

## **Analytics in store operations and retail profitability: Best practices and opportunities in india**

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### **Abstract**

*The Retail industry is one of the most dominant industries in India today. It faces complex operational challenges that have to be monitored with stringent business processes. Store operations form a major portion of a retail business for the corporates and its efficiency thereby drives their operational and financial performance. Store operations involve store staffing, front-end/backend stocking, customer service, and other key maintenance tasks. Since payroll is one of the major expenses in retail, it has to be linked to sales metrics and KPIs in performance, benefits and compensation. Flawless system integration between various departments will boost the staffing efficiency and overall store profitability. Other processes include security and in-store systems integration like POS complementing employee performance and Stores' overall KPIs. In India, the middle class boom and globalization have opened new business avenues for the retailers. As the infrastructure is still in growth stages, several challenges plague the retail industry in the country, namely labour management, systems integration, analytical ability and sustainability, and governmental regulations. Also analytics is not a priority to Indian retail businesses in combination with infrastructure. Global Retail giants like Wal-Mart, Tesco and Metro integrate real-time data analytics into their store operations with in-depth KPI monitoring and strategic initiatives on a global scale. Analytical planning is embedded in all departments that have significant impact on store operations. This paper attempts to identify the challenges in Indian retail operations scenario and impart the best practices from global leaders assimilated to the Indian economy and culture.*

Key Words: Business Analytics, KPIs, Retail, Store Operations.

### **Introduction**

Indian middle class has grown tremendously in recent years attributable to globalization. The influx of global products due to the open market since the 1990's and the growth of the new middle class has boosted the presence of organized retail chains across the nation (Caruana, 1995). Major players in India both retail based on non-retail based have ventured into this sector to tap the opportunities due to the humongous growth caused by improved living standards of the new middle class. One of the primary reasons for this growth is the IT sector, Metro and non-metro cities have seen this growth both directly and indirectly all over the country. The key factors responsible for the retail boom have been the change in consumer profile and demographics, increase in the number of international brands available in the Indian market, economic implications of the government, increasing urbanization, credit availability, improvement in the infrastructure, increasing investments in technology and real estate building a world class shopping environment for the consumers (Shahid & Iftekhar,2012).

The Population is a major attraction factor for global corporations and they are focusing in the Indian market with full vigor. This is not only prevalent in the

FMCG but across all products and industries namely automobiles, food, infrastructure and power etc. Apart from the global product influx, technology influx is also in high growth in many sectors, this is either through direct investment of foreign companies or through indo-foreign partnerships and agreements. The technology innovation is majorly found in FMCG sector and new and varieties of products enter into the market for today's customer needs (David, 2009). For example, in the food industry, food packaging and preservation technology has infused a variety of ready to eat and ready to cook food products for today's younger generation. A few years ago, these technologies were out of reach for Indian food manufacturers, but due to the technological innovation from global players in the packaging industry, varieties of food products are available for the customer (Ishan, Jorn, Christian, Patrick & Steve, 2010).

Another major reason for the improvement of the retail sector is the distribution infrastructure in India. The automobile industry is a major contributor for this growth along with government's input through infrastructure development like roads, railways and air travel has improved the retail growth in a significant ways. In earlier years, air cargo, was a premium service and was not a viable source of distribution for the retail sector. Currently, air cargo along with rail and road has improved the distribution network many fold. Distribution is either outsourced to specialty operators, vendor's distribution or through in-house distribution network. Though improvement is needed in this area, the current development has brought in new avenues for retail sector by providing specialty products, which were out of reach for customers in their network. Retail business is reaching another milestone due to organized retail entry into the sector. Major corporations both from non-retail and retail origins have ventured into this market both from abroad through FDI or joint ventures with Indian corporations (Chari, Anusha, & Madhav, 2012).

In organized retail sector, several departments within the company play key role in the store operations and the profitability of the business. Among the key influencers, store operations play a vital role in the business profitability. As it is the front end of the corporate to the customer front and where revenue inflows take place, corporations across the globe place key importance to this department and focus on continuous improvement in this area. It comprises of several categories or segments namely customer front, back end operations, analytics, security, labor, inventory and distribution.

### **Store Operations**

Store operations for any retail company irrespective of the product they sell to their customer, is key to its business profitability. Several sub categories exist within store operations namely customer front, back end operations, store staffing, technology and analytics. The customer front is the most important section of store operations. This is the outcome of the combined effects of several departments not limited to Human resources, supply chain, marketing (Gupta & Kohli, 2006) Operations analysis, project management, Information technology. The customer perceives this as the image of the company and the business has to present with the best efforts and make the customer's experience a memorable one and bring in repeated business. This also brings referrals and new business to the company and in a way forms as a barrier of entry for its competitors when the business creates its own identity in its customer service levels. The shopping experience of the customer is met with the employee's greeting and effective service to the customer to buy his product in a relatively short period of time and with care (Tansik, 1990). The employee needs to have the utmost knowledge of the products sold in the store which in turn give confidence to the customer for the product he intend to

purchase. This confidence translates to perception of product quality and reliability for the customer.

**Store Operations On Business Profitability Model**

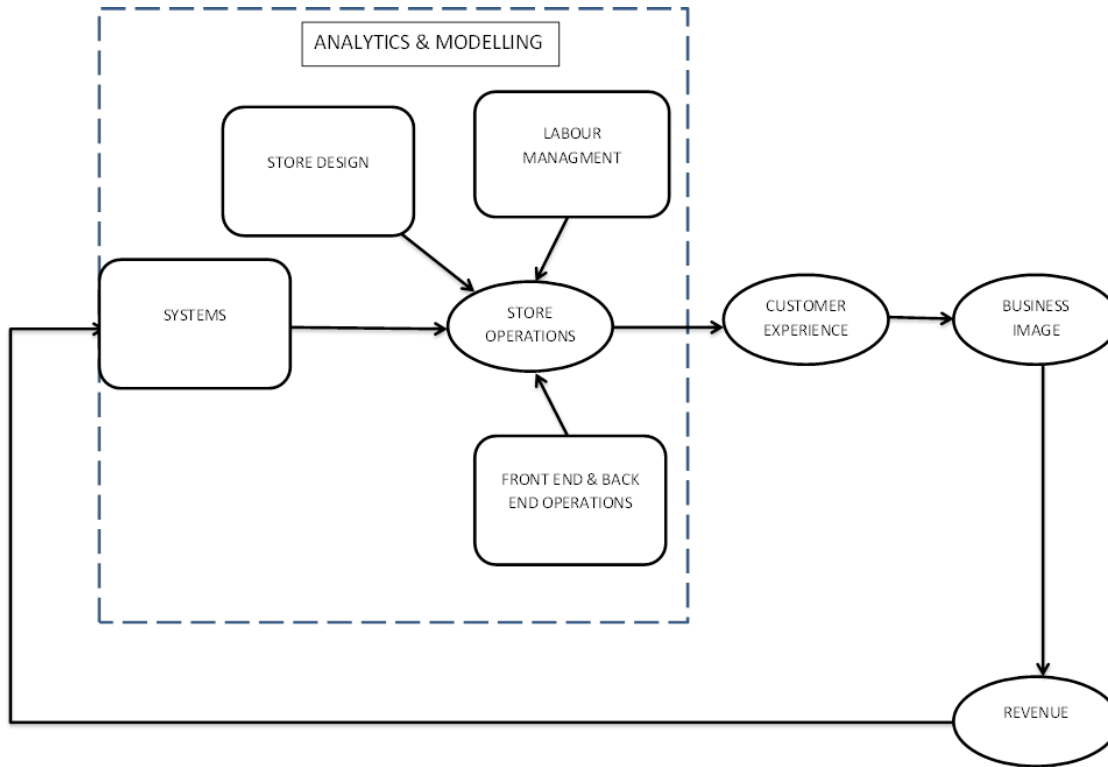


Fig1: Store Operations on Business Profitability Model

**Analytics And Modeling**

Analytics play a key role several of the customer’s experience in the store (Helena, 2011) . For example, the time he waits at the Point of Sale (POS) to pay for his product and service levels when he approaches store associates at kiosks/shelf areas for product information and pricing. Waiting line models and queuing theory are predominantly used to optimize waiting time for customers and effectively cater more customers by the store staff (Vasiliki & Amy, 2009). Store layout plays a key role in the customer experience and in-turn increase revenues for the store. The product sequencing in the store gondolas and planogram alignment has to be optimized based on analytical models of customer travel paths and seasonality requirements of products by the customers. This is a major reason, why big box retailers like Wal-Mart, The Home Depot, Target and AutoZone place major importance for shelf space. For example, Wal-Mart charges premium rates for shelf space for vendors in their store. This is due to the fact that key shelf locations bring more business to the vendors and in turn more revenue to the store. Customer accessibility and seasonal factors to these areas are major factors for the shelf pricing (Xavier Drèze, et al , 1994).

**Store Design And Floor Plan**

The store floor plan is vital in designing the store. The store development or the construction department works in tandem with marketing, operations, and process improvement departments to develop the optimal floor plan to enhance customer experience and bring in store revenues. Analytical models that dictate the store

floor plan design are used to enhance the customer experience and in turn increase business revenue.

Shelf & Gondola displays in retail stores are the second important store operations the alignment and product planogram setup needs to be analytically designed and has to match product type, pricing and competition. Store floor plan and business image and theme plays key roles in designing gondola design and layout. Product display is analytically modelled, designed and display rates are assigned according to proximity and effectiveness of product sales.

### **Business Image, Customer Experience**

Customer front is the primary image factor for a retail business, be it a retail giant or a mom and pop store and its efficiency dictates the image of the business. Several sub categories constitute customer front for a retail store (Dodds, Monroe & Grewal, 1991). Waiting Line models are used to optimize customer waiting time based on their business rules of the store. This is used in conjunction with complex time series forecasting models for the store at different time slots, day of the week, season of the year etc. the product type and counts at specific timeframes will dictate the labor assignment at cash registers or POS or at product information kiosks.

Loyalty programs are another key part of bringing back existing customers and rewarding them for being loyal to the store. These programs reduce attrition rates and create barriers of entry for competitors and sustain market share. Analytical models include predictive modelling using logistic regression techniques identify key customers and target loyalty programs to the right customer base based on historical data and identifying probability of remaining loyal to the company.

Customer service is the prime focus for all retail businesses. All other supporting functions and operations converge into customer service of a business. Both quantitative and qualitative analytical methods focus on this key phenomenon. Unlike manufacturing, customer service is the primary focus of the service business including retail.

### **Back End Operations**

Back end operations for retail business are vital for a flawless store and business operations on a daily basis. These functions are the backbone for store performance in sales, customer service, labor management and overall strategic perspective for the business. In organized retail sector, several internal departments collaborate on a regular basis to accomplish a flawless functioning of back-end operations. Some of the key operations are shelf stocking, planograms, store staffing, security, distribution receiving, inventory control, pricing and power management.

### **Systems In Store Operation**

The advent of technology in all the sectors of business has also benefitted the retail sector in a large scale. These technological changes have brought in quick turnaround of updated business rules and implementation of new process control and tools to support retail business. For example, major analytical softwares and application developers have eased analytical methodologies for forecasting, interface development and corporate wide vital systems for an effective deployment of corporate strategies throughout the chain. This quick response time and preemptive strategic implementation of new business rules have helped large retail

businesses to sustain their market position and venture into new business development avenues in lightning pace.

Analytics is the backbone for all business improvement techniques in today's global retail business. Its use ranges from back end operations like Forecasting, Inventory models, Labor scheduling, Pricing, Weather and store open close times to front end operations like store planograms, store floor plan, power management, security, customer service models.

### **Best Practices and Opportunities in India**

Retail chains in India should take cue for their foreign counterparts to improve their business profitability through analytical methods in their store operations. All sections of the store operations right from customer storefront to the back-end operations need to be revamped to increase customer service and the business turnover. In spite of the drawbacks infrastructure both systems wise and support service wise. Companies should make appropriate modifications in their business model for better profitability.

Systems implementation is imperative for today's retail business for real time reporting, management and implementation of corporate objectives. Current systems have embedded analytical models in them and aids front end store staff to implement corporate objectives effectively and efficiently. Indian retail organized sectors should effectively deliver systems into their business in order to bring about quick turnaround of their corporate initiatives.

### **Labour Management**

Labor scheduling and Management are key operating costs for retail business and has to be monitored with stringent measures on a regular basis. This key resource is a major hurdle in India as the labor laws are not complementing to the retail business's objective. High turnaround and improper training for the workforce are two among the major causes of improper retail operations. Cross training sessions and outside consultant training may aid better performance and productivity from the employees.

Analytics in backend operations is absent to a certain extent in Indian retail chains. Although the resources are available through people and systems, the gap between the academia and the industry to provide this skill sets to their students has proven to be a major bottleneck to recruit the right skills for the industry. Secondly, the application of analytical concepts is seldom taught at higher education institutions. These institutions have primarily focused on theories and the absence of practical application has to be addressed to reduce the gap between the academia and the industry. Currently, small training institutions are emerging to train graduates and aspirants in analytics, thanks to the analytical software giants who have identified this gap and have established franchises to introduce analytics in the market from the education perspective. In the coming years, the analytics domain will improve as more and more established higher education institutions introduce analytics curriculum in their program.

Business Intelligence and Process Improvement are the key factors for market sustainability for the retail sector. Indian retail chains should identify this importance taking cue from global retail giants or other sectors market leaders like Toyota, FedEx and try to incorporate process improvement techniques in their business cycle. Traditional and time proven concepts like just-in-time, 4S are critical methodologies in process improvement for today's business. These concepts, though have originated from automobile industry, they are extensively

and successively used by retail giants like Wal-Mart, AutoZone etc. Indian retail giants should invest more resources to identify key concepts of process improvement and business intelligence methodologies into their businesses.

### **Conclusion**

Analytics and store operations go hand in hand for a better profitability and sustainability in the retail sector. Innovative ideas both homegrown and inspired need to be embedded by the organized retail giants in India. Though the market conditions abroad are much different from that of India, ideas, technologies and analytical methods can be modified and adopted to successfully establish advanced models and business rules into the corporate strategy of Indian retail. Academia on the other hand has to be more proactive to the needs of the industry to bring about effective programs and teaching methods into the curriculum. Fortunately in the recent years, the academia is catching up to the trend and has started to introduce courses to develop the required skills for the retail industry.

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