

# Marketing Information, Analytics, and Intelligence: Roles in Customer Relationship Management

Pratap Chandra Mandal, Indian Institute of Management, Shillong, India

## ABSTRACT

Companies collect customer information, store the information in databases, and analyze it to generate customer insights. The study focuses on the roles of customer relationship management (CRM) in making proper usage of the information, marketing analytics, and the marketing intelligence generated to develop fruitful customer relationships. Companies employ advanced marketing analytics and big data to understand customers and implement CRM effectively. The customer insights generated should be distributed and used properly. Although companies benefit from implementation of CRM, the implementation has its own drawbacks. Implementation of CRM will not solve all issues related to customers. It has its own drawbacks. However, proper implementation and effective utilization of CRM will help companies in developing customer relationships, in growing their businesses, and in achieving business excellence in the long run.

## KEYWORDS

Big Data, Customer Insights, Customer Touch Points, Internal Database, Marketing Information System, Marketing Insights

## 1. INTRODUCTION

Marketers collect information about customers to understand their needs, wants, and preferences, and to gain customer insights (Carmen & Marius, 2016). The information is collected through competitive marketing intelligence which is stored in internal databases maintained by companies. However, the stored information requires additional analysis. Managers may need help while applying the information to gain customer and market insights that will improve their marketing decisions (Mandal, 2018). Marketing managers may use advanced marketing analytics to learn more about the relationships within the sets of data. They may apply analytical models to improve the quality of analysis. Such analysis may help marketers make better decisions and may help in developing better customer relationships (Al-Weshah, 2017).

Marketing information needs to be processed and analyzed carefully. Once the analysis is over, it must be made available to the right decision-makers at the right time (Khan, Ehsan, Mirza, & Sarwar, 2012). The study discusses the important issue of analysis of marketing information without which it is impossible to generate customer insights. Customer relationship management (CRM) plays a major role in the analysis of marketing information. CRM has a narrower meaning with respect to management of data. CRM refers to capturing and using data from all sources to manage

DOI: 10.4018/IJBSA.287618

This article published as an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>) which permits unrestricted use, distribution, and production in any medium, provided the author of the original work and original publication source are properly credited.

customer interactions, to engage customers, and to build customer relationships (Chalmeta, 2006). However, CRM also has a broader implication with respect to formulation of marketing strategies and development of fruitful and long-term relationships with customers.

It is important to understand the roles of marketing information, marketing analytics, and marketing intelligence in the implementation of customer relationship management. However, there are few studies which deal with the connections and the inter-connections among marketing information, marketing analytics, marketing intelligence, and their roles in customer relationship management. The study aims to address this research gap.

The objective of the study is to focus on the roles of CRM in understanding customers and their requirements with the help of analysis of relevant marketing information and generation of marketing intelligence. The study focuses on the roles of marketing analytics, big data, and marketing intelligence in the generation of marketing and customer insights. The study also reiterates that implementation of CRM is only a step forward to understand customers better. However, CRM has its own drawbacks and will not solve all issues related to customers.

The methodology adopted is the qualitative and the conceptual analysis of the literature on marketing information, marketing analytics, marketing intelligence, and customer relationship management. So, these may be considered as the variables for the study. Primary data was not collected and empirical analysis was not done.

The contributions and the novelty of the study lie in the fact that an in-depth discussion of collection of information from customers, storage and analysis of the collected information, roles of marketing analytics and big data in the generation of marketing insights and CRM implementation, various strategies related to CRM, and the reasons for the failure of CRM implementation are discussed. Previous studies do not seem to have investigated the combined roles of marketing information, marketing analytics, big data, and marketing intelligence in the generation of customer insights and in the implantation of CRM. The discussions have both theoretical and managerial implications. Academicians will understand the types of information which should be collected for generating customer insights and their roles in CRM implementation. Academicians may conduct a further review and suggest improved strategies for CRM implementation. The discussions will also sensitize managers about the importance of CRM and its strategic impact. Efforts were made to include the relevant and the latest literature related to customer relationship management and the connections among information collected from customers, customer relationship management, and its roles in building relationships and decision-making in an organization. Practitioners will realize the importance of collection of relevant marketing information, marketing analytics, big data, marketing intelligence, and customer insights for the successful implementation of CRM. They will realize that there might be failures in CRM implementation and CRM implantation will not be successful without proper organizational arrangements. They will also realize that analysis of relevant customer information and subsequent CRM implementation will help them grow their businesses in the long run.

The study is structured as follows.

Section 2 highlights the methodology adopted in the study. Section 3 discusses the many and the varied methods companies apply to collect information from customers. Section 4 discusses about the storage and the analysis of information and the roles played by marketing information systems and databases in doing so. Section 5 focuses on the linkages between marketing information and customer relationship management. Marketing analytics and big data play important roles in the analysis of information and in the generation of customer insights. These roles are discussed in section 6. Section 7 focuses on the distribution and the usage of the generated marketing insights by the concerned stakeholders. Implementation of CRM is not without drawbacks and such drawbacks are discussed in section 8. Section 9 discusses the strategic roles played by CRM and their implications. Sub-sections 9.1 and 9.2 focus on the theoretical implications and the managerial implications of the study respectively. Section 10 concludes the study with sub-sections 10.1 and 10.2 focusing on the limitations of the study and the avenues of future research respectively.

## 2. METHODOLOGY

The methodology adopted is a qualitative and conceptual analysis of the literature on marketing information, marketing analytics, marketing intelligence, and their connections and inter-connections with customer relationship management. The study discusses about collection, storage, and analysis of marketing information. It discusses about the linkages between marketing information and customer relationship management. Marketing analytics and big data play an important role in customer relationship management. Distribution and usage of marketing insights gained from marketing information with the help of marketing analytics and marketing intelligence are discussed. Implementation of CRM based on marketing insights may not always be beneficial for organizations. These issues are discussed.

## 3. COLLECTION OF MARKETING INFORMATION FROM CUSTOMERS

Companies apply many and varied methods for collecting information from customers. Sometimes, companies have too much information available about customers (Mandal, 2019). Companies try to capture information about customers at every customer touch point. Customer touch points include all instances where customers come in contact with companies. These touch points may be customer purchases, sales force contacts, service and support calls, marketing communications, website visits, satisfaction surveys, credit and payment interactions, and market research studies (Mladenow, Mollova, & Strauss, 2018).

Marketers require context, insights, and inspiration to make decisions. They require comprehensive and up-to-date information about macro trends in the business environment. Companies also require information about micro trends specific to their businesses (Shukla & Pattnaik, 2019). Based on such information, companies require identifying significant marketplace changes. Consequently, companies should have systematic and organized methods of collecting information about customers (Khanna, 2014). Companies spend time interacting with consumers, observing the behavior of consumers, and observing competitors and other outside groups. Most of the companies maintain marketing information systems that provide rich and updated information about needs, wants, preferences, and behavior of individuals (Atsmon, Child, Dobbs, & Narasimhan, 2012).

Companies sometimes go out in the field and collect information directly from their customers. For example, DuPont wanted to understand personal pillow behavior of consumers for its Dacron Polyester unit. The unit supplies filling to pillow makers and sells its own Comforel brand (Warren, 1998). Although it is challenging to conduct such research, DuPont conducted the research to generate better customer insights. People do not give up their old pillows. On the contrary, people show high emotional attachment with their pillows. In a survey, 37 percent of the respondents described their relationship with their pillows as being like that of an “old married couple”. Another 13 percent described the relationship was like that of a “childhood friend”. Based on the behavior and the attitudes of individuals towards their pillows, DuPont was able to identify distinct consumer groups. There were stackers (23 percent), plumpers (20 percent), rollers or folders (16 percent), cuddlers (16 percent), and smashers (10 percent) who fold their pillows into a comfortable shape. The survey also revealed that women are more likely to plump, and men to fold. It was evident from the survey that the market was dominated by stackers. This provided a valuable customer insight. DuPont decided to sell pillows packaged as pairs. The company also decided to market different levels of softness or firmness (Warren, 1998).

Marketers are aware that consumption patterns vary across and within countries (Khanna, 2014). For example, the Swiss consume the most chocolate on a per capita basis. The Czechs consume the most beer, the Portuguese the most wine, and the Greeks the most cigarettes (Michman, Mazze, & Greco, 2003). Consumption patterns vary within the boundaries of the same country. For example, in the United States, Seattle’s residents buy the highest number of toothbrushes per person than in

any other U.S. city. People in Salt Lake City eat more candy bars, New Orleans residents use more ketchup, and people in Miami drink more prune juice (Michman et al., 2003).

Companies which collect relevant information are able to understand the markets better, develop offerings according to the market requirements, and are able to create better marketing planning (Kaur, Chahal, & Gupta, 2019). The Michigan Economic Development Corporation (MEDC) wanted to understand and serve its visitors better. MEDC collected the demographic information of its visitors and analyzed the information and those of competing Midwestern cities to create a new marketing message and tourism campaign (Coster, 2009). The information and the subsequent analysis helped MEDC attract 3.8 million new trips to Michigan, \$805 million in new visitor spending, and \$56 million in incremental state tax revenue over the period 2004-2008 (Coster, 2009). Research, in-depth insights, and well-developed marketing campaigns helped MEDC to increase tourism and tax revenue for the state of Michigan.

Companies use marketing information system (MIS) to collect, organize, and distribute information about customers to their marketing managers. A marketing information system (MIS) consists of people, equipment, and procedures to gather, sort, analyze, evaluate, and distribute needed, timely, and accurate information to marketing decision-makers. It relies on internal company records, marketing intelligence activities, and marketing research (Paksoy, Özbezek, & Kilinc, 2020). Companies develop marketing information systems based on a number of considerations. Information is collected and stored in an MIS based on what marketing managers think they need, what they really need, and what is economically feasible. Many companies set up an internal MIS committee to understand the information requirements of marketing managers (Khanna, 2014). Marketing managers identify important opportunities and detect potential problems by relying on internal reports of orders, sales, prices, costs, inventory levels, receivables, and payables (Atsmon et al., 2012).

The order-to-payment cycle is the heart of internal records. Sales representatives, dealers, and customers send orders to the company. Such orders contain information about customers. Based on the information available in the orders, the sales department prepares invoices, transmits copies to various departments, and back-orders out-of-stock items. Shipping and billing documents are prepared for those orders which need to be shifted to customers. The documents are sent to various departments. Customers always want prompt service and timely delivery of their orders. Companies require speeding up their services while maintaining accuracy. Many companies use internet and extranets to improve the speed, accuracy, and efficiency of the order-to-payment cycle (Atsmon et al., 2012).

Fossil Group Australia designs and distributes accessories and apparels globally. The company requires latest information about pricing and inventory while taking wholesale orders. However, its account executives lacked this vital information (Michman et al., 2003). This resulted in cases where products were out of stock, especially for high demand items. The situation created problems for retailers who could not meet the demands of customers. Consequently, the reputation of the company was affected. Fossil Group required an immediate solution to the problem. The firm deployed a mobile sales solution that connected account executives with current inventory data. The initiative allowed the firm to reduce the number of sales tied in back orders by 80 percent. The initiative also allowed Fossil Group to provide retailers with actual inventory levels and to speed up its delivery time. Orders were shipped in hours instead of days (Michman et al., 2003).

Companies use sales information systems to generate timely and accurate reports on current sales. Wal-Mart maintains a sales and inventory data warehouse which captures data for every customer, every store, every day, and refreshes it every hour (Soegoto & Eliana, 2018).

Panasonic is in the business of making digital cameras, plasma televisions, and other consumer electronics. Panasonic was in a tough situation when it was unable to generate the desired amount of revenue (Bughin, Lund, & Manyika, 2015). Panasonic adopted a vendor-managed inventory solution to understand the specific requirements of customers. Panasonic increased the availability of products as per customer requirements from 70 percent to 90 percent. Panasonic was able to perform efficient channel management. Vendor-managed inventory solution allowed Panasonic to reduce the time

required to supply products from 25 weeks to 5 weeks within a year of its adoption. The unit sales of the targeted plasma television rose from 20000 to approximately 100000 (Bughin et al., 2015). Best Buy was the first retailer which was covered by the vendor-managed inventory model. Best Buy helped Panasonic to become a Tier-1 “Go-To” brand for plasma televisions. Previously, the brand was a Tier-3 one (Bughin et al., 2015). Panasonic was able to achieve this significant improvement because of its decision to adopt a vendor-managed inventory solution.

Technological developments make the collection of information easier for companies. Companies use cookies and records of website usage stored on personal browsers to gather information about customers. Customers willingly agree to enable cookies while visiting websites of companies because cookies help customers to access websites which they have already visited. A survey confirms that more than 49 percent of individuals agree that cookies are important for them while using the internet. Customers expect customized marketing offers and deals based on their acceptance to enable cookies. As a result, customers enable cookies willingly and do not delete cookies (Khanna, 2014). Apart from installing cookies, companies also keep track of the online browsing behavior of individuals to understand their psychology, requirements, and preferences.

Companies should analyze the collected information critically and should interpret the results carefully to avoid drawing wrong conclusions. For example, Michael Dell of Dell Computers gave this illustration: “If you have three yellow Mustangs sitting on a dealer’s lot and a customer wants a red one, the salesman may be really good at figuring out how to sell the yellow Mustang. So the yellow Mustang gets sold, and a signal gets sent back to the factory that, hey, people want yellow Mustangs” (Holstein, 2000). This example explains why companies should analyze the collected data carefully to avoid making wrong interpretations.

#### **4. STORAGE AND ANALYSIS OF MARKETING INFORMATION**

Companies store the collected data in a number of databases maintained for the purpose. There may be customer, product, and salesperson databases. The data stored in different databases should be connected and integrated properly. A customer database will contain the details of individual customers like customer’s name, address, past transactions, and sometimes even demographics and psychographics (activities, interests, preferences, and opinions) (Mandal, 2017). Companies can analyze their customers based on certain parameters and criteria. The analysis will help companies to do target-based marketing. Companies will be able to customize offers and marketing programs catering to individual requirements of customers. Instead of sending mass communications to all customers, a company can choose those customers whom it wants to target based on certain criteria. A company may apply the combined criteria of recency, frequency, and monetary value (RFM) to generate RFM scores for each customer (Asllani & Halstead, 2015). Customers are then ranked based on their RFM scores. Marketing offers are sent only to those customers whose RFM scores are high. The process helps the company cut down on its cost of targeting and saves time and mailing expenses. Further, since the targeting of customers is much more focused based on the analysis and interpretation of data, the process may help companies achieve a double-digit response rate (Asllani & Halstead, 2015).

Companies provide data to decision makers. Analysts mine the data to generate customer insights. They focus on recent trends among customers, unexplored customer segments, and opportunities, and other useful information. Analysts combine information from various databases and the information available from salespersons to generate deeper customer insights. Wells Fargo applied such analytics to track and analyze the bank transactions made by its 10 million retail customers (Der Hovanesian, 2004). The bank transactions might have been done online, at bank branches, or at ATMs. Wells Fargo combines the transaction data with the information provided by customers. Based on such analysis, Wells Fargo is able to provide targeted marketing offers to their customers according to their requirements and preferences (Mandal, 2019). Wells Fargo is able to sell four products to each

customer on an average compared to the industry average of 2.2 products per customer. Best Buy is another company which does targeted marketing based on the analysis of customer information. Best Buy assembled a 15-plus terabyte database with seven years of data on 75 million households. It collects information about customers from all possible customer touch points which include phone calls, mouse clicks, and delivery and rebate-check addresses. Sophisticated algorithms and programs are then used to categorize the customers such as “Buzz” (the young technology buff), “Jill” (the suburban soccer mom), “Barry” (the wealthy professional guy), and “Ray” (the family man). Best Buy also applies customer value model to analyze the value generated by each customer for the company. The model measures transaction-level profitability and factors in customer behaviors that increase or decrease the value of the relationship. Such in-depth knowledge about customers allows Best Buy to employ precision marketing and suggest incentive programs which generate higher response rates (Zabin, 2006).

Information about customers might be scattered in an organization. It may be stored in separate databases which are maintained by different departments of the organization. Companies should organize the information systematically and integrate the information in the form of centralized databases to generate maximum benefits. In addition to that, companies focus on customer relationship management to manage detailed information about customers. This helps in managing customer touch points to maximize customer loyalty (Khanna, 2014).

## **5. MARKETING INFORMATION AND CUSTOMER RELATIONSHIP MANAGEMENT**

Marketers collect information about customers through many and varied sources. Marketers may analyze the information for all the customers or groups or clusters of customers or for individual customers. Analysis of individual customer data presents special problems (Sony, 2020). Recent developments in technology allow companies to collect enormous amount of information about their customers and the marketplace. Companies employ *big data* to know about their customers (Nusca, 2014). Even with the enormous amount of information already available, smart companies capture information at every possible customer touch point (Alsever, 2013). Such touch points may include sales force contacts, customer purchases, satisfaction surveys, market research studies, credit and payment interactions, web and social media site visits, and service and support calls – every contact point which customers and companies may have between themselves (Nusca, 2014).

Marketing information is scattered throughout the organization and marketing managers should put in effort to search for relevant marketing information from separate company databases (Hung, 2019). Companies turn to customer relationship management (CRM) to overcome such problems. CRM helps companies to manage and organize detailed information about individual customers and to carefully manage customer touch points to maximize customer loyalty (Purohit & Thakar, 2019).

CRM consists of a number of sophisticated softwares and analytical tools from companies such as SAS, Oracle, Salesforce.com, and Microsoft. The softwares and tools integrate information about customers and marketplace from all sources, analyze the information, and apply the results to build stronger customer relationships (Mousavy, Rad, Bujarpor, & Mashali, 2012). CRM integrates all types of customer information available with companies. It provides a 360-degree view of the information about customers available with sales, services, and marketing teams. Such integration helps in building customer relationships (Purohit & Thakar, 2019).

MetLife developed a CRM system which it calls “The MetLife Wall” (Alsever, 2016). The sales and service representatives of MetLife required latest, updated, and relevant customer information to serve their customers more effectively. Such customer information included different records, transactions, and interactions stored in dozens of different company data locations and formats (Alsever, 2013). The sales and service representatives found it difficult and challenging to integrate information from varied sources. The MetLife Wall solves that problem. The Wall uses an integrated

interface which provides a consolidated view of a specific MetLife customer. The CRM system draws data from 70 different MetLife systems containing 45 million customer agreements and 140 million transactions (Alsever, 2016). All the information about a customer is shown on a single screen and as a single record. The information is also updated in real time. With the help of the MetLife Wall, sales and service representatives can instantly view the relevant details about a customer – various policies, transactions, and claims filed and paid. The Wall also provides details about all interactions which a customer had with MetLife across all the customer touch points of the company (Alsever, 2016). The Wall has improved the productivity of sales and service representatives of MetLife and customer service and cross-selling efforts. A MetLife marketing executive comments that The MetLife Wall had “a huge amount on customer satisfaction” (Alsever, 2013).

Proper application and usage of CRM allow companies to understand customers and their requirements better, provide higher levels of customer service, and build long-term customer relationships. Marketing managers can identify high-value customers, target them more effectively, cross-sell the company’s products, and create and deliver offers which are customized for individual requirements.

## **6. MARKETING ANALYTICS AND BIG DATA**

Big data allows companies to have access to all types of information. However, collection of data and information are of no value unless they are converted into actionable customer insights. Marketers and market researchers should mine and analyze the data to identify the relevant data which will help them to generate customer insights (Nusca, 2014). One marketing executive comments, “It’s actually (about getting) big insights from big data. It’s throwing away 99.999 percent of that data to find things that are actionable.” Another data mining expert comments, “Right data trumps big data” (Nagarjuna, 2015). All the above are the responsibilities of marketing analytics.

Marketing analytics consists of the analysis tools, technologies, and processes by which marketers dig out meaningful patterns in big data to gain customer insights and gauge marketing performance (Kihn, 2015). Marketing analytics is applied by marketers on complex data sets. Such data sets may be collected from web, mobile, and social media tracking; customer transactions and engagements; and other big data sources. For example, Netflix maintains an extensive customer database. It applies marketing analytics to gain customer insights. Based on such insights, Netflix may recommend fuel options to subscribers, decide what programming to offer, and develop its own customized content to the preferences of individual customers and serve them better (Atwal, 2020).

Food giant Kraft applies marketing analytics to gain customer insights (Bashir, Papamichail, & Malik, 2017). Kraft has a number of classic brands which include Miracle Whip, JELL-O, Kraft Macaroni, Kraft Cheese, Planters nuts, Lunchables, Philadelphia Cream Cheese, and Oscar Mayer. These brands are found in 98 percent of all North American households (Kumar, 2019).

Kraft has a lot of marketing data which have been collected over a number of years through interactions with customers. It also has a social media monitoring hub called Looking Glass which helps Kraft in collecting information (Dan, 2014). Looking Glass tracks consumer trends, competitor activities, and more than 100000 brand-related conversations daily in social media and on blogs. Kraft interacts with its customers through a number of customer touch points which include Kraft Food & Family magazine, email communications, and more than 100 web and social media sites that serve its large brand portfolio (Dan, 2014). Because of such interactions and 18 years of research, Kraft is able to collect customer data across 22000 different attributes (Bashir et al., 2017).

Kraft applies advanced marketing analytics techniques to mine customer data and gain customer insights. Such insights are used to develop big data-driven marketing strategies and tactics. The insights help Kraft in taking decisions for new product development, and in creating more focused and personalized web, mobile, and social media content (Bashir et al., 2017). Marketing analytics helped Kraft to identify more than 500 custom target segments. Kraft has detailed insights about

wants and preferences of customers in those segments. One analyst comments that Kraft knows “their dietary (characteristics and) restrictions – gluten-free, a diabetic, low calorie, big snacks, feeding a big family, whether they are new cooks” (Neff, 2014). Such intricate details about customers are used by Kraft to customize the offers and digitalize interactions with customers to the finest details. One analyst observes, “If Kraft knows you’re not a bacon user, you will never be served a bacon ad” (Neff, 2014). Such sophisticated marketing analytics let Kraft target the right customer with the right message in the right medium at the right moment.

Applications of customer relationship management and marketing analytics have their own drawbacks. They have associated costs and risks. Many companies view and consider CRM and marketing analytics only as applications of information technology and ignore the broader perspective. Marketing analysts get occupied with enormous amount of data and miss the bigger picture (Horst & Duboff, 2015). Customer relationships cannot be built and developed only through technology and its applications. Installations of the latest softwares will not help companies to improve customer relationships unless managers understand the fundamentals of customer relationships, realize their implications, and then employ high-tech data and analytics solutions. They should focus first on the R – it is the relationship that CRM is all about.

## **7. DISTRIBUTION AND USAGE OF MARKETING INSIGHTS**

Marketing data and information are of no value unless they are refined and used to make better marketing decisions. Marketing information system should identify who its users are, identify their requirements, and make information available to them as and when they require. This may mean providing regular performance reports, intelligence updates, and reports on the results of research studies (Paksoy et al., 2020).

Marketing managers require information for their routine activities. At the same time, they require access to non-routine information for specific situations and for making instant decisions (Peltier, Zahay, & Lehmann, 2013). For example, a sales manager may require the transaction details of a customer over the past year to understand whether the customer should be targeted in future or not. A brand manager may require understanding the buzz created on social media by a newly-launched brand. Now-a-days, distribution of information involves making information available in a timely, accurate, and user-friendly way (Khanna, 2014).

Companies maintain internal databases and use intranet and internal CRM systems to facilitate the process of analysis. Such resources allow companies to have ready access to research and intelligence information, customer transactions, customer experiences, and shared reports and documents (Khanna, 2014). For example, the CRM system at phone and online gift retailer 1-800-Flowers.com allows frontline employees who are having regular interactions with customers to have ready and real-time access to the latest information about customers (SAS, 2016). When a customer calls, frontline employees immediately check data on previous transactions and other contacts. The latest updates are communicated instantly to the concerned sales representative. The sales representative knows the customer better. Also, because of the improved knowledge about the customer, the customer’s experience becomes easier and more relevant. For example, if an individual purchases flowers regularly, a sales representative can provide details about the best tulip selections and related gifts. Such personalized attention results in higher customer satisfaction and loyalty and also higher sales for the company. A 1-800-Flowers.com executive says, “We can do it in real time and it enhances the customer experience” (SAS, 2016).

Some companies provide access to accounts, products, and other data on demand through extranets to their key customers and value-network members (Travis, 2014). Suppliers, resellers, customers, and select other network members may access a company’s extranet to update their accounts, arrange purchases, and check orders against inventories. Such initiatives help companies to improve levels of customer service. For example, Zappos is an online shoes and accessories retailer which



considers suppliers to be “part of the Zappos family” and a key component in its quest to deliver “WOW” through greater customer service. Zappos considers its suppliers as value partners and shares information with them. Zappos maintains extranet login called Zappos Unified User Login (ZUUL) for its suppliers. The suppliers are provided full access to brand-related Zappos’ inventory levels, sales figures, and even profitability (Travis, 2014). Suppliers are able to interact with the Zappos creative team through the ZUUL login. Suppliers can suggest orders to the creative team for Zappos buyers to approve (Travis, 2014).

Modern and latest technological developments allow marketing managers to have direct access to information about companies at any time and from any location. They can login from practically anywhere – coffee shops, airport lounges, or home office and from any device – tablet, mobile phone, or laptop. Such instant access allows marketing managers to have the latest, updated, and relevant information which they can modify to suit their own needs.

## **8. DOWNSIDE OF CUSTOMER RELATIONSHIP MANAGEMENT**

Companies benefit when they understand the importance of CRM and implement CRM properly. However, companies may experience a number of issues while implementing CRM. Some of the problems which may prevent a firm from effectively implementing CRM are mentioned:

1. It may not be always practical and beneficial for companies to maintain databases. In such cases, it might be difficult to implement CRM. Implementation of CRM and maintaining it may not be practical for products which are bought once in a life time. These products may include buying a house or a grand piano. Customers will not buy such products for a second time. So, it will not be worthwhile for companies to implement CRM in such cases because it may result in poor utilization of resources (Dreze & Nunes, 2008). Implementation of CRM will not be effective when customers are not loyal to brands and there is a lot of customer churn (Fredrick & Christopher, 2019). In some other cases, the unit price of the product may be so less that it may not be practical and beneficial for companies to implement CRM (Peltier et al., 2013). Implementation of CRM will not be cost-effective for products like candy bars and pens for which the unit price of the product and customer life-time value (CLV) are very low. The cost incurred in collecting information about customers will outweigh the benefits received on implementation of CRM (Peltier et al., 2013). Sometimes, a lot of intermediaries may be present between the seller and the buyer. Implementation of CRM may not be effective because there is no direct contact between the seller and the ultimate buyer (Kumar & Reinartz, 2018).
2. Companies require building and maintaining a customer database for the successful implementation of CRM. Building and maintaining a customer database requires substantial investment in computer hardware, database software, analytical programs, communication links, and skilled staff (Ližbetinová, Štarchoň, Weberová, Nedeliaková, & Juříková, 2020). Data is captured from customers at all possible customer touch points. However, it is not always possible to collect the right data. It is also difficult to capture all occasions when companies interact with customers (Peltier et al., 2013). There are instances when companies found little or no improvement from implementing CRM. For example, Deloitte Consulting found that 70 percent of the firms which implemented CRM found little or no improvement (Peltier et al., 2013). The primary reasons of failure of CRM were that the CRM system was poorly designed, it became too expensive, users did not make much use of it or report much benefit, and collaborators ignored the system (Khanna, 2014). Companies focus more on improving customer touch points and collecting information from customers. However, corresponding changes required in internal structures and systems are not done (Khanna, 2014).
3. It is difficult for companies to motivate the employees to become customer-oriented and to focus on building relationships with them. Employees are more comfortable in practicing traditional

transaction marketing than in practicing CRM (Beirau, 2020). It is difficult to change the attitude and mindset of employees. Implementation of effective CRM requires managing and training employees, dealers, and suppliers (Solangi, Talpur, Shaikh, Mushatque, & Channa, 2019).

4. Customers are not always willing to develop relationships with companies. Customers are more concerned about maintaining their privacy and security which they feel will be at threat if they maintain relationships with companies. Customers worry that companies may collect too much personal and sensitive information from the transactions (Rafaeli et al., 2012). Companies require assuring customers about the privacy and the security of information shared by them with companies. Companies should ensure that the information shared by customers is not misused. They should explain their privacy policies to their customers. Companies should allow customers to opt out from their information being stored and utilized. Companies can use customer information only after obtaining explicit consent from customers. European countries are highly protective of customers' private information. The European Union passed a law handicapping the growth of CRM in its member countries (Rafaeli et al., 2012).
5. Basic assumptions about CRM may not always hold true. Companies assume that high volume and loyal customers will generate higher revenues and profits and will help businesses grow. On the contrary, loyal customers are aware of their value to companies and have high expectations from companies. Loyal customers expect and demand more benefits at lower prices. They may not also approve of companies focusing more attention on other customers. For example, when eBay focused its attention on big corporate customers such as IBM, Disney, and Sears, the businesses of many small mom-and-pop stores got affected. Such stores disapproved the CRM strategy of eBay because they felt that they had helped eBay to build its brand initially (Swartz, 2002). It is believed that delighted and loyal customers spread more positive word of mouth than other customers. However, loyal customers may not always be the best ambassadors for a brand. One study revealed that those customers who were high on behavioral loyalty were less active word of mouth marketers than customers who were high on attitudinal loyalty and expressed greater commitment to the company (Reinartz & Kumar, 2002).

Companies should be aware of the above aspects before and during CRM implementation. Otherwise, CRM implementation may not be feasible and realistic.

## **9. DISCUSSIONS**

The marketing process starts with a complete understanding of the marketplace and consumer needs and wants. Customer information should be converted into meaningful customer insights by which companies can produce superior value for customers. Marketing information is also collected about competitors, resellers, and other actors and forces in the marketplace. Marketers do not consider information only as an input for making better decisions but also as an important strategic asset. Proper analysis of marketing information and subsequent implementation of CRM allow companies to formulate effective marketing strategies. The marketing information system forms the basis of customer relationship management. The marketing information system (MIS) consists of people and procedures for assessing information needs, developing the needed information, and helping decision makers use the information to generate and validate actionable customer and marketing insights. A well-designed information system begins and ends with users.

Information stored in MIS requires further analysis which is done with the help of marketing intelligence and marketing analytics. To analyze individual customer data, many companies adopt customer relationship management which consists of special softwares and analysis techniques. CRM helps to integrate, analyze, and to apply the customer data to gain a 360-degree view of customers and build stronger customer relationships. Companies apply marketing analytics to find out patterns in big data and gain customer insights and gauge marketing performance. Marketing information has

no value unless it is utilized to generate customer insights and make better marketing decisions. An MIS must make all the relevant information available to marketing managers and others who make marketing decisions or deal with customers. Decision makers require regular reports and updates and also non-routine information for special situations and on-the-spot decisions. Companies use both intranets and extranets to facilitate the process. Because of the developments and advances in technology, marketing managers can gain direct and instant access to marketing information at any time and from virtually any location.

The study focused on CRM and its roles in collection and analysis of marketing information. Companies implement CRM to develop and to build fruitful relationships with customers. CRM implementation has both advantages and disadvantages. The study discussed about the various issues related to the implementation of CRM and the different situations where a company may not benefit by implementing CRM. Implementation of CRM does not come without significant costs and risks. Companies incur cost in collecting, storing, and mining the data. When it works, implementation of CRM yields more than it costs. The available information should be in a good condition so that analysis can be performed. The relationships which are predicted and developed must be valid and acceptable to customers. For all the above-mentioned reasons, companies should conduct a cost-benefit analysis before CRM implementation.

### **9.1. Theoretical Implications**

Academicians will be able to appreciate the importance of marketing information, marketing analytics, big data, marketing intelligence, and marketing insights in the implementation of customer relationship management and also in generating effective customer insights. They will also be able to realize that customer relationship management is not the solution of all customer-related issues. The issues should be studied in-depth to provide effective solutions.

### **9.2. Managerial Implications**

Companies require doing substantial investment for collecting original customer data, for maintaining the data, and for mining it. Managers have a number of misconceptions regarding CRM. They sometimes regard CRM as a solution for all customer-related problems. The most common misconception about CRM is that it is viewed as a technology and software solution only. Although technology is important, only technology and installation of latest softwares will not help in developing profitable and fruitful relationships with customers. Many companies fail to realize the broader perspective of CRM. Some analysts view CRM as “there is a lot of talk about CRM and these days it usually has to do with a software solution.” Marketing managers should realize that CRM is much more than a software solution. They should start by adhering to “some basic tenets of actual customer relationship management – and then empower them with high-tech solutions.” Companies should realize that CRM has a strategic perspective which is all about building and developing long-term, fruitful, and mutually beneficial relationships with profitable customers.

## **10. CONCLUSION**

The study discussed about the various aspects of collecting information from customers, storage and analysis of information, marketing analytics, big data, marketing and customer insights, and the roles played by customer relationship management in collection, storage, and analysis of information. The connections among marketing information, big data, marketing analytics, marketing intelligence, and customer relationship management were discussed. Marketing information needs to be distributed and used properly to generate relevant customer insights. Customer relationship management is not without drawbacks. Those drawbacks were discussed. Proper implementation of CRM may help companies to achieve the goal of building relationships with customers. In this way, the study aimed to establish

the connections and inter-connections among marketing information, marketing analytics, big data, marketing intelligence, marketing and customer insights, and customer relationship management.

### **10.1. Limitations**

The study aimed at conducting a qualitative and conceptual analysis of the literature and understanding the connections and inter-connections among marketing information, marketing analytics, marketing intelligence, and customer relationship management. Primary data was not collected and empirical analysis was not done.

### **10.2. Avenues of Future Research**

Researchers and practicing managers require keeping themselves updated about the latest information about customers for proper CRM implementation, trends, and developments taking place to understand the roles of CRM in developing relationships and implement better strategies for building customer relationships. Researchers may collect primary data and investigate the roles and importance of marketing information and marketing intelligence in the generation of customer insights and in the effective implementation of customer relationship management in organizations and come up with strategies and initiatives which are actionable. Based on this study, researchers should investigate more about the connections and inter-connections among marketing information, marketing analytics, big data, marketing intelligence, marketing and customer insights, and customer relationship management.

CRM is an important criterion for success in today's competitive business scenario. Relevant information about customers should be available to marketing managers for analysis, for taking decisions, and for CRM implementation. Marketing intelligence and CRM implementation allow marketing managers to understand the marketing environment and formulate marketing strategies for the future. In the age of tough competition and technical developments happening regularly, companies equipped with an understanding of CRM will have an edge over companies who do not give importance to CRM. The discussions in the study will sensitize both academicians and practitioners about the importance of CRM and the necessity of CRM implementation. Researchers should delve more into the practical aspects of CRM implementation and try to investigate the reasons of failure for CRM programs. This will suggest the areas for improvement in CRM implementation. Those areas should then be worked upon and should be improved so that CRM programs are effective. Proper implementation of CRM will define relationships with customers, and help companies to grow their businesses. Those companies exploiting CRM will succeed in the competition.

## REFERENCES

- Al-Weshah, G. A. (2017). Marketing intelligence and customer relationships: Empirical evidence from Jordanian banks. *Journal of Marketing Analytics*, 5(3-4), 141–152. doi:10.1057/s41270-017-0021-7
- Alsever, J. (2013, November 18). Technology is the Best Policy. *Fortune*.
- Alsever, J. (2016, June). 5 Lessons Learnt from the MetLife Wall. *Insurance Networking News*.
- Asllani, A., & Halstead, D. (2015). A multi-objective optimization approach using the RFM model in direct marketing. *Academy of Marketing Studies Journal*, 19(2), 65.
- Atsmon, Y., Child, P., Dobbs, R., & Narasimhan, L. (2012). Winning the \$30 trillion decathlon: Going for gold in emerging markets. *The McKinsey Quarterly*, 4(1).
- Atwal, H. (2020). The Problem with Data Science. In *Practical DataOps* (pp. 3–26). Apress. doi:10.1007/978-1-4842-5104-1\_1
- Bashir, N., Papamichail, K. N., & Malik, K. (2017). Use of social media applications for supporting new product development processes in multinational corporations. *Technological Forecasting and Social Change*, 120, 176–183. doi:10.1016/j.techfore.2017.02.028
- Beirau, D. (2020). Theoretical Foundation. In *Which Customers Pay?* (pp. 9–48). Springer Gabler. doi:10.1007/978-3-658-28137-3\_2
- Bughin, J., Lund, S., & Manyika, J. (2015). Harnessing the power of shifting global flows. *The McKinsey Quarterly*, 7(1), 1–13.
- Carmen, R., & Marius, S. (2016). Customer loyalty using customer relationship management. *Management Strategies Journal*, 31(1), 285–288.
- Chalmers, R. (2006). Methodology for customer relationship management. *Journal of Systems and Software*, 79(7), 1015–1024. doi:10.1016/j.jss.2005.10.018
- Coster, H. (2009). Shopping Cart Psychology. *Forbes*, 184(4), 64–65.
- Dan, A. (2014, October 26). How Data Nourishes Agile Marketing at Kraft. *Forbes*.
- Der Hovanesian, M. (2004, November 24). Wells Fargo. *BusinessWeek*, p. 96.
- Dreze, X., & Nunes, J. C. (2009). Feeling superior: The impact of loyalty program structure on consumers' perceptions of status. *The Journal of Consumer Research*, 35(6), 890–905. doi:10.1086/593946
- Fredrick, K., & Christopher, D. (2019). Investigative analysis of CRM System Implementation and the challenges attached to its integration into existing ERP System. *From an Organization Perspective: A case study of a Freight Forwarding Company in Sweden*.
- Holstein, W. (2000, January 30). The Dot Com within Ford. *BusinessWeek*.
- Horst, P., & Duboff, R. (2015). Don't let big data bury your brand. *Harvard Business Review*, 93(11), 78–86.
- Hung, C. W. (2019). Using Cloud Services to Develop Marketing Information System Applications. *Journal of Internet Technology*, 20(1), 157–166.
- Kaur, J., Chahal, H., & Gupta, M. (2019). Re-investigating Market Orientation and Environmental Turbulence in Marketing Capability and Business Performance Linkage: A Structural Approach. In *Understanding the Role of Business Analytics* (pp. 145–168). Springer. doi:10.1007/978-981-13-1334-9\_8
- Khan, A., Ehsan, N., Mirza, E., & Sarwar, S. Z. (2012). Integration between customer relationship management (CRM) and data warehousing. *Procedia Technology*, 1, 239–249. doi:10.1016/j.protcy.2012.02.050
- Khanna, T. (2014). Contextual Intelligence. *Harvard Business Review*, 92(9), 58–68.
- Kihn, M. (2015, September 30). What's Going on with Marketing Analytics? *Gartner*.

Kumar, B. R. (2019). Merger of Kraft and Heinz Company. In *Wealth Creation in the World's Largest Mergers and Acquisitions* (pp. 79–84). Springer. doi:10.1007/978-3-030-02363-8\_7

Kumar, V., & Reinartz, W. (2018). Software Tools and Dashboards. In *Customer Relationship Management* (pp. 171–178). Springer. doi:10.1007/978-3-662-55381-7\_9

Ližbetinová, L., Štarchoň, P., Weberová, D., Nedeliaková, E., & Juříková, M. (2020). The Approach of SMEs to Using the Customer Databases and CRM: Empirical Study in the Slovak Republic. *Sustainability*, 12(1), 227. doi:10.3390/su12010227

Mandal, P. C. (2017). Customer databases and database marketing: Roles in relationship marketing. *International Journal of Business Forecasting and Marketing Intelligence*, 3(3), 327–336. doi:10.1504/IJBFMI.2017.085367

Mandal, P. C. (2018). Marketing information and marketing intelligence: Roles in generating customer insights. *International Journal of Business Forecasting and Marketing Intelligence*, 4(3), 311–321. doi:10.1504/IJBFMI.2018.092786

Mandal, P. C. (2019). Ethical Issues and Concerns in Collection of Marketing Information and Marketing Intelligence: Ethical Issue in Collection of Information. *International Journal of Business Intelligence Research*, 10(2), 16–28. doi:10.4018/IJBIR.2019070102

Michman, R. D., Mazze, E. M., & Greco, A. J. (2003). *Lifestyle marketing: reaching the new American consumer*. Greenwood Publishing Group.

Mladenow, A., Mollova, A., & Strauss, C. (2018, November). Mobile technology contributing to omni-channel retail. In *Proceedings of the 16th International Conference on Advances in Mobile Computing and Multimedia* (pp. 92–101). doi:10.1145/3282353.3282371

Mousavy, S., Rad, B., Bujarpor, M., & Mashali, B. (2012). Customer Relationship Management (CRM) and study of its effect on competitive advantage. *Life Science Journal*, 9(4), 4167–4173.

Nagarjuna, P. (2015, January 9). Seven Steps to Understanding Your Business and Monetizing Analytics. *Sales & Marketing Management*.

Neff, J. (2014, September 15). Kraft Says Content Delivers Four Times Better ROI than Ads. *Advertising Age*.

Nusca, A. (2014, July 15). Despite High Tech, the Future of Marketing is Exactly the Same: Focus on Customers. *Fortune*.

Paksoy, H. M., Özbezek, B. D., & Kilinc, E. (2020). The Importance and Place of Information Technology in the Changing Marketing Concept. *Bitlis Eren Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 8(2), 440–458.

Peltier, J. W., Zahay, D., & Lehmann, D. R. (2013). Organizational learning and CRM success: A model for linking organizational practices, customer data quality, and performance. *Journal of Interactive Marketing*, 27(1), 1–13. doi:10.1016/j.intmar.2012.05.001

Purohit, A., & Thakar, U. (2019). Role of information and communication technology in improving loyalty program effectiveness: A comprehensive approach and future research agenda. *Information Technology & Tourism*, 21(2), 1–22. doi:10.1007/s40558-018-00139-6

Rafaeli, A., Erez, A., Ravid, S., Derfler-Rozin, R., Treister, D. E., & Scheyer, R. (2012). When customers exhibit verbal aggression, employees pay cognitive costs. *The Journal of Applied Psychology*, 97(5), 931–950. doi:10.1037/a0028559 PMID:22582725

Reinartz, W., & Kumar, V. (2002). The mismanagement of customer loyalty. *Harvard Business Review*, 80(7), 86–94. PMID:12140857

SAS. (2016). *1-800-Flowers.com Customer Connection Blooms with SAS Business Analytics*. Available at [www.sas.com/success/1800flowers.html](http://www.sas.com/success/1800flowers.html)

Shukla, M. K., & Pattnaik, P. N. (2019). Managing customer relations in a modern business environment: Towards an ecosystem-based sustainable CRM model. *Journal of Relationship Marketing*, 18(1), 17–33. doi:10.1080/15332667.2018.1534057

- Soegoto, E. S., & Eliana, E. (2018, August). E-Commerce and Business Social Media Today. *IOP Conference Series. Materials Science and Engineering*, 407(1), 012034. doi:10.1088/1757-899X/407/1/012034
- Solangi, B., Talpur, U., Shaikh, S. S., Mushatque, T., & Channa, M. A. (2019). Relationship Marketing as an Orientation to Customer Retention: Evidence from Banks of Pakistan. *International Business Research*, 12(7), 133–140. doi:10.5539/ibr.v12n7p133
- Sony, M. (2020). Design of cyber physical system architecture for industry 4.0 through lean six sigma: Conceptual foundations and research issues. *Production & Manufacturing Research*, 8(1), 158–181. doi:10.1080/21693277.2020.1774814
- Swartz, J. (2002). Ebay faithful expect loyalty in return. *USA Today*, 1, 1-2B.
- Travis, D. (2014, August). The Best Omni-Channel Brands Look More Like a Cause than a Business. *The Hub*.
- Warren, S. (1998, January 8). Pillow Talk: Stackers Outnumber Plumpers; Don't Mention Drool. *Wall Street Journal*.
- Zabin, J. (2006). Cracking the Code on Next-Generation Code Promotions. *Chief Marketer*, 15.

*Pratap Chandra Mandal is an Assistant Professor (Marketing) at Indian Institute of Management, Shillong, India. He has completed graduate degree from the reputed Indian Institute of Technology, Kharagpur (IIT Kharagpur), India (Bachelor of Technology in Mechanical Engineering), post-graduate degree from Vinod Gupta School of Management, IIT Kharagpur (Masters in Business Administration), PhD (Marketing) from Vinod Gupta School of Management, IIT Kharagpur. His research concerns customer relationship management, customer satisfaction, services marketing, marketing intelligence, and qualitative methods in management. He is the editor-in-chief of two international journals and is on the editorial board of journals like Journal of Global Marketing. Pratap has won several prestigious scholarships and awards throughout his academic career.*