

# Improve Profitability With Retail Science

**USING ADVANCED MACHINE LEARNING, TO SPOT INFLUENTIAL RETAIL CUSTOMERS FOR TARGETED OFFERS, CAN IMPROVE BOTTOM LINE**



The following research, conducted by MIT Sloan School of Management and Oracle Retail Science researchers, employs machine learning to identify and understand influential relationships between early adopters and later buyers of a product.

**The results indicate an average 9% improvement in profit.**



## PREDICTING PROMOTION EFFICACY AND SELL THROUGH IN FASHION RETAIL

### METHODOLOGY

The team analyzed the following customer behavior of a fashion retailer:



**10,000**

customers in the retailer's loyalty program



Over **2 1/2** Years



Bought **4,000** men's tops in 20 stores and online

### FOR EACH STORE, CUSTOMERS WERE PUT INTO GROUPS SUCH AS:

- high spender/early
- medium spender/early
- medium spender/late
- low spender

### THE QUESTION ?

If you **accelerated the pace of the early buyers** of a given item—by, say, offering them a discount—could you speed up group two? And would that in turn speed up groups three and four behind them? And thus **create overall better sell-through and margin** for the item?

As part of the test, the Oracle Retail and MIT research collaboration generated suggestions for promotions:

**Targets**      **Degree of Discount**      **Timing**

and compared them to the retailer's own promotion/discount program.

**Some of the machine-learning-generated targeted offers were distinctly counter-intuitive, and overall, the suggested campaign was very different from the retailer's strategy.**



**However, the overall impact resulted in 5-12% improved profitability rate.**

### KEY TAKE-AWAYS

**1.** Targeted promotions, shaped and informed by machine learning, may turn conventional wisdom on its head.

**2.** Costly data sources (e.g., social) are not the only option for predictive models.

**3.** Retailer POS and loyalty data can provide significant insights, with the right predictive model.

"No one is suggesting that there's any magic at work here... but with enough data, and the necessary analytical tools, statistical correlations between one group and another can be established and used as the basis for profitable, successful, and repeatable targeted promotions."

—Professor, Dr. Georgia Perakis, MIT Sloan School of Management

## ABOUT ORACLE RETAIL SCIENCE:

The Oracle Retail Science team works in partnership with participating retail customers and researchers from major universities like (MIT) to further the advancement of knowledge and solutions that enable new capabilities in adaptive, intelligent retailing.

50+ U.S. patents dedicated to retail processes and technologies

Works with 20 of the top 20 retailers worldwide

Turns data into \$ with consistent user & data scientist experience

Innovates with top universities to prepare retailers for retail in 2020 and beyond

Helps you stay ahead with latest machine learning & AI solutions

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