



How Price Elasticity Modeling Helped a CPG Giant Navigate Regulation and Consumer Sensitivity

INDUSTRY

CPG

CAPABILITY

Pricing Analytics

FUNCTION

Revenue Growth

Management

TECH STACK

Hierarchical Bayesian

Models,

Lasso Regression,

Python-Based Simulator,

Internal + External Data

Integration

Client Overview

A UK-based global tobacco company and the world's leading producer of fine-cut tobacco and rolling papers. Combustibles account for nearly 90% of its revenue, and the company maintains a dominant presence in the UK market.

The Ask

An advanced analytics-driven pricing engine capable of simulating price changes across brands, tiers, and retail segments. The goal was to move to a structured, model-based framework that could quantify price elasticity, enable robust scenario planning, and support strategic pricing decisions.

Challenges

Regulatory Environment:

Stringent excise duties and restrictions in a dark market with no open display of products or promotions

Pricing Volatility:

Competitor-driven price changes demanded agile, reactive decision-making

Model Limitations:

Pricing models did not capture consumer behavior, retailer dynamics, or regulatory impact.

Consumer Sensitivity:

High price sensitivity led to downtrading and brand switching as prices outpaced income growth.

Data Gaps:

Irregular collection and refresh cycles reduced confidence in pricing decisions.

Our Solution: Centralized Pricing Engine with Real-Time Simulation

Data Integration & Preparation

Unified diverse internal and external datasets, including excise taxes, regulations, and retail dynamics, into a clean, standardized dataset for elasticity modeling.

Elasticity Model Development

Built advanced elasticity models across key accounts, independents, and total market levels using hierarchical Bayesian and Lasso regression. Captured consumer behavior, retailer advocacy, and cross-price effects for decision-ready outputs.

Simulation Tool Creation

Developed a user-friendly simulator enabling real-time scenario modeling across 100+ brand/region/tier combinations. Factored in competitor moves, promotions, and tax shifts for smarter, week-level decision-making.

Pricing Insights & Deployment

Deployed validated models into a modular pricing engine with attribution logic and a semi-automated refresh pipeline. Delivered continuous insights on elasticity, downtrading, and competitive impact.

Impact Delivered

Elasticity at Scale:

Three tiers of elasticity models deployed across key accounts, independents, and the total market.

Real-Time Scenario Planning:

Simulator enabled weekly scenario planning across 100+ brand, region, and tier combinations.

Consumer Behavior Insights:

Downtrading and brand-switching quantified using historical data, conjoint analysis, and loyalty signals.

Attribution and Market Drivers:

Integrated attribution logic to measure the impact of regulations, competitor pricing, and external events.

Scalable Architecture:

Phase-ready engine designed for expansion into international markets with quarterly model refresh cycles.

Navigate Complex Pricing Decisions in Highly Regulated Markets

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About Us

Tiger Analytics is a global leader in AI and analytics, helping Fortune 1000 companies solve their toughest challenges. We offer full-stack AI and analytics services & solutions to help businesses achieve real outcomes and value at scale. We are on a mission to push the boundaries of what AI and analytics can do to help enterprises navigate uncertainty and move forward decisively. Our purpose is to provide certainty to shape a better tomorrow.

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