



IMPACT OF TECHNOLOGY ON ORGANISED RETAIL INDUSTRY

S.SREEKANTH

Research Scholar
Department of Business Mgt
Osmania University
Hyderabad

Prof. MALLIKARJUNA REDDY

Professor
Department of Business Management,
Osmania University
Hyderabad.

ABSTRACT

The organized retail industry in India has been developing since 1991 especially after the introduction of Liberalization, Privatization and Globalization (LPG). Retailing is a dynamic and very vibrant sector which attracts the national and international players. To keep pace with the growth of retail industry, companies are forced to leverage technology to bring in the operational efficiency and competitive advantage. The benefits of the technology are greatly reaped by the retailers today and information technology has become the integral, critical and competitive tool for thriving in the business in the present scenario. The present-day customers are more tech-savvy and demanding more and more information from retailers. The customers demand the quickest and quality service with competitive market price. The technologies assist the computerized inventory management, POS systems and supply chain management, etc., The challenges before the retail technology is to develop the data base and install information systems which will have both backward and forward integration capabilities. There are also problems or issues while handling the technology and the retailer has to find ways to overcome such problems within a short span of time, failing which he cannot retain the customers. Many software packages are available in retailing and the retailer has to select the suitable software that would provide maximum benefit to business and to customer. The Government of India is also encouraging the sector by formulating liberal policies in retailing and IT in order to boost the sector.

Key Words: Organized Retailing, LPG, Operational Efficiency, Competitive advantage, Information Technology, POS systems, Software Packages.

INTRODUCTION

Backdrop

Technological revolution is witnessed in every sector since past two decades and there is no exception for retailing. We come across number of new technologies in retailing in day in and day out to enhance the operations and to provide better customer service. These technologies are focusing on efficiency and efficacy of the operation system. The new and futuristic technologies bring change in customer outlook by making shopping experience more convenient. In order to be on the cutting edge, retailers have to bring delight to the customers by introduction of new and advanced technology.

Technology involves intelligent kiosks, digital and interactive advertisements, wireless messages and Bluetooth technology, self-ordering systems, automated systems. These systems result in more efficient working and effective customer service in the long run. Growing educational levels, nuclear family, westernization is some of the emerging factors for development of retail technology.

Review of Literature:

Inman and Nikolova(2017) conducted a research on technological advancements in retails and its benefit to retailers and consumers. The study concluded that technological advancements in the field of retailing will help the retailer to reach the target audience at low cost. Besides, the customers can take more informed decisions, beneficial offers and faster service than before. This would help the retailer to increase profitability. As per the research study by Richards & Hamilton (2014), technology is prominent throughout the retail industry

with an explosion of end devices, applications and social media advertising. Online Technology presents a threat to bricks and mortar. However, new technologies have also enhanced the in store experience in the forms of immersive technologies, virtual mirrors, bluetooth beacons, NFC payments and in store mobile applications that can transform the in store experience for the consumer (Accenture, 2014). Clements (2014) stated that interacting between customers by use of technology provide trust on products is a vital part of the communications strategy.. Retail data has evolved from POS data into SoLoMo data, which is social, local and mobile data. This is linked to behavioural data, which includes what a customer has bought in the past, what they are browsing online and in store, which is aiding in the development of real time data.

Objectives of the study:

- To study the Indian Retail Industry and the importance of technology in retailing.
- To study the emerging trends of information technology in retailing.
- To study the application of software technology in retail activities

Scope: This article is confined to study the role of technology in retailing sector and retailing outlets.

Need of the study: To keep pace with the growth of retail industry, companies are forced to leverage technology to bring in the operational efficiency and competitive advantage. Customer satisfaction is the most important aspect to be taken care by any marketer more so in retailing. Many research studies focussed on the technology implementation in retailing but there is a gap existing for study on how the retail technology is applicable to various retail functions. Hence, the present study.

Methodology:

The article is descriptive in nature and is purely based on secondary data by referring to journals, magazines, websites, texts, reports of companies and previous research studies, etc.

Meaning of Retailing:

Retailing consists of buying the products from manufacturer/supplier and directly sale to the consumers. He is considered as a reseller. The term retailing is existing since the introduction of currencies in world economies. USA is the hub I for retailing in the world as most of the retail organization are headquartered in US. For example, Walmart Stores Inc, Home Depot, Kroger, Costco, Target, etc. Most of the retail sector is driven by the practices of USA retail industry. Retailing involves not only the sale of products but also the movement of goods from time to time.

The retailing cycle involves the following players: the manufacturers or suppliers, logistic and supply chain partners, warehouse, distribution channel, store and customers. We find many retailing formats basing on their nature of products, the preference of customers and the prevailing competition in the market. Whatever may be format, use of technology is imminent now-a-days. Some of the formats are: Mass Discounters, Mom-and-Pop Stores, Warehouse Stores, Category Killers, Departmental Stores, Boutique, Catalogue Retailers, e-tailers, Franchise. Convenience Stores, Vending Stores, Hyper Markets, etc.

The prime factor that influences the retailing sector is the technology. The success of any retailer depends on the use and differentiating the technology. The organized sectors especially the well-established retailers have an upper hand than the unorganized retailers are

not in a position to take the full advantage of technology available in the market. This may be due to many constrains like small retail shops, less sales and less profits. The retailing sector is technology intensive and the retailers are very strongly associated for their supplies. Technology helps them to get their supplies within the stated lead time. Indirectly, this saves the cost in the form of holding fewer inventories. The global industry has crossed more than \$12 trillion dollars and top retailers occupy around 35% of the total retailing. The development of the retail industry is mainly due to availability of disposable income for the past two decades.

Indian Retail Industry:

The organized retail industry in India has been developing since 1991 especially after the introduction of financial and other reforms. Liberalization, Privatization and Globalization has made the industry more vibrant not only at national level but also at international level. It is one of the most dynamic and fast-growing industry and attracting big players to it's fold. It occupies about 10-12% of GDP and providing 8% of employment. The changes India witnessed in retailing are increasing availability of international brands, establishing of more and more malls, hyper markets, availability of more retail space, after sales service, good environment/ambience than to price. The other factors that contribute for the development of retailing are change in lifestyles compared to traditional periods, international exposure, awareness of customers, etc. Another advantage for the development of retailing in India is having more youth and middle-class population.

The key attributes of Indian Retailing are:

- The growth of retail industry is multifold in India which is around 10% every year.
- India is having largest number of outlets in the world. About 12 million retail outlets are existing in India.
- World 5th largest retail destination in retail space and ranked 63 in terms of World Bank's Doing Business 2019
- As per United Nations Conference on Trade and Development's Business to Consumer (B2C) E-Commerce Index 2019, it occupies 73 positions.
- Its position is 16 in FDI Confidence Index after USA, Canada, Germany, UK, China, Japan, France, Australia, Switzerland and Italy.
- Market Size of retail industry at CAGR is expected to reach by US\$1.1 trillion by 2020
- Offline retail namely brick and mortar (B&M) is expected to increase by 12000 crores in FY2020.
- Due to huge investment in retailing and rapid increase in internet users, it is expected that India will become fastest growing e-commerce business in world.
- India's FDI equity inflow in retailing has touched US \$ 2.12 billion during April 2000-March 2020 according to Department of Promotion of Industry and Internal Trade.
- Due to heavy demand for consumer goods in different sector namely electronics, home appliances, etc., many companies have invested in Indian retail space in recent month before COVID -19.
- Walmart Investments Cooperative U.A invested Rs 2.75 billion (US\$ 37.68 million)

in Wal-Mart India Pvt Ltd.

- Government of India changed the FDI policy rules in food processing industry to attract more and more foreign investment. 100% FDI is allowed by Government of India through automatic route in single brand goods

The Key Issues in Retailing:

The retailer has to address the following issues in the global context namely Providing right products, Product Presentation, Traffic Building, Layout of Retail Stores, Location of Retail Stores, Customer Satisfaction, Technology, etc., The technology has become the basic fabric of the retailing industry today. It is left to the discretion of the retailers, to use the technology for a competitive advantage. Technology is used in every aspect of retailing namely customer knowledge (Customer relationship management software), product movement (Use of RFID tags for tracking), point-of-purchase (Scanners, kiosks, self-serve checkout), web technologies (Online shopping carts, purchase recommendations) and many more.

Application of Information Technology in Retailing Sector

Retail technology brought greatest changes since past decades in generating the data required for better understanding of customers. It will also help to ascertain the stock position and replenishment. Technology is useful in identifying the products that have great demand and products that have little movement. In other areas where the retailers' supply chain and inventory management affected is the use of radio frequency identification (RFID) which uses microchips replaces the scanner barcodes and can be read by radio wave from a distance. The best example is the Walmart, USA using RFID.

Due to busy schedules, many people are using technology to meet their requirements. Digital or online shopping is driving the people to order their requirements by using technology and would occupy a prominent place in the years to come. Urbanization, per capita income.

The use of information technology in various activities related to retailing are:

IT in Supply Chain Management: The application of information technology in retailing includes all the functions that enable to give prompt and quick service to customers. It involves product supply, delivery, recycling of materials, components, end product and services. This provides the value addition to the organization. There is a reduction of cost in inventories due to use of technology to a greater extent. It is essential for retailing to use technology to face cut-throat competition.

IT in Purchasing Management

Since 1970, Electronic Data Interchange was used in purchasing process. Since 1990, advancement in retail technology is used for flexible internet based e-procurement systems. Many e-commerce firms have realized the benefits of these technology services. The advantages are saving in time and cost.

IT in Forecasting Demand

The goal of a good forecasting technique is to minimize the gap between actual and forecast demand. Different methods are used to forecast the demand. Different softwares are used to forecast the demand at retail stores/outlet. Some of the forecast software are: Forecast Pro Software, Smart Software and many more.

IT in Performance Measurement: Information technology in retailing helps us to analyses the various objectives through data mining and data warehousing. Non-performance or

under performance of products can be removed from the shelf to maintain the profitability. This task becomes more complex if there is lack of technology and perform functions manually is highly cumbersome. Performance measurement requires lot of data and continuous evaluation .Due to large volume of information available it has become almost impossible to do this evaluation process manually and thus the role of IT in retailing has been increasing. Supply Chain Operations Reference (SCOR) is used for agement diagnosis, bench marking and is a process improvement tool and used globally.

IT in Inventory Management: The information technology provides the sharing of demand and inventory data quickly with less cost. It influences the production and stock position in retail outlets. IT is also used in material requirement planning and manufacturing resource planning.

Store management: The retailers are now focusing on customer's in store experience to differentiate themselves with the help of technology. Software of store management helps in improving store efficiency.

Technology Driven Value Chain Changes

Another area where the technology in retailing useful is Customers signing credit card bills with their fingers on touchscreens and using apps to order.

Touch screen Food Vendors: Many companies are using digital boxes which will help to produce many numbers of variations in products. By using touchscreen device we can dispense more and more varieties of products. These are more useful in retail food outlets.

Tablet Restaurant Management: Many apps are developed by retailers to service the customers better. The flexible iPad app provides real-time views of tables, catalogs the menu by a selection's name or ingredients, processes sales and delivery tickets and sends orders to the kitchen. It is used in restaurants which come under food retailing. This is more useful for new customers who do not have any idea about the retail outlet. The app will also work with traditional receipt printers and cash drawers.

LED Alert Systems: These systems make the workers alert to time sensitive tasks. It can also help to maintain ambience in high-end eateries.

Webcam-Enabled Monitoring: By using advanced algorithms in technology, it helps to detect any noncompliance of rules with reference to health and safety codes. This is more useful in food retail outlets. Further employees were given identification badges with radio frequency transmitters. This will help the employees to observe the customers and meet their needs, if any.

Computerized points-of-sale (POS): This has helped the industry to move from cash registers and completely install computerized points-of-sale (POS). McDonald has such system.

WI-FI Hotspots: The most recent development has been installing WI-FI hotspots which are electronic payment model which help to quicken the ordering and payment. It shortens the time of supply, preparation, and payment time. me and payment.

Bio-diesel Technology: This helps the retail sector especially in food retailing to reduce carbon emissions with the truck making the deliveries.

Nintendo DS system: This technology is used as an e-learning training tool for their new recruit staff. These gaming systems train the recruits and grade them on their performance, in

which they can compare with other colleagues and view their progress. These results in less paper work and allow the employees to enjoy their job learning experience.

ACS" Technology: This is another technology that is used for service desk functions, user access, executive and security administration, desktop support and messaging services, as well as end-to-end application performance monitoring service that improves diagnosis of performance issues across core technology stacks and will support development, testing and quality assurance processes.

IT in Customer Relationship Management

There is different CRM software available in the market and plays a major role for CRM. With the help of technology in retailing, we can identify the most valued customers and focus on building long term relationships. CRM software allows storing the data of individual customers and most valuable customers. It helps in loyalty programmes.

ERP Systems in Retailing:

ERP software packages integrate all the data and related processes into a unified information system. Large retail outlets are implementing ERP packages. It helps in the order entry, accounts payable and receivable, purchasing, distribution, sales, fiancé and inventory management, etc.

Other software/technology in retail outlets will help in

- Faster approval of purchases from the inventory of the retailer
- Capturing the product detail
- Software with related item or suggested item prompts
- Transaction Suspend
- Automatic store credits
- Capture of customer information
- Reconciliation
- Time Stamping
- Clocking In Period

Benefits of Retail Technology

- Technology is user friendly, scalable, flexible, reliable and easy to maintain
- Helps to track individual transactions from the POS to the general ledger
- Improves efficiency and maximize the value of the organization
- Synchronize the data efficiently.
- Improves warehouse operations most effectively.
- Provides better Customer Service
- Customer Support through call center
- Handling of Post Sales Service
- Helps to building of long term relationships with the customer
- Helps in campaign Management
- Helps in effective Selling Processes

Problems in Technology Implementation



- Outdated Software – Many retailers have implemented the outdated technology which is rigid and inflexible. This becomes a challenge and reduces the efficiency of the retail business. We come across advanced technology/software in retail industry and competitors are adopting. Today's business environment demands real time adaptability from the software systems.
- Limited scope – The retail systems were designed to take care of specific problems, tasks and lack the enterprise wide approach to the problem solving. Some of technology used is unsuitable for present business environment which are very dynamic in nature. Markets are highly competitive in nature and competitors are waiting for opportunity to take the advantage.
- High maintenance costs – Old technology is costly to maintain as such systems are not used in retail industry at present. Small retailers cannot afford to install new systems. The components are also costly with high maintenance cost and require specialized personnel for maintenance purposes.
- Integration and scalability problems – Some of the old systems used in retailing cannot synchronize or integrate with modern systems. Such integration and scalability problems tend to multiply as the size and scope of retail operations increases.
- Increased risk to the business – A combination of old and new information systems makes the whole system susceptible to failure or crash. The heterogeneity in the system is the primary cause of risk.

Conclusion:

Technology is regarded as one of the core competencies that bring opportunity to the retailer and create value for the business. Customer insight cannot be fully leveraged without technology to enhance the relationship. Technology provides and analyses the information across marketing, sales, and operations. Global economies have witnessed unforeseen changes for two decades due to introduction of reforms and retailing is not an exception. It has seen a sea change because of introduction and use of latest technology in order to meet the customer demands and make the operations easier. Further, it helps the retailers to dispose the customer more quickly. Overseas investment is encouraged by respective governments and policies are framed to attract more and more foreign players.

REFERENCES

- Anand, V & Nambiar, V. *Indian food retail sector in the global scenario*.
Bryman, A and Bell, E (2003) *Business Research Methods Oxford University Press*
Dane, F.C. (1990), *Research Methods, Brooks/Cole Publishing Company, Pacific Grove: CA*. Das, S. (2000). *Rapidly Expanding Garment Retail Sector Global Retail Report, (2003). Deloitte Touche Tohmatsu*.
Birchall, J. (2010). *Walmart aims to cut supply chain costs. Financial Times, January 3*.
Bustillo, M., and Timothy W. M. (2010). *Walmart thinks smaller. The Wall Street Journal, April 22. Available online: <http://online.wsj.com>*.
Retail Management: Text & Cases – Swapna Pradhan,
Websites:
<https://www.ibef.org/industry/retail-india.aspx>
Wikipedia, the free encyclopedia - www.wikipedia.com
Customer Relationship Management - www.crminfoline.org
Infosys Shopping Trip 360 – www.fibre2fashion.com
IT innovations in Indian Retail - www.expresscomputeronline.com



www.microsoft.com/industry/retail/businessvalue/rfidoverview.aspx

Store Management – www.infosys.com

ERP – www.sap.com