

# Survey on Advancements in Retail Sector and Its Future

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## ABSTRACT

We have been living in an era of rapid integration of IT technologies into business processes and people's day to day lives. Large volumes of functional and non functional data is being produced everywhere which companies desire to make use of. Data mining techniques and data analytics have become essential in making useful sense of this sea of data for any business to prosper. Taking an example of retail sector, internet users in India have been becoming increasingly aware and receptive towards online retail. Noticing this traditional retailers have been focusing on increasing their online presence and adapting to new marketing strategies thereby utilizing this medium. In this paper we discuss the advent of data analytics in business processes, growing need for knowledge driven decision making, MIS hierarchy, some of the facets of online retail and changing needs of consumers.

**Keywords:-** Data Mining, MIS, Decision Support, e-Marketing, Online Retail.

## I. INTRODUCTION

Data Mining and data analytics deal with extraction of value-able information from large data sets. They are widely used together and most helpful in supporting decision making activities of a firm. The knowledge derived after analysis of data can be used to predict future trends, thus enabling firms to make more focused, knowledge-driven decisions. Data mining has found a lot of applications in the current business scenario due to its ability to process, summarize and derive conclusions from large volumes of data.

### A. Data Mining in Retail and Marketing sectors

These days many companies have been choosing to integrate data mining and analytics into their business processes to gain competitive advantage. A steady rise in growth rate of online retail sector in India can be seen in the past several years.

Data mining helps formulate marketing strategies based on previous records to predict who will respond to new marketing campaigns such as online campaigns etc. Through this knowledge marketing personnel may have a clearly defined approach to sell profitable products to targeted consumers while providing them with a greater degree of satisfaction.

### B. Management Information System(MIS)

The Management Information System (MIS) may also be known as the Decision Support System, Information System, and computer based information System. To help provide needful information whenever required, a management information system may include an array of data mining and statistical analysis tools among many others that may be used for predictive and exploratory analysis. MIS includes:

1) **Information:** Data that has been represented in a meaningful context which may be understandable and lucid. The more lucid the data the more it may help in knowledge discovery.

2) **Information Systems:** These comprise of people and Computing systems working in unison to provide information and derive meaningful conclusions from available data.

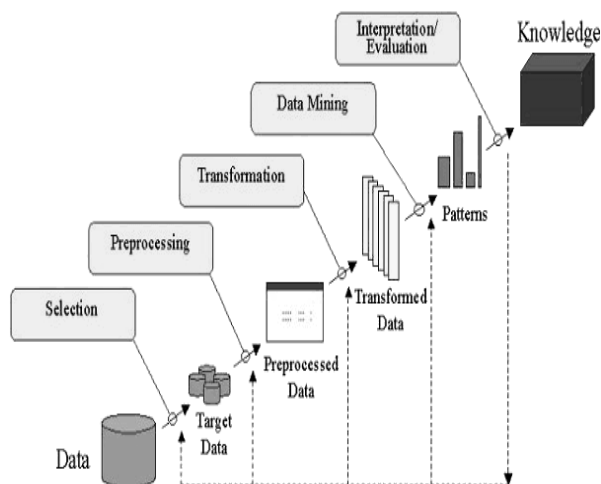


Fig. 1 Description of a simple data mining process

3) **Information Technology:** With this support in decision making, the balanced management of financial resources, human resources, marketing strategies and other company resources become more effective and profitable and management chain becomes more functional. Identification and management of the goals and organization policies becomes easy.

**C. Classification of MIS**

MIS may be categorized on the basis of functions they perform in a firm.

1) **Decision Support Systems:** Computer softwares and program applications used by the management to compile and extract information from data collected from wide range of sources to help aid in the decision making process.

2) **Executive Information Systems:** It is basically a reporting tool which is used to access summaries of information coming from all company levels from various departments.

3) **Marketing Information Systems:** It handles the marketing aspects of a business such as modifying marketing strategies according to changes in market scenario etc.

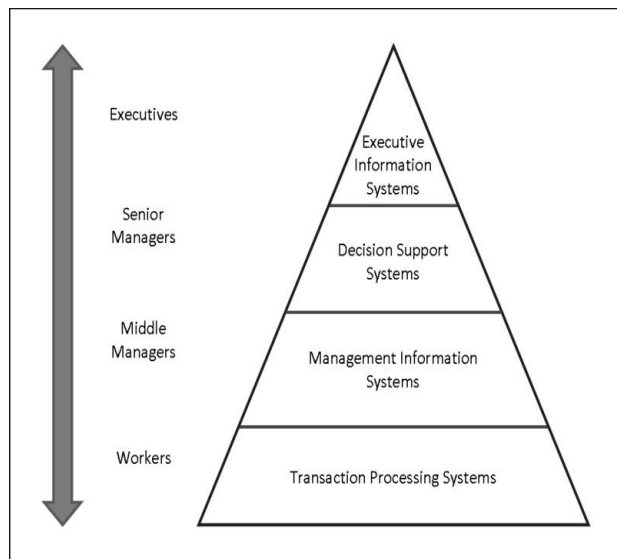


Fig. 2 Hierarchical classification of MIS in an organization

**II. ADVANCES IN RETAIL SECTOR**

A significant part of today’s market scenario is influenced by the advancements in IT industry and increasing usage of internet as a medium for connecting with the consumer. Though India is an emerging economy on the world scale still the numbers of online shoppers in India has been rapidly increasing.

These days companies have been diligently working on increasing their online presence and improving quality of customer relationships. Progress in IT technologies and the growing popularity of internet in India have led to computer based systems taking over a significant portion of retail world although they have not completely substituted the importance of physical stores in the market.

The lifestyle of Indian consumer has been changing steadily changing with time. Due to long working hours, comfort seeking lifestyle, and increasing usage of devices and gadgets utilizing IT technologies the consumer may avoid the effort and time required to go and buy at a physical store. Factors such as earnings, educational background and awareness also determine buying behavior of a customer.

These days online shopping offers a wide variety of products to compare and choose from with the click of a button, the products are less expensive and they generally offer discounts and lucrative deals to the customer. This has not only decreased overall effort of the customer in a fast paced world but also given him/her an opportunity to choose from a wide variety of products and buy at lesser expense than the physical market while being in the comfort of his home.

It has been found that the numbers of users opting for online shopping has increased considerably compared to increase in number of internet users in recent years. Most of these consumers prefer to buy some selected products online because they will get heavy discounts in comparison to store purchases.

Trust may also be a significant factor in affecting customer behavior. It has been seen that sometimes the customer is not satisfied with the product which reaches his doorstep and finds unacceptable quality difference in the look and feel of the product. This affects his judgment of the brand value and may also affect his overall trust on online shopping as a reliable medium for purchase. If the customer has many such experiences or hears about similar experiences happening in his social group it’s highly likely that he will not choose to shop online in future.

The user may often be required to give his personal information while completing a transaction during shopping online. The misuse or misplacement of such information may result in the user losing his trust in online shopping medium.

Although the count of online shoppers has been rising, still physical stores have also maintained their stronghold in the market. An old Consumer -retailer relationship may amount for a certain degree of trust and might be one of the many factors for this fixation as many users are suspicious by nature and prefer to remain in the comfort zone of their buying behaviors. Unawareness among users and illiteracy as regarding the usage of internet may also be an influential factor.

Also when shopping at physical stores the customer does not have to go through time lags and delay issues between date of purchase and delivery. In many instances when the consumer needs to acquire the product immediately the consumer has no choice but to buy from a physical store. This factor of time delay between purchase and acquiring the object is not there when one shops directly from a store.

The customer experiences ease of use and flexibility while using this medium for purchasing. Seeing the increased inclination of customers towards online shopping the online retailers have also modified many of their business policies in attempts to improve quality of customer relationship and build trust. Implementation of some of these policies, such as “Cash on delivery” and “Return if not satisfied” are in an effort to strengthen trust relationship with consumers.

### **III. BRIEF LITERATURE SURVEY**

Gurleen K, (2012) [1] tried to identify various reasons for adoption or non- adoption of online channel for purchasing activities of consumers. The results of her study declare that customers were found to be reluctant and anxious in handing over their personal information while shopping online such as their credit card information etc.

Know and lee (2003) [2] in their study, saw around nine factors that influence the consumer behavior with regard to shopping online. It was seen that the suspicious attitude of the customers towards online shopping was a principle discriminator between consumers opting for e-shopping and those not opting for the same.

Kailani & Kumar, (2012), show a rise in tendency for the adaptation of e-commerce concerning the use of phones and tablets which are being used to carry out purchase. In India it was found that apparels, accessories, foods and beverages, and Books/Music are the sectors that have shown rapid amount of growth in the e-commerce and these were the sectors which were most commonly used for traditional market retail activities. Their reports also indicate the same kind of market development in foreign markets hereby showing the all over rise in acceptance of e commerce practices.

Beatty, Reay, Dick & Miller, 2011,[12] concluded that as in the act of buying from a physical store the customer has direct access to the product he can visual assess the product quality and can attain a certain level of surety and trust about the product. This gives them an edge over the online channel. But they also argue that online medium offers more in terms of availability of variety of information at the same web portal with the help of which the user can easily compare product pricings and form alternate choices.

Chang, C., Chang, S., Chang, J., & Chien, Y., 2013 envision that an average increase of evaluated 17% growth rate from 2012 -2017 in shopping in areas such as accessories, food, clothes. Another one of the

summation of their studies is that 885 of customers of the age 18-29 were found to be inclined to adapt to online purchase medium within second quarter of 2012. An increase in 13% of purchasing activities was seen in the clothing and shoe sector of retail which is a huge number.

Suresh and Shashikala, 2011 [3] they found during the their study that monetary and performance risks are the most influential factors affecting risk perception in consumers in India. They also argued that due to rapid growth in internet access to the populace, online retailing may see an explosive growth. They also stated observing the present market scenario that most growth drivers namely growing economy, change in living standards, increasing adoption of state-of-the-art business practices are in India’s favor. They also stated that perceived risk decreases with adding on to the general internet experience which will increase trust and thus accelerate this process in India.

Ramayah (n.d.) [4] compared three beliefs and tried to identify their relationships with intention of a consumer to shop online. The beliefs were namely perceived usefulness, perceived ease of use and perceived enjoyment. The findings of their studies revealed that perceived usefulness was not as much a significant factor in determining the intention to shop online of a user. It identified that consumers prefer to buy through traditional means when it came to apparels and household items as these have a higher quality uncertainty and requires personal interaction with products. They concluded that type of products affect buying behaviors of the consumers.

### **IV. CONCLUSIONS**

The attempt of this survey was to understand the dawn of IT technologies in retail and marketing sector and observation in India’s context. Analytics and data mining technologies have become the backbone of decision making process in many organizations. Emphasis should indeed be on deriving useful knowledge from transactional data as this would highly assist the management in modifying marketing strategies and in turn may also help improve the satisfaction rate in consumers.

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