Case Study

How a leading retailer increased their market forecast accuracy by 42% and optimized data-driven decision making

CHALLENGES

01 Inability to allocate resources efficiently due to little clarity over market shifts

As a manufacturer in the consumer goods market, they needed to determine key drivers that would guide their market strategies and production planning for both product and region categories.

Not being able to forecast demand accurately and the lack of clarity over the impact of macroeconomic factors meant that they needed full visibility over resource allocation. This led to unnecessary costs and potential lost revenue.

This was also necessary to help them uncover key demand drivers by product and region at a quicker pace to stay competitive.

02 Inability to identify external drivers of demand

Currently using a bottom-up approach, their forecast method was limited to a simple univariate forecasting model.

This introduced a crucial issue that impacted forecasting accuracy.

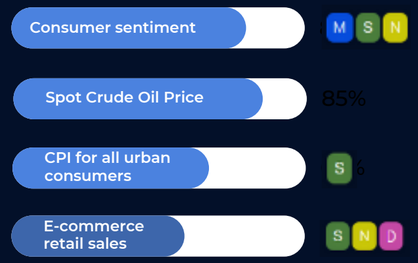
The risks associated with only applying univariate forecasting models meant that they were missing out on the opportunity to apply leading indicators to their aggregated forecast as univariate forecasting models do not allow for that.

Key results

Ability to optimize sales performance with market-validated forecasts

The organization was now able to optimize their sales performance with forecasts that were validated by market and macroeconomic data.

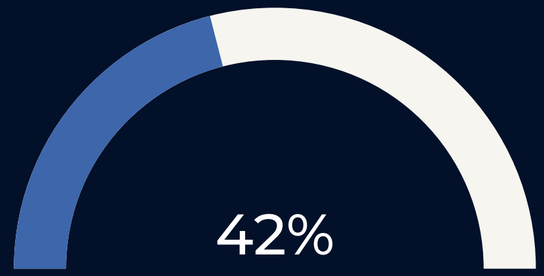
This meant that they could get visibility over the significance of each market driver and an overview of their impact on their business projections. They had the possibility to continuously track these as consumer and economic activity shifts.



Identified predictive market drivers at a product group and region level

After identifying their leading indicators and demand, they could now factor in the economic developments and business cycle impacting a specific product group.

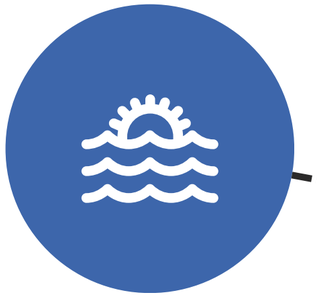
The retailer was now able to create forecasts easily for each product group and region. With the models built, it simply requires a quick update monthly, making the process repeatable, saving valuable time.



42% forecast accuracy improvement

By implementing best practices through all stages of the forecast process, the retailer achieved a double-digit MAPE forecast accuracy improvement.

HOW WAS THIS DONE?



01 Identified their seasonal patterns

To begin with, we started with data cleaning. Next, we proceeded to identify their seasonal patterns.

After a seasonal pattern was identified, the seasonality was removed before building forecast models. After the forecast models have been applied, the seasonality is added back to the forecast.

02 Built benchmark forecasts

Initially, Indicio built several univariate models that were based solely on historical sales.

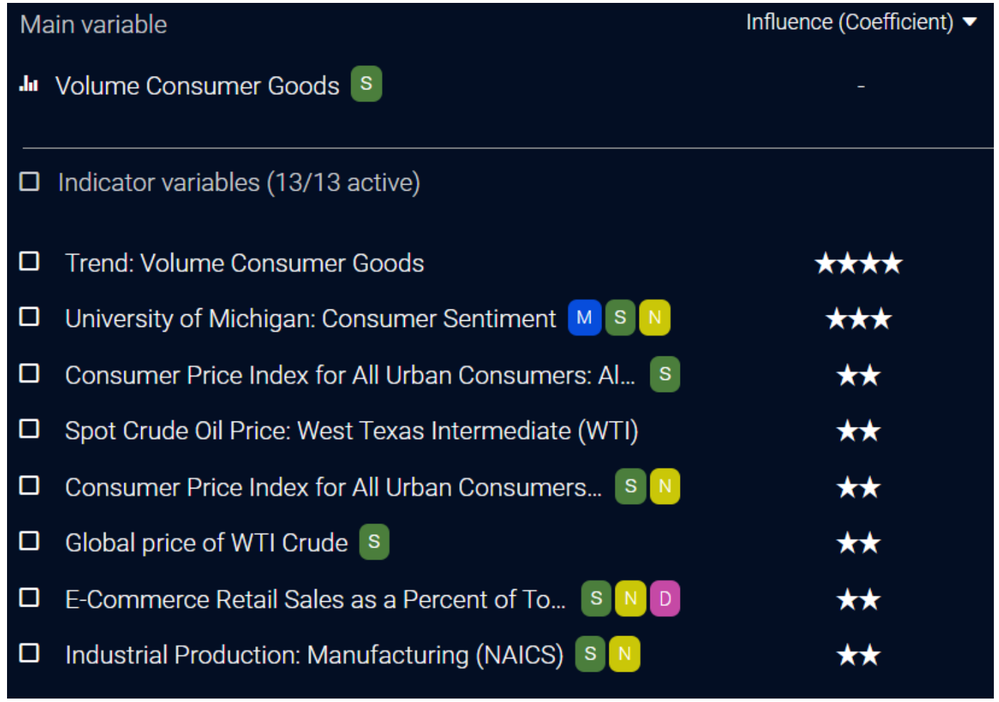
This acted as a first benchmark to judge the quality of the more advanced models applied at a later stage.

03 Identified their specific leading indicators

Using a VAR model with Lasso penalty, the models tested for all the potential combinations of indicators that are determined as most valuable towards predicting future sales.

These were the most relevant leading indicators identified to best forecast the demand for their chemicals products.

Key leading indicators identified



04 Built multivariate forecasts

After the relevant leading indicators had been identified, we applied multivariate forecast models on the indicators identified to forecast their data.

When the indicators were identified, multivariate forecast models were applied on the indicators identified to forecast their data. This was followed by weighting a large number of econometric forecast models according to accuracy.

Why not just one good model?

All forecast models have their advantages. By weighting a large set of models, we capture the strengths of each individual models. According to the latest forecast research, this has been proven to be more accurate.

05 Weighted all models according to accuracy

Some models are better than others at short, mid and long horizons. Indicio combines all models into one forecast, giving more weight to the best performing models at each step.

The manufacturer’s forecast did not apply any forecast models while Indicio's forecast applied 50+ of the latest econometric models, and weighted them into one optimal forecast.

Ready to get started?

Contact us today and find out
how much you can improve your forecast accuracy.

Book a demo

indicio