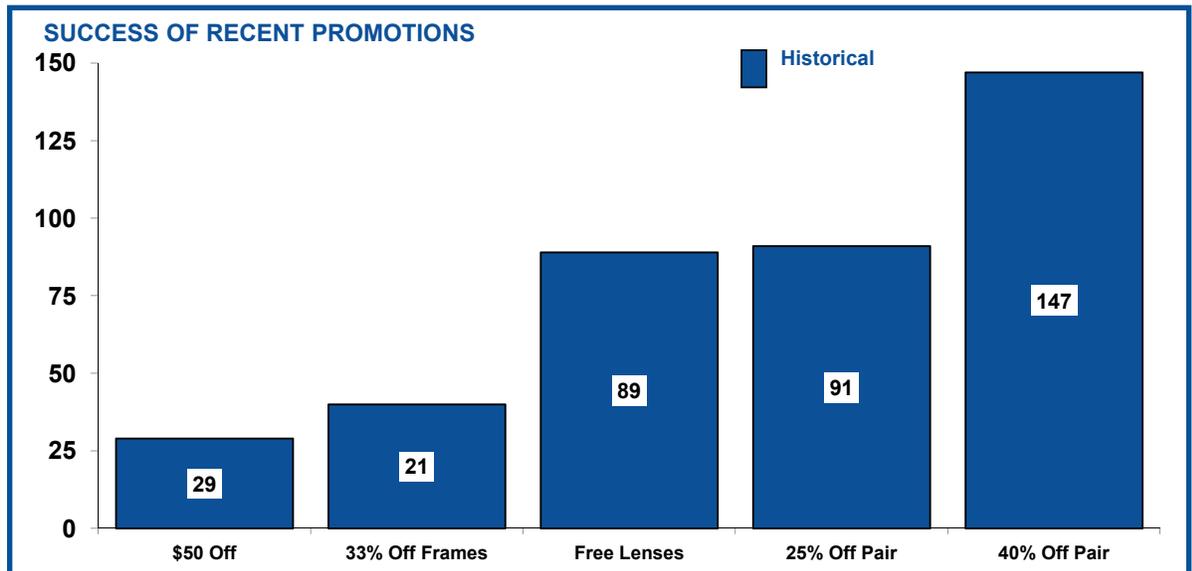
**P**romotions can be an important element of any successful marketing program. Some are effective and increase trial and/or repeat business while others do nothing for sales and may have high costs.

Marketing managers often have historical data reflecting how successful promotions were, but find it difficult to predict whether or not a new promotional idea will be successful.

Here is a method which can help the marketing manager choose winning promotions.

### Case History\*

An eyewear superstore had records on how much each of five promotions increased unit sales in the recent past.



Management was of the belief that two other promotional ideas might be more effective. Buy One Get One Free (BOGO) and \$75 Off.

### METHODOLOGY

Two hundred consumers were interviewed by telephone. Each consumer wore glasses, intended to buy a new pair in the next 12 months and would consider buying from a superstore.

In the interview, each consumer was asked to imagine they were planning to buy glasses and drove by the client's store.

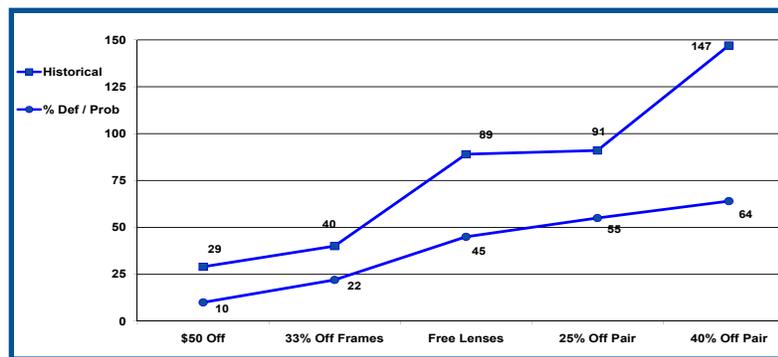
\* The data has been disguised to protect client confidentiality.

The interviewer then presented each of the five historical and two new promotional ideas on a rotated basis and asked how likely the consumer would be to take advantage of each promotion using the scale:

- Definitely would
- Probably would
- Might/Might not
- Probably would not
- Definitely would not

The chart below shows the percentage of people who said they would definitely/probably take advantage of each of the five promotions run in the past along with the actual unit sales increases they realized.

### LIKELIHOOD OF USING PROMOTIONS RUN IN THE PAST



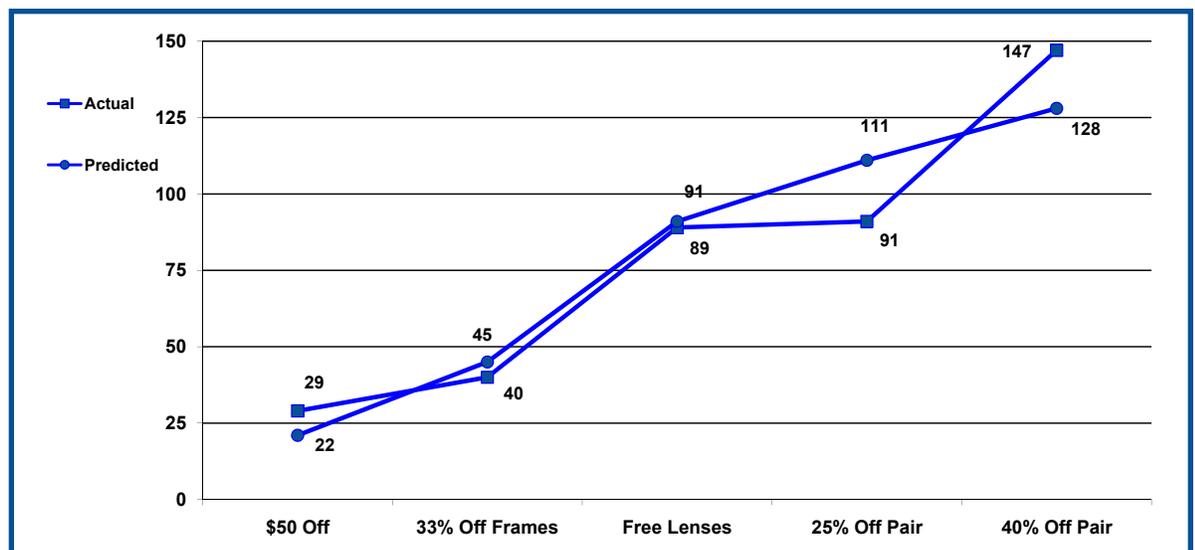
We used the data for the promotions run in the past to develop a model which predicts sales increases (y) based on the percentage of consumers with positive purchase intent, i.e., who said they definitely or probably would take advantage of each promotion (x). By sales increases we mean the additional units sold for a given promotion over and above running no promotion at all.

#### EQUATION

$$Y=1.77+1.98x \quad R^2=87\%$$

In addition to noting the fact that the correlation coefficient of 0.87 for the model is high, we examined how well the model predicted the sales increases for which historical data are available. It was able to predict sales increases with an average absolute deviation of only 14.8% as shown below.

### ACTUAL VERSUS PREDICTED



The model was able to predict sales increases with an average absolute deviation of only 14.8%!

Next, we applied the model to the new promotional ideas. Here are the results.

### NEW PROMOTION PREDICTION

The chart which follows, shows the percentage of consumers who said they would take advantage of the new promotional ideas. This information is used along with the model to estimate unit sales increases for the new promotional ideas.

### LIKELIHOOD OF USING NEW PROMOTIONAL IDEAS

Promotion	% DEF / PROB	Model	Predicted Unit Sales Increase
BOGO	50%	$y = 1.77 + 1.98(50)$	100.8
\$75 Off	35%	$y = 1.77 + 1.98(35)$	71.1

### PROMOTION COMPARISONS

Now, we examine the old and new promotions listed in the order of the model's prediction. In terms of units sold, neither of the new promotions did better than either the 25% Off Pair or the 40% Off Pair promotions run in the past. Therefore, it would appear there is little to be gained in running with the new ideas.

Promotion	% DEF / PROB	Predicted Unit Sales Increase	Actual Unit Sales Increase
\$50	10%	22	29
33% off frames	22%	45	40
\$75 Off	35%	71	-
Free Lenses	45%	91	89
BOGO	50%	101	-
25% Off Pair	55%	111	91
40% Off Pair	64%	128	147

### FINANCIAL ANALYSIS

However, let's examine the financial impact of each of the promotions to see if the \$75 Off or BOGO are really worth featuring from a bottom-line perspective.

Let's assume the average pair costs \$300 retail, \$120 for the lenses and \$180 for the frame. Let's further assume the cost of goods is 20% of retail for both lenses and frame. Thus, the gross margin, excluding any discounts, would be 80% of \$300 or \$240. With this in mind, we can compute the return from the various promotions relative to running no promotion.

*In terms of units sold, neither of the new promotions did better than either the 25% Off Pair or the 40% Off Pair promotions run in the past. However...*

For example, with the \$50 Off promotion, the discount is \$50, the margin will be \$240 - \$50 = \$190 and the predicted unit sales increase is 22% over and above running no promotion at all. Thus, the predicted sales margin is 122% x 100 pairs x (\$240-\$50) or \$23,180.

The base case of no promotion yields a sales margin of 100% x \$240 or \$24,000. Therefore, the \$50 off promotion actually is less effective than none at all since \$23,180-\$24,000= (-\$820)! The bottom-line values of other promotions are predicted in a similar manner.

Promotion	Discount Price	Gross Margin (Discounted Price Less Cost)	Predicted Increase in Sales Units	Predicted Sales Units (i.e. 100 with No Promotion)	Projected Sales Margin	Incremental Margin Over / Under No Promotion	% Increase in Margin
\$50 Off	\$250	\$190	22	122	\$22,180	(\$820)	(3.4%)
33% Off Frames	\$240	\$180	45	145	\$26,100	\$2,100	8.8%
25% Off Pair	\$225	\$165	111	211	\$34,815	\$10,815	45.1%
Free Lenses	\$180	\$120	91	191	\$22,920	(\$1,080)	(4.5%)
40% Off Pair	\$180	\$120	128	228	\$27,360	\$3,360	14.1%
BOGO	\$300	\$180	101	201	\$36,180	\$12,180	50.8%
\$75 off	\$225	\$164	71	171	\$28,044	\$4,040	16.9%

Remarkably, only three of the five promotions run in the past generate more bottom-line revenue than running no promotion at all! The 25% Off a Pair leads to 228 pairs sold for every 100 sold with no promotion. Moreover, it yields more margin than any of the other promotions run in the recent past, 45.1% more than running no promotion at all.

While the BOGO only sells 201 pairs versus 100 with no promotion, its bottom-line outpaces the 25% Off a Pair discount, 50.8% versus 45.1%! Therefore, it is the best of the seven promotional ideas the company could run.

### SUMMARY

Promotions are a key element in the marketing mix. We have proposed a fairly straight forward method for evaluating new promotional ideas. In the case history shown, it is of note that some of the promotions run in the past were less effective than running none at all. More importantly, one of the test promotions led to a greater increase in the bottom line than the company had seen in the recent past.

In general, companies can develop new promotional ideas which will indeed drive up the bottom-line. If you would like to do research to test any new promotional ideas, call us at Savitz Research Solutions. We are bottom-line driven.

*Only three of the five promotions run in the past generate more bottom-line revenue than running no promotion at all!*

*In terms of the bottom line, the BOGO outpaces the 25% Off a Pair discount, 50.8% versus 45.1%.*

*Therefore, it is the winner!*

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Savitz Research Solutions  
**972-386-4050**  
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