

Retail Store Stock Inventory Analytics

Literature Survey

Relationships between inventory, sales and service in a retail chain store operation

AUTHORS: Chris , Garland Chow Paul D.

Larson Effective inventory management is critical to retailing success. Surprisingly, there is little published empirical research examining relationships between retail inventory, sales and customer service. Based on a survey of 101 chain store units, this paper develops and tests a series of hypotheses about retail inventory. Seventy-five percent of the store owners/managers responded to the mail survey. As expected, significant positive relationships were found between inventory, service and sales. Specifically, support was found for the theory that inventory is a function of the square root of sales. Also, greater product variety leads to higher inventory, and service level is an exponential function of inventory. Finally, demand uncertainty was found to have no apparent effect on inventory levels.

The importance and usage of Business intelligence technologies in the retail industry

Authors: Gang, Kai & Bei

The increase in data available due to the advent of automation, modern technologies and standards have made the decision-making process in business become complicated. The key technologies used in business intelligence are Data Warehouse, Online Analytical Processing (OLAP), Data Mining and Release & Express technology. The main applications of a BI system are profit analysis and KPI (Key Performance Indicators) Management, client service management and environmental analysis.

Inventory Behavior, Demand, and Productivity in Retail AUTHORS: Florin Maican, Matilda Orth This paper studies the factors underlying the heterogeneity in inventory behavior and performance across retail stores. We use a dynamic model of multi-product retailers and local competition to estimate store productivity and consumers' perceived quality of the shopping experience, and we analyze their relationship with inventory behavior and product variety. Using novel and detailed data on Swedish stores and their products, we find that stores learn from demand to improve future productivity. Store productivity is the main primitive that increases inventory turnover and product variety, and this increase is larger for stores with already high inventory turnover. Stores in small markets with intense competition from rivals have higher inventory turnover. Consumers in large markets and markets with large investments in technology benefit from a broader product variety. Counterfactual experiments show that the increase in inventory turnover due to innovations in productivity is three times greater when uncertainty in demand is reduced by 30 percent. Our analysis highlights important trade-offs between productivity and demand that allow retailers to reach high levels of inventory turnover and offer a broad product variety to consumers.

Recommendation systems using recommender algorithms

Authors: Chavan & Mukhopadhyay

Such systems use the past purchase history and the customer's search data to supply relevant recommendations for the customer. All big companies such as Amazon and Netflix personalize the content for the user based on their shopping habits and behavior patterns. An effective recommendation system can increase sales manifold, by presenting users with items that they would need before the user even recognizes they need it. The hybrid recommendation algorithms are more suitable in the e-commerce field. It improves the quality and efficiency by providing the user with a great shopping experience