

When BI Meets CRM: An Emerging Concept in Retail Industry

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Abstract

In the current era it is very important to develop a direct contact with the customers because customers are the ultimate determinants and the success of the company depends on customer satisfaction. So companies are using different techniques to provide information about the product to the customers like e-commerce, call center, on-line shopping etc. Nowadays, in Indian business an effective way of integrating enterprise applications in real time is introduced. This is done to create the competitive advantage. For this purpose companies are implementing business intelligence tool (BI). The paper explores the theoretical concepts of BI, its components, benefits of BI. Through business intelligence tools, companies can achieve the strategic goal which leads to success. In this highly competitive environment retailers are emphasizing on customer intelligence so that it can also reduce the cost. Business Intelligence techniques are used by the companies to enhance the skills, knowledge and awareness of customers and it is also helpful in increasing the turnover of the company. It is also helpful in improving customer retention. The improved business intelligence system helps the companies to predict customer demand. It helps in pleasing customers and building strong relationship and also helps in turning one-time purchasers into long term customers. In today's highly competitive and global landscape, the average customer has many options, so maintaining and exceeding customer expectations is critical for a company's success. This paper focuses on the role of BI in business.

Keywords: Business Intelligence, Competitive Intelligence, Retail Industry, and Customer Relationship Management.

INTRODUCTION

Business intelligence (BI) can be defined as the human intelligence capability which can be useful in business activities. It is considered as the new area of study, which focuses on the function of human cognitive faculties and artificial technologies in management decision making for business problems. Business Intelligence can also be defined as how the intelligently used information can be used in increasing the business. Knowledge and technology both play a very important role in business now days. Therefore, business intelligence can be defined as the applications and tools for collecting the data, analyzing data and providing useful information to the customers as well as business which is helpful for taking better strategic decision. On the other hand it relates to widespread knowledge of all those issues that affect the business directly or indirectly. It is essential that firms acquire a great knowledge about external factors, i.e., customers, competitors, government rules and regulations, political environment and internal factors i.e., employees, management etc. so that it is helpful in taking good quality decisions. A competitive intelligence, an individual field of BI focuses on external factor. Information is gathered on the actions of competitors and decisions are made based on this information.

Business intelligence is helpful in simplifying the complex data and provides the necessary information to the top level management, which will be helpful for planning purpose and taking various types of decisions related to business. The objective is to improve the quality of information (output) that depends on quality of data (input). Business Intelligence is used to analyze the

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ability of the company, the competitive environment in which a firm competes and it provides the useful solution for those actions which takes by the competitors.

LITERATURE REVIEW

Stackowiak et al. (2007) define Business intelligence as “the process of collecting data, analyzing that data and providing useful information to top level management, and it also enables the management to take various decision regarding business activities”. Zeng et al. (2006) define BI as “The procedure of gathering, analyzing and disseminating information that has an objective to reduce the future insecurity in making various decisions. Golfarelli et.al, (2004) defined BI that includes effective data warehouse and also a reactive component capable of monitoring the time critical operational processes to allow tactical and operational decision-makers to tune their actions according to the company strategy. BI as a term replaced decision support, executive information systems, and management information systems (Thomsen, 2003). Essential components of proactive BI are (Langseth & Vivatrat, 2003): real-time data warehousing, data mining, automated anomaly and exception detection, proactive alerting with automatic recipient determination, seamless follow-through workflow, automatic learning and refinement, geographic information systems and data visualization. BI includes several softwares for Extraction, Transformation and Loading (ETL), data warehousing, database query and reporting, (Berson et.al, 2002; Curt Hall, 1999) multidimensional/on-line analytical processing (OLAP) data analysis, data mining and visualization.

OBJECTIVES

- To study the concepts of BI in CRM and its benefits.
- To understand successful implementation of BI in retailing.

RESEARCH METHODOLOGY

Secondary data has been used in the study. The data has been collected through internet, magazines, journals, and other sources.

WHY TO ADOPT BUSINESS INTELLIGENCE?

For taking quality business decision, Business Intelligence plays an important role in decision making activities. The organization's success depends on the accurate information, so BI is helpful in collecting the raw data from the external environment and after analyzing that raw data, it provides the useful information by which future trend of business can be easily analyzed. This is mainly required where the firms are able to extrapolate information from the external environment and make accurate forecasts about future trends or economic conditions. Once business intelligence is gathered the data from the outsiders, it efficiently used the data and take necessary actions regarding business. The main purpose of the BI is to develop the quality of information which depends on data taken by external constituencies. Business intelligence reveals the position of the firm as in comparison to its competitors, changes in customer behavior and spending patterns, the capabilities of the firm, market conditions, future trends, demographic and economic information, and the social, regulatory, and political environment and also what the other firms in the market are doing.

Thus we can say that, BI system is a combination of data warehousing and decision support systems. The primary activities of BI include gathering, preparing and analyzing data; the data used should be of high quality. The various sources of data is collected, transformed, cleansed, loaded and stored in a warehouse. The relevant data is for a specific business area that is extracted from the data warehouse. BI facilitates the different business to inculcate the solutions that depend on the information and react accordingly.

Competitive Intelligence (CI)

This is a specialized branch of Business Intelligence. It is the process of analyzing the competitiveness of business through understanding the strategies of competitors and overall external environment. According to The Society of Competitive Intelligence Professionals (SCIP) Competitive Intelligence is an organized ethical program for collecting, analyzing and supervising outside

information that influence the plans, decision, operations and policies of the companies. CI is not as difficult as it sounds. It obtained from various sources available to everyone like government websites and reports, online databases, surveys, different groups i.e., academies, trade associations and consumers, private sector sources, media, journal, financial reports etc.

A firm using Competitive Intelligence faces the challenge of using the available information efficiently. The next step to be followed by a firm is to protect itself from the competitive intelligence of competitors firms. Only if the firm is able to protect itself from the countermeasure of the competitors, it can succeed.

BI and CRM Together

The CRM strategy should include:

- a. Operational CRM: Automating interaction with the customers and sales force, and
- b. Analytical CRM: Sophisticated analysis of the customer data generated by operational CRM and other sources like POS transactions, web site transactions, and third-party data providers. In retail business there are huge numbers of customers but every customer differ from one another. To maintain good customer relationship companies introduced Analytical CRM. Analytical CRM depends upon marketing and sales functions of the organization as they are the source through which companies get insights gained about the customer. The different BI tools used by Analytical CRM are data warehousing, data mining, and OLAP to present a unified view of the customer.

Advantages of Analytical CRM

Customer Segmentation: Customer segmentation is an essence of retail marketing. It explains how different segments respond to different demographics, fashions and trends factors. For example customers can be segmented on the following basis.

- Customers reaction towards new product launches
- Customers reaction towards new promotional strategies
- Customers reaction towards different offers, discounts etc.

- Customers tendency to purchase specific product

Promotion Effectiveness Analysis: As a marketer it is important to study and analyze the right promotion combination, and it helps in understanding the communication impact on sales impact. Promotion effectiveness depends upon the following factors:

- Choosing the effective advertising message
- Deciding on reach, frequency, and impact on the basis of past campaigns
- Deciding on geographical location
- Evaluating advertising effectiveness

Business Intelligence here works as a real-time tool which effectively utilizes this raw data and converts it into meaningful information that in turn helps in taking business decisions. Analytical CRM uses historical data with predictive science to produce forward-looking views of customer behavior.

Examples of Successful Deployment of BI in CRM

1. The analytical CRM solution of Standard Chartered Bank allows the bank to effectively manage and optimize the profitability of all products that constitute its retail portfolio. It is simple and easy for the bank to target campaigns and obtain significantly higher returns since BI can perform profit modeling for each account. "The solution also enables micro-segmentation. Using analytics and a test-and-learn culture, we know the probability of customers adopting a new product. We now know which card member is more likely to take an auto loan. This has resulted in more focused marketing campaigns and reduced costs, with improved customer satisfaction," says Sedjwick John Joseph, Head, Business Intelligence Unit, Standard Chartered Bank.
2. Another example is of iSeva which provides BPO services such as inbound customer care, outbound customer acquisition, and transaction and data processing to the mortgage, banking, and high-technology industries. CRM is one of the key applications used by iSeva for managing the business. The major factors affecting CRM strategy of iSeva are:
 - **Closely Integrated channels:** The CRM initiative helps in integrating different channels like e-mail, and this knowledge based data helps in building the

efficiency of service teams. It also helps in identifying the customer and providing service to them each time without asking too many basic questions.

- **Scalability of the CRM Infrastructure:** The CRM infrastructure should allow the company to quickly satisfy the increasing demands of clients.
 - **Reporting Capabilities:** For improved management of resources CRM infrastructure should possess robust reporting capabilities on operations.
 - **One View:** There should be a single, unified view of the customer.
3. Zip Telecom has adopted a two-way CRM strategy where BI plays an important role. Firstly, CRM focuses on incremental sales which are achieved by adding customers every month. Secondly, it focuses on service quality and control where BI helps it in building relationship with the customer.

BUSINESS INTELLIGENCE FOR THE INDIAN RETAIL INDUSTRY

CRM systems and Business Intelligence provide a holistic approach to customers by focusing on transactions to build long-term, profitable customer relationships. Companies focus on their most profitable customers, products and channels. The large chain superstore maintains customer database which includes information about individual customers or prospects that is current, accessible and actionable for marketing purposes. This helps these large retailers to gain advantage over independent retailers by creating new ideas for attracting customers. They are also more powerful than independent retailers in supply chain.

But embracing the customer's imagination for long has remained an elusive dream for marketers. Due to changing tastes and preferences, increasing competition, demographic shifts, and the youngsters' attitude of "let's try something new", customer disloyalty has increased. Today retailers are working harder to reach and understand their customer needs. They have started using new technologies like CRM, Business Intelligence, Economic Resource Planning (ERP), digital content creation (DCC) etc., to compete in this volatile market. Smart retailers have reoriented their business around the customer.

The competitive game is changing for retail. Retailers have realized that using latest technology can help

them to better understand customer buying behavior and to increase sales as well as profitability by reducing their operational costs. So, retailers are now paying significant attention to BI software, specifically in the areas of price, promotion, and markdown optimization, customer intelligence, and operational intelligence. There are certain reasons that have led retailers to adopt BI software such as increased competition, more profitability out of less space, prevalent credit card usage, internet shopping, loyal customers, and RFID (radio frequency identification). The above sources have helped in creating a lot of data that retailers are ready to appreciate and use.

In present scenario the need for cross-channel analytics is one of the biggest trends in the Indian market. Technology-savvy consumers are increasing day by day and they are demanding greater speed, access and collaboration. According to the Nice Global Consumer Survey 2012, it was found that the Web continues to be the most popular self-service channel that's growing the fastest as well as smartphone applications and social networking sites have grown in popularity with over 40% of respondents noting that they had increased their use of these channels.

Today Indian businesses want real-time insights as that enable enterprises to better connect with the consumer during the interaction. For example, a business can convert an enquiry call into a sales opportunity by using real-time analytics, identify and capture the opportunity while the interaction is in progress. Another example that we can consider is most grocery chains sell their bar code scanner data to organizations such as Information Resources Inc. (IRI) who, in turn collate the data and sell it to grocery wholesalers and vendors. If individual firms want to find out how well their (and their competitors) special offers worked in the marketplace they can perform it simply by examining how well the offer worked previously, how well it worked in the current situation, and can forecast the future effects of the promotion. This way a firm can easily decide whether to continue the offer or change it.

Security and Compliance Regulations

Business Intelligence tools offer great opportunities for the business community and consumers, however it also brings with it some significant risks. The explosive worldwide growth of open networks (banking sector etc.) has raised a legitimate concern with respect to the adequacy

of security measures for information and communications system and the data which is transmitted and stored on those systems.

However, the other factor that is relevant here cost optimization. The expense involved in providing security must be weighed against the security expectations of transacting parties. For example credit card companies generally work out the economics of increased security against an evaluation of what they can afford to absorb in fraud losses each year. For customers, the convenience of the credit card system may overshadow other considerations as long as the costs do not exceed a sustainable level, that defensive mechanisms exist to minimize the security problem and that the liabilities of individual customers can be limited. Retailers are also leaning towards lowering operating costs, optimizing existing infrastructure and achieving strategic application development.

Indeed, customer attitudes to security in general are varied and sometimes ambiguous. Individuals make purchases over the telephone using credit cards, with little knowledge about the security of these transactions and some seem already prepared to use credit cards on the internet even though there was virtually no confirm security. A firm that expresses concerns about the security of “on-line” transactions may completely overlook the negative security implications of transaction media like the telephone and fax machine, simply because these media are more familiar. Cryptography is used as a security system but adequate security is not provided by it alone.

The large data collected is one of the biggest advantages for analytics. The vast amount of data that is available for analysis is exploding. For forward-thinking enterprises, big data can create value. Whereas BI traditionally performs structured analysis and provides good quantity and quality, the information available to market participants can be increased, which helps in grabbing the opportunities in future.

Few data mining tools can also be used to develop customized models for calculating customer lifetime value:

Customer Loyalty Analysis: It is more economical to retain an existing customer than to acquire a new one. To develop effective customer retention programs it is

important to analyze the reasons for customer disloyalty. Business Intelligence helps in understanding customer disloyalty with respect to various factors which affects customer loyalty.

Cross Selling: Retailers use the vast amount of customer information available to them to cross sell other products at the time of purchase. This effort is largely based on the tastes of a particular customer, which can be analyzed using BI tools based on previous purchases. Retailers can also “up sell” i.e., they can sell more profitable products to the customer at the time of contact.

Product Pricing: Pricing is one of the most crucial marketing decisions taken by retailers. Often an increase in price of a product can result in lower sales and customer opting for the replacement products. Using data warehousing and data mining, retailers can develop sophisticated price models for different products, which can establish price-sales relationships for the product and how changes in prices affect the sales of other products.

Target Marketing: Retailers can optimize the overall marketing and promotion effort by targeting campaigns to specific customers or groups of customers. Target marketing can be based on a very simple analysis of the buying habits of the customer or the customer group. But increasingly data mining tools are being used to define specific customer segments that are likely to respond to particular types of campaigns.

Types of Retailers Using BI & Its Operational Benefits

In today’s competitive world BI plays a very important role in different areas like merchandising, marketing, logistics, store operations, and call center etc. With the help of BI techniques, retailers can analyze operation data and maximize the profit of business.

Merchandising – Merchandising includes all those activities which are related to sale of product to the customers. It helps in attracting the customers that helps in revenue generation. BI provide the useful information by that companies can properly utilize the manpower.

Marketing – Marketing is to analyze the preference of consumers and to produce the product accordingly. Retailers study market trends by dividing areas into

different groups according to demographic factors and geographical factors and increase the sales by promotion and campaigning.

Operation – A better analysis demand is helpful in enhancing productivity by managing product price, promotion, and manpower.

BUSINESS INTELLIGENCE TOOLS

The most popular business intelligence tools are listed below in accordance to their rising worth, rising business intelligence intricacy, rising functionality, and diminishing number of total clients.

1. **Excel:** Excel is one of the business intelligence tools, which is useful for many purposes. Excel is reasonable, easy accessible and consists most of the functions that is helpful for the user to convert complex data into useful information. Spreadsheets are used to store various data. It performs basic mathematical operation, finding values such as profit or loss, calculating average, maximum, minimum etc., which helps for the business growth and time saving. Even for domestic use, the competence to export numbers to Excel usually need to be created.
2. **Reporting Tool:** The reporting tool is useful for the user, it provides flexibility in context, program, and with the help of reporting tool a user can easily operate one's own account. The main applications for a reporting tool are "dashboard and commercial operations reporting". The various functions of reporting tools are programming, information source link competence, security benefit, in-house verification, export competence and integration with the Microsoft Office. Some famous reporting tools are Business Objects, Actuate and Cognos.
3. **OLAP Tool:** OLAP (online analytical processing) is an important tool of Business Intelligence system that facilitates a user to easily and selectively extract and view data from different points of view. OLAP tools make information simpler for them so that they can interpret it from different perspectives. OLAP tools structure data hierarchically – the way managers think of their enterprises, but also allows business to modify that data, changing the relationships to get more detailed insight into corporate information. In other words, OLAP tools are utilized

for multidimensional study. There are two kinds of OLAP tools. They are:

- **MOLAP (Multidimensional OLAP):** When a user creates an account request, the MOLAP tool speedily creates all information because all the information is before handedly arranged within the dice.
 - **ROLAP (Relational OLAP):** The ROLAP tool classically comes with a "Designer" part, where the information stockroom manager can identify the association between the relational desks, along with the measurements, characteristics, and chain of command map to the fundamental catalog tables.
4. **Data Mining Tool:** It is the technique of removing sample from information and is becoming an increasingly more considerable equipment to convert the complex data into information. It is used in different processes i.e., advertising, fraud finding, supervision etc. Data mining tools are generally for business users. In a company, expert professionals use data mining tool in converting the data into information. These tools are used for identifying association between various factors. Data mining can also be used to extract data from elsewhere in your industry, such as price lists and user data.

FINDINGS

In this highly competitive world, consumers are demanding quicker and efficient services along with good quality product by the businesses. To survive in a competitive world companies must fulfill the demand and expectation of consumers. Companies will have to focus on their Business Intelligence systems to predict the future trends and prospects properly. Business intelligence users are beginning to demand real time Business Intelligence or near real time analysis relating to their business, particularly in frontline operations. They will come to expect up-to-date and fresh information in the same fashion as they monitor stock quotes online; monthly and even weekly analysis will not suffice. In the not too distant future companies will become dependent on real time Business Information in much the same fashion as people expect to get information on the internet in just one or two clicks.

In future, Business Information will become more transparent when the final consumers can easily access

the data and are able to view information related to performance of particular industry or segments. So in the near future, the business intelligence system also requires certain changes as soon as the demand and customer expectation increases. It is therefore crucial that business technology improve at the same pace or even faster one to withstand this competition.

CONCLUSION

Company's success highly depends on its customers. Without them a company cannot exist. So it is very important that firms have information on their preferences. Firms must quickly adapt to their changing demands. Business Intelligence facilitates a company to collect the data related to current trends and come up with innovative products or services so that it helps to adopt flexible approach regarding customer demand.

Retailers are known for innovation. Nowadays, the most innovative companies are those who are using Business Intelligence techniques to meet out the demand of customers and survive in this competitive environment. The retailers also become conscious that Business Intelligence can be used properly only when it is applied with care and complete support from the top management. With BI superior tools, now employees can also easily convert their business knowledge via the analytical intelligence to solve many business issues, like increased response rates from direct mail, telephone, e-mail, and internet delivered marketing campaigns. With the help of Business Intelligence, firms can identify their most profitable customers and the underlying reasons for those customers' loyalty, as well as identify future customers with comparable if not greater potential.

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