A Comparative Study on the Implementation of Traditional vs Big-Data Technology in CRM Practices.

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Abstract

Customer Relationship Management (CRM) have been adopting various tools to provide best customer service. This paper aims to understand the similarities and differences between traditional and Big-data driven CRM tools. An attempt has been made to understand benefits and challenges of adopting the new tools in CRM. It is very clear from the given survey that Big Data technologies bring in significant improvement in CRM with respect to communication with customers, response time, visibility and hence availability of product. Volume handling, Convenience, quick communication and significantly faster analytics are some of the major analytical benefits of using Big Data CRM. Among the important challenges addressed by Big Data technologies are understanding the unstructured data, data integration and use of real time data.

KEYWORDS: *BIG DATA, CRM, RETAIL, ANALYTICS*

Introduction

1.1 Customer Relationship Management (CRM) has been an integral part of Marketing Communication and Brand Management tools across the globe. The approaches to CRM have always evolved over a period and has been ever changing with times. Customer feedback is considered and treated with utmost importance, not only since it is a need of the hour, but a matter of survival for most businesses. Uber, a radio taxi firm for example takes feedback from customer after every trip and decides the frequency of allocation to the taxi driver for his next trip. Flipkart and Amazon treat the last mile delivery and satisfaction as the most important key factor for their business and are quick in reacting to customer queries. Coffee Days and Airline operators cannot sustain without a proper CRM mechanism.

1.2 Today the customer is technology savvy and is always connected to the net through various devices like Smart phones, tablets, laptops, etc. The customer is closer to the marketer than ever before. SMAC – Social networking, Mobility, Analytics and Cloud Computing have become integral part of a consumers life directly or indirectly. Hence it becomes even more interesting to understand the 21st century CRM approaches and more so Mobile based approaches which have penetrated in recent times. No longer are the traditional mailers and feedback forms and Tele calls making an impact in customer's life. A real time data driven CRM based solutions are becoming popular among all service based industries.

Literature review

According to the literature review developed by Ngai et al. (2009), for customer identification purposes, classification and clustering techniques are the most often used. If the objective is to attract customers, classification techniques are the most frequently used, while if the objective is to retain customers, association and classification are the most frequently used. Concerning customers' development, association techniques are

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the most frequent. Despite this, it is known that a combination of data mining techniques is often required to support each CRM analytical dimension (Ngai et al., 2009).

According to Berson et al. (1999), the inability to find valuable information in the data has prevented companies from converting these data into valuable and useful knowledge. Particularly within the analytical CRM dimension, data mining techniques are becoming popular ways of analyzing customer data. In fact, the employment of data mining to support CRM analytical dimension is seen as an emerging tendency (Ngai et al., 2009)

Research Methodology

• Problem statement

This paper aims to understand the similarities and differences between traditional and Big data driven CRM tools. An attempt has been made to understand benefits and challenges of adopting the new tools in CRM.

• Objectives

1. Key similarities and differences in using Big Data CRM vs Traditional CRM
2. Analytical benefits driving CRM with the use of Big Data Technologies
3. The data challenges addressed by Big Data Technologies

Results and Findings

• Demographic Profile of the respondents: A survey was administered to about 50 retailers. Among them about 28% of the retailers had adopted Big Data CRM technologies, 16% were in the process of adopting CRM technologies and about 46% of the retailers were following traditional CRM techniques. About 10% of the retailers were not adopting the CRM methodologies as most of them were local retailers with significant turnover (above Rs 10 Crore).

4.2 Key similarities and differences in using Big Data CRM vs Traditional CRM w.r.t retailers:

Table 4.2.1 depicting similarities between Traditional CRM and Big Data CRM

Key Similarities	*Traditional CRM*	*Big Data CRM*
You avoid irritation or annoyance when dealing with customers	95%	95%
You use your customer's reactions in a positive sense as a means to enhance your efficiency	92%	93%
You follow innovative ideas to satisfy customer requirements	94%	96%
You measure customer satisfaction, customer retention, customer complaints, etc.	93%	96%

* With a significance level of .05 at 95% confidence interval

Interpretation: It is observed that retailers who use either traditional or Big Data CRM have certain commonalities. 95% of the respondents among both traditional and Big Data CRM agreed that they would avoid irritation or annoyance when dealing with customers. They take customer reactions in a positive sense as a means to enhance their efficiency and follow innovative ideas to satisfy their customer. They also measure their customer satisfaction, customer retention and customer complaints.

Table 4.2.2 depicting differences between Traditional CRM and Big Data CRM

Parameters with Key differences	*Traditional CRM*	*Big Data CRM*
You keep constant communication with customers	40%	85%
You respond as quickly as possible for all enquiries received however unimportant those enquiries are from the organization's viewpoint	35%	90%
You never hesitate to render advice to customers	62%	89%
You make your product available everywhere, every time	66%	88%
You develop opportunities to interact with lost customers	52%	96%
You are visible always and participate in all those events that would draw the attention of your target market	61%	79%
You adopt special strategies to draw the attention of your customers.	51%	94%
Do you analyze customer feed back	55%	89%

*with a significance level of .05 at 95% confidence interva

Interpretation: It is interesting to note the key parameters and areas where retailers who use Big Data CRM score over retailers using traditional CRM at 95% confidence interval. 85% of Big Data CRM users keep in constant touch with their customers compared to 40% of the traditional CRM. 90% of Big Data CRM retailers respond as quickly as possible for all enquiries received however unimportant those enquiries are from the organization's viewpoint compared to 35% of traditional CRM users. 89% Big data retailers never hesitate to render advice to customers and make sure their products are available everywhere and anytime. Also the Big data CRM retailers analyze the customer feedback, develop opportunities to interact with lost customers, adopt strategies to draw the attention of the customers by participating in various events.

4.3 Analytical benefits driving CRM with the use of Big Data Technologies

Analytical Benefits (5 most important and 1 least important	5	4	3	2	1	Total
Volume	50%	44%	6%	0%	0%	100%
Variety	44%	36%	14%	6%	0%	100%
Velocity	48%	44%	8%	0%	0%	100%
Veracity	42%	48%	10%	0%	0%	100%
Customer Experience	48%	36%	10%	4%	2%	100%
Cost	42%	28%	10%	14%	6%	100%
Convenience	54%	30%	6%	6%	4%	100%
Communication	52%	42%	4%	2%	0%	100%
Significantly faster analytics	58%	40%	2%	0%	0%	100%
Accurate models and insights	40%	44%	14%	2%	0%	100%

Interpretation: It is observed that most of the analytical benefits provided by Big Data CRM are recognized by more than 75% of the respondents. Volume handling, Convenience, quick communication and significantly faster analytics received maximum importance among the respondents. Cost and customer experience were recognized as least important by 6% and 20% of the respondents respectively.

Among the challenges addressed by Big Data following are that 94% agreed that Big-data technologies addressed the understanding unstructured data, and a vast majority agreed on Data Integration and using real time data. However Cleansing data, and using more granular data were considered least important challenges addressed by these technologies.

• The data challenges addressed by Big Data Technologies

Challenges addressed by Big Data (5 most important and 1 least important)	5	4	3	2	1	Total
Data Integrating	54%	44%	2%	0%	0%	100%
Variety of data	44%	36%	14%	4%	2%	100%
Cleansing data	30%	14%	6%	20%	30%	100%
Using more current data	36%	30%	20%	4%	10%	100%
Storing more historical data	54%	36%	10%	0%	0%	100%
Understanding unstructured data	60%	34%	2%	2%	2%	100%
Using real-time data	56%	28%	8%	6%	2%	100%
Using more granular data	32%	26%	20%	10%	12%	100%
Using higher quality data	50%	30%	20%	0%	0%	100%
Streaming data	52%	28%	12%	4%	4%	100%

Conclusion and Recommendations

It is very clear from the given survey that Big Data technologies bring in significant improvement in CRM with respect to communication with customers, response time, visibility and hence availability of product. Volume handling, Convenience, quick communication and significantly faster analytics are some of the major analytical benefits of using Big Data CRM. Among the important challenges addressed by Big Data technologies are understanding the unstructured data, data integration and use of real time data.

In future research, the impact of using big data technologies on customers can be studied. Due to the increased use of smart phones, customers are close to the retailers and real time data integration and customer service is becoming the order of the day. Use of social media to promote CRM can also be studied in future research. It is interesting to note that going forward marketers cannot neglect the use of Big data Technologies in their CRM framework.

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