

RETAIL STORE STOCK INVENTORY ANALYTICS

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LITERATURE RIVIEW

1.Inventory management for retail companies: A literature review and current trends

- March 2021
- Conference: 2021 Second International Conference on Information Systems and Software Technologies (ICI2ST)

In recent years, the correct management of inventories has become a fundamental pillar for achieving success in enterprises. Unfortunately, studies suggesting the investment and adoption of advanced inventory management and control systems are not easy to find. In this context, this article aims to analyze and present an extensive literature concerning inventory management, containing multiple definitions and fundamental concepts for the retail sector. A systematic literature review was carried out to determine the main trends and indicators of inventory management in Small and Medium-sized Enterprises (SMEs). This research covers five years, between 2015 and 2019, focusing specifically on the retail sector. The primary outcomes of this study are the leading inventory management systems and models, the Key Performance Indicators (KPIs) for their correct management, and the benefits and challenges for choosing or adopting an efficient inventory control and management system. Findings indicate that SMEs do not invest resources in sophisticated systems; instead, a simple Enterprise Resource Planning (ERP) system or even programs such as Excel or manual inventories

are mainly used.

1. Retail Analytics: Driving Success in Retail Industry with Business Analytics

- August 2017
- Project: [Retail Business Management](#)

Authors: [Sudeep B. Chandramana](#)

As retail market becomes extensively competitive, the ability to optimize on serving business processes while satisfying customer expectations has never been more important. Therefore, managing and channelizing data to work towards customer delight as well as generate healthy profits is crucial to survive prosperously. In the case of big retail players internationally as well as in India, data or rather big data analytics is now being applied at every stage of the retail process - tracking emerging popular products, forecasting sales and future demand through predictive simulation, optimising product placements and offers via customer heat-mapping and many more.

Alongside this, identifying the customers likely to be interested in particular product types based on their previous purchase behaviours, working out the best way to approach them through targeted marketing efforts and finally working out what to sell them next is what forms the core of data analytics. This article is the outcome of a descriptive research on the past, present and future of retail industry and the application of business analytics in shaping appropriate marketing strategies.

3. Retailing and retailing research in the age of big data analytics

Author: Marnik G. Dekimpe

As a research domain, the retail sector has always had many appealing features, such as its size, its multi-faceted and dynamic nature, the possibility for researchers to exploit their own domain knowledge, and an extensive coverage by business analysts. In addition, the above-average availability of

good-quality data has historically been an additional selling point to empirical researchers. The paper considers to what extent the latter still holds, and explores a number of additional opportunities and challenges that emerge from the ongoing big data revolution. This is done from five perspectives: retail managers, retailing researchers, public-policy makers, investors, and retailing educators.

3.1. Coverage by business analysts

Apart from personal experiences and observations, retail researchers also benefit from the extensive (and not necessarily consistent) coverage of the sector by business analysts. For example, Edge Retail Insight (formerly PlanetRetail RNG) tracks over 2000 leading retailers worldwide, and publishes both daily news updates and summary reports on numerous retail trends. Similar reports are published on a regular basis by, among others, Euromonitor, AC Nielsen, AT Kearney and IRI.² These reports not only contain a wealth of information, they also regularly posit opposing expectations, which offers a natural opening to position one's own research. For example, the analysts of [Rabobank \(2013, p. 1\)](#) predict that within 15 years “the main Asian grocery markets, India and China, will have closed in on the PL share currently seen in Europe,” while the analysts of [Euromonitor \(2014, p. 6\)](#) expect PLs to “only make gradual, if any, inroads into emerging markets in the years to come”. Clearly, such discrepancies between different “expert opinions” are an open invitation for more academic work.

4. Analytics for Operational Visibility in the Retail Store: The Cases of Censored Demand and Inventory Record Inaccuracy

AUTHOR: [Li Chen](#) & [Adam J. Mersereau](#)

Armed with a number of modern and emerging visibility technologies and facing increased competition from the internet channel, retail managers are seeking ever deeper visibility into store operations. We review two established streams of operations management research that try to overcome shortcomings of common retail data sources. The first is demand estimation and inventory optimization in the presence of data censoring, where imperfect data may cause significant estimation biases and inventory cost inefficiencies. The second is inventory record inaccuracy, where intelligent replenishment and inspection

policies may be able to reduce inventory management costs even without real-time tracking technologies like radio frequency identification (RFID). Common themes of these literatures are that lack of visibility can be costly if not properly accounted for, that intelligent analytical approaches can potentially substitute for visibility provided by technology, and that understanding the best possible policy without visibility is needed to properly evaluate visibility technologies. We include a survey of modern and emerging visibility technologies and a discussion of several new avenues for analytical research.

5.Inventory management in retail industry-Application of big data analytics

AUTHOR:Hien Vu

University of Auckland

December 2018

Publication: researchgate

The retail industry is becoming rigorously competitive and narrowly profitable that retailers find themselves in a dilemma of neither excessive in-stock nor depleted out-ofstock is negotiable. This report investigates the answer to the question by providing a comprehensive evaluation of substantial inventory management models which are widely used by retailers throughout the history. Then it commences with the transformation that Big Data Analytics (BDA) made on inventory control. Results from literature review and inventory management practices show that BDA has made a great contribution to demand forecast improvement and inventory diminution. In particular, the application of BDA has significantly enhanced the preciseness in demand forecast and the visibility in inventory tracking, which conjointly support the reduction in inventory level. The report articulates the core problem of inventory management is the trade-off between shortage cost and overage costs. Again, the “performance frontier” graph indicates a pragmatic solution is introducing innovative to shift the efficiency curve. In this context, that innovative is BDA. The report finds the prospects of integrating BDA in the conventional inventory management techniques and promoting the viability and appropriateness of these models in the big-data era. However, the limitations of BDA underlie data challenges, processing challenges and management challenges. Finally, the connection between BDA and tradition operation concepts is presented with insightful lessons from the personal perspective.

6. Predictive Analysis of Big Data in Retail Industry Literature Review

AUTHOR: Hamza BELARBI

University Settat, Morocco

Year: 2004

Nowadays retailers are having access to a raw material of production: big data. In this article, we attempt to focus on the value created by big data for retail industry. While almost of publications of big data and big data analytics are around the technical side, there is a lack of papers and studies which focus on retail. The uses of big data analytics are not exclusive to one industry. In retail we can use big data to make decision about pricing and merchandising. In this paper we provide a summary the state-of-the-art research on big data analytics.

7. ANALYSIS AND DESIGN OF SALES AND INVENTORY MANAGEMENT SYSTEM FOR YOCHANG GENERAL MERCHANDISE

AUTHOR: Dianne S. Acosta

Citizens have lately focused on the benefits that the system provides. Technology is derived from human discoveries; thus, it includes the use of both primitive and highly advanced tools and work methods. Inventions and technological development allowed people to expand their work as quickly as possible. Today, with the aid of technology, people are using the most important and highly advanced machine man ever invented: the computer. The computer has changed the way people work in industry and commerce especially. It has been utilized by several businesses when carrying out numerous corporate transactions. The machine was strongly regarded for the capacity to accomplish activities more quickly and more reliably than any person could. The Sales & Inventory System is an automated version of the system for manual sales and inventories. It can manage all the information surrounding a product. Details include personnel details Inventory, Sales Information, Information of goods, Regular descriptions of

the transaction. We require a ton of in case of manual program Time, workforce. Nearly all the work here is computerized. So, it maintains accuracy. Point of Sales and Inventory System is a computer that is an easy way to check and list the company's sales, it's faster and more reliable than doing it manually. The system can minimize human editing errors and the company will be able to access them easily at any time. Sales and inventory systems make the enterprise more efficient, productive, and convenient for the enterprise and its customers.