

CASE STUDY

Best Practices for Forecasting

- ▶ **Objective**
Developing a rigorous sales forecasting methodology for an extremely large product portfolio.
- ▶ **Client**
One of India's biggest FMCG marketer.
- ▶ **Benefits**
Our solution served as a basis for sales planning for the entire product portfolio and informed their view on the existing ERP system's planning capabilities

Project Objective

To develop a rigorous modeling methodology for forecasting sales for an extremely large product portfolio.

Client

India's biggest FMCG (Fast Moving Consumer Goods) marketer.

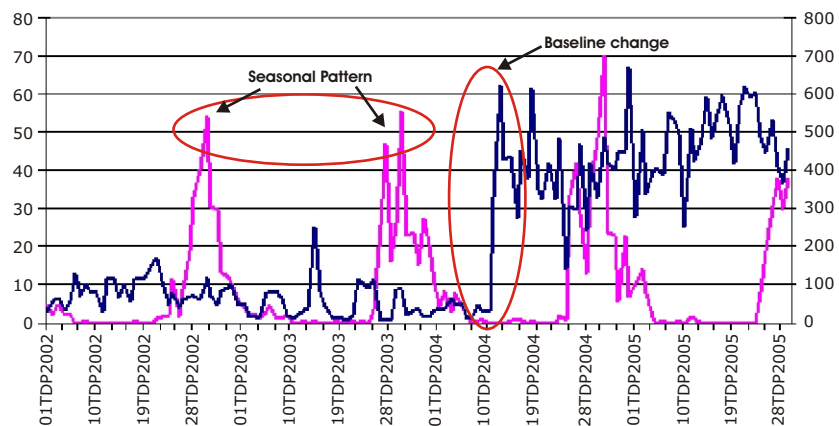
Approach

Our client has a portfolio of more than 5000 SKUs that have varying sales patterns. Forecasting sales accurately for such a large portfolio is infeasible in terms of the resources required. On the other hand, automating it through the in-built capabilities of most ERP systems may not result in the best choice and performance of models. In such a scenario, a need was felt for defining a thorough methodology to identify the most appropriate forecasting model. This methodology would guide the automation of the model selection, thereby ensuring that the models selected, were the most appropriate while still saving time and resources.

The methodology developed was evaluated for a group of 10 distinct SKUs. Test forecasts were to be generated for every 10-day period (TDP) and for a 9 TDP horizon. Models were compared on the basis of 1 TDP, 3 TDP (monthly) and 9 TDP (quarterly).

Other Case Studies

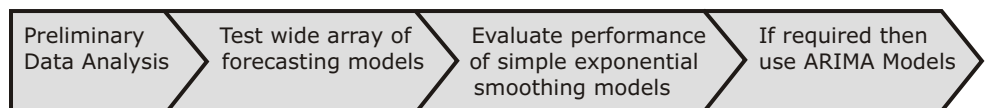
- ↳ Transport Scheduling and Rostering: *Optimizing resource utilization and reducing transportation costs*
- ↳ Price Forecasting: *Forecasting petrochemical prices in a volatile market scenario*
- ↳ Sales and Operations Planning: *Sales and operations planning for commodity*



Diverse sales pattern amongst the products

Solution

A rigorous process capitalizing on DecisionCraft's expertise in developing forecasting models was developed. This process ensured that "model parsimony" was paramount in decision making. Model parsimony ensured that if simpler models like Holt's smoothing or Holt-Winter's smoothing were found to be appropriate, then more complex models like Box-Jenkin's (ARIMA) were not applied. The modeling exercise also highlighted the significant effect of promotional campaigns on the sales of FMCG products and how their effect had to be incorporated while making forecasts. It also reiterated the need for quantifying the effect of various sales drivers including promotions, sales discounts, competitor pricing and internal issues like pushing inventory for meeting sales targets at the end of every month/quarter.



Solution Methodology

In case of the 10 SKUs considered, exceptional accuracies (75-80%) were generated for forecasting sales for the next period.

Benefits

The outlined methodology served as the basis for selecting and maintaining forecasting models for client's the entire product portfolio. Moreover, it served as a guideline for evaluating the need of an add-on module for the client's ERP system.