



Optimizing trade promotion spending with AI and ML for consumer-packaged goods companies



Executive summary

Consumer packaged goods (CPG) companies have long relied on spreadsheets and traditional software to manage trade promotion spending. However, as markets become more complex and competitive, these conventional methods are proving inadequate for maximizing return on investment. Whether it's finding new ways to sustain lift and volume increases or understanding the right time and right channel for a specific type of promotion, Artificial Intelligence (AI) and Machine Learning (ML) offer a transformative solution for the CPG industry. In this white paper, we explore how AI and ML can revolutionize trade promotion spending optimization, providing statistical evidence and real-world examples of their superiority over traditional approaches.



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Introduction

You already know that trade promotion spending is a critical component of CPG companies' marketing strategies. For some organizations it accounts for the largest part of their brand's budget and can significantly impact profitability if a promotion or a promotional strategy goes wrong.

Traditionally, companies have used spreadsheets and regular software to plan and execute trade promotions, and for simple calculations and planning, these tools work just fine.

However, these methods also have limitations that hinder effective optimization. Because at the end of the day, it's not just about getting the plans into the system, it's about generating profitable, incremental sales that increase brand performance while protecting margins that are always under pressure.

That's why more companies are turning to not just planning promotions, but utilizing software to help optimize those promotions—to find the best time, tactics, and strategies to work with their retail partners to land the best result for both parties.

And that's why AI is vital. Because it's not just about going over last year's plan and seeing if you can improve by 10% one time--it's about modeling lots of different results to see how you can make those gains last for your brand.

The limitations of spreadsheets

These are probably not new to you—they're probably not new to anyone in your organization. But that doesn't mean that people don't try to get around these limitations every year. So once more for the cheap seats in the back, let's review the inherent risks and limitations of using spreadsheets to optimize your promotions and spending!

Lack of scalability

Spreadsheets are manual and labor-intensive, making them unsuitable for handling the increasing complexity of trade promotions as companies expand their product portfolios and target markets. From 50 different versions to one-off calculations that break formulas, we've all been through it before. When you had just a few products in a few channels, it was fine. When you're trying to manage 200 channels across a category, you're in big trouble. Spreadsheets were not built to optimize your plans at scale.

Inability to analyze big data

CPG companies generate vast amounts of data daily, making it challenging to analyze and extract actionable insights using conventional tools. AI and ML models and tools can work across retailers, regions, categories, SKUs, and many other dimensions to help your team sift through the myriad of options and alternatives to get to the best options for your business.

Poor predictive capabilities

Spreadsheets cannot predict future market trends or consumer behavior, limiting the ability to optimize promotions proactively. Almost all the tools we utilize in our “planning” and execution today are backwards facing—we can see what we did, and then make guesses on what we “think” will happen in the future. Contrast that with AI tools that do just that—they take what happened and model it out, providing you with the most likely scenarios based on the variables you feed into the model. And importantly, as you create new conditions or move things around the model adjusts accordingly!

Time-consuming Analysis

Analyzing historical data and adjusting promotions in real-time is time-consuming with spreadsheets, leading to missed opportunities and inefficiencies. Even more, most CPG organizations don’t have a ton of extra staff or data scientists sitting around looking for something to do! Most teams are already stretched. And so, having a purpose-built model for the trade channel allows you to manipulate and game plan the variables that matter to you, so that as you add your insight and knowledge, the model learns faster as well.

The power of AI and ML in the CPG industry

There’s no doubt that AI and ML technologies are game changers in the CPG industry. AI models can process vast amounts of data quickly, learn from historical patterns, and provide actionable insights in real time. Here’s why AI and ML outperform traditional approaches to trade promotion optimization tools:

Scalability

AI and ML algorithms can handle large and complex datasets, making them suitable for the ever-expanding CPG market. As we mentioned previously, and you probably already know, while spreadsheets and basic planning tools do the trick in linear calculations, once you add in the complexity of realistic business conditions, you understand quickly that what may have worked before will not be of help to us now.

Predictive analytics

AI models can forecast market trends and consumer behavior, enabling companies to plan promotions that resonate with customers, whether it’s the impact of holidays at different times of the year, weather trends, supply chain issues, or new retailer constraints. Helping to look into the future to better predict what will happen based on industry-specific measures is a hallmark of CPG AI tools.

Real-time optimization

ML algorithms can analyze data in real time, helping companies adjust promotions dynamically to maximize ROI. That means as you get sell-through and lift data, and measure stock levels and distribution channels, the AI models are constantly updating as new data points are added. This ensures you’re not using something that was relevant in the past. To the contrary, it’s what’s happening right now with your business.

Personalization

This is one of the key areas where AI can play a huge role in CPG planning and execution—in the ability to tailor promotions to individual retailer preferences and brand objectives, increasing the likelihood of sales and customer loyalty. You and your team know your business best. As such, ensuring that the models you use are tuned to your processes, constraints, the key moments-in-time that drive your volume and lift—that's where the secret sauce of AI really helps you out. Because as humans, we can't index on all the variables that go into a model—so let's let the machine take our knowledge and make something of it.

Four ways that AI and ML optimize trade promotion spending

So if you're along for the ride and are at least convinced that AI might be something worth investing in for your next planning cycle, now let's share four specific ways that CPG companies incorporate AI into their trade channel business:

1. Demand forecasting

AI models can predict product demand accurately, reducing overstocking and understocking issues. This has a significant impact on everything from raw material costs to labor costs, to shipping and stocking costs. Getting more accurate demand helps drive tighter brand planning and profitability.

2. Dynamic pricing

ML algorithms can optimize pricing strategies based on real-time data, increasing competitiveness and profitability. Whether it's a coming price increase, a temporary price adjustment (up or down), or seasonal changes to your raw material costs, understanding what price point drives the maximum lift and revenue is essential to optimizing your retailer plan.

3. Customer segmentation

AI can identify and target specific customer segments with personalized promotions, boosting sales in flat or even down markets, helping you to profitably find the niche that's most likely to buy your product at the right time with the right type of offer.

4. Promotion effectiveness

ML models can measure the impact of promotions on sales, allowing for data-driven decision-making by your sales, finance, and marketing teams. Further, when you combine your trade plans with your consumer and advertising plans, you can start to get a brand-level and category level view as to how your products are performing across all channels and spending, to all your customers.

Real-world examples and evidence

The benefits of adopting AI and ML for trade promotion optimization are clear:

- Increased profitability to your product, category, and brand
- Reduced wastage and excess inventory which improves margins
- Enhanced customer engagement and loyalty
- Faster response to market dynamics
- Improved competitive advantage

The return on investment (ROI) for AI/ML adoption can be substantial, with many companies reporting a positive impact within the first year of implementation.

In one example and implementation, a large global beverage and snacks manufacturer adopted AI to optimize trade promotions and realized a 30% increase in promotional efficiency, resulting in \$30 million in annual savings to their trade channel.

And in another case, a global household goods manufacturer leveraged ML to optimize pricing and promotions, resulting in a 10% increase in sales and a 2% improvement in gross margin—and tens of millions of dollars in savings in trade spend.

Additionally, a study by McKinsey & Company found that companies using AI and ML for trade promotion optimization achieved:

- 15-20% increase in promotional efficiency
- 25-30% reduction in excess inventory
- 10-15% increase in sales

While every company is different and “your results may vary,” what’s clear is this—there’s not been a case where optimization and AI have been deployed where plans haven’t gotten tighter, more focused, and resulted in better channel performance. And for us, that’s all the evidence we need to get moving.

Conclusion

As consumer-packaged goods companies face increasing market complexity, the use of AI and ML for trade promotion spending optimization is becoming essential. The limitations of spreadsheets and regular software are evident, while AI and ML offer scalability, predictive capabilities, real-time optimization, and personalization that traditional approaches cannot match.

To stay competitive and maximize ROI on trade promotions, CPG companies must embrace AI and ML technologies. The real-world examples and statistical evidence provided help demonstrate that the advantages of AI and ML are not hypothetical--but are already being realized by industry leaders today!

So, while you may have been hesitant to dip your toe into the optimization waters previously, hopefully we’ve helped demonstrate that it’s now time for CPG companies to make the shift toward intelligent, data-driven trade promotion optimization to secure their future success with purpose-built AI tools!