

A Survey on Big Data Strategy for different environment dataset using various Technique

Mohini Arya , Amit Asthana

SUBHARTI UNIVERSITY(U.P) ,INDIA

ABSTRACT

In data and its customers to design longitudinal models of selection over the breadth of the firm's products using them strictly to increase the revenues from customers over their lifecycle and updated literature has initiated to acknowledge intangible (indirect) as well as tangible (direct) values although it still a minimization of clarity about different dimensions of stage of firms and customers in value co-creation. In this paper survey , analyze underlying value logic to explain the value co-created by firms and customers and accounted partition of different technique which overcome complexity and reduce computational time of data refining and pursuing strategy .

Keywords: Big Data , CRM , web data , BI , OGC time complexity etc.

I. INTRODUCTION

1.1. Customer relationship management

Customer Relationship Management (CRM) is a strategy by utilizing ICT in attracting potential customers, retaining existing customer and extending new services to loyal customers (Anshari,2009). The main objective of businesses including in banking sector is to earn profits by providing products and services, developing competitive advantages, and satisfying customers and stakeholders through value (Almunawar and Anshari, 2006). The strategies should be laid down in such a way that they provide benefits to the organization as well as customers; shorter cycle times, greater customer involvement in service development and reduction in operation costs

By redesigning business processes that eliminates work that does not add value to customers (Chen et al.,2012). Therefore, CRM is critical components in managing long-term customer relationship.

CRM with Web 2.0 (Social CRM) features can be used to empower customers, allowing them to access their financial activities-related information, interact with customer services professionals, or even interact with other customers. This will open the opportunity to improve banking services to customers and at the same time help improving their knowledge on financial literacy through efficient online services, consultations, and knowledge sharing (Almunawar and Anshari, 2006).

Social CRM can be used by banking as a tool and strategy in meeting their customers' expectations. As such, Social CRM must be aligned with the organization's mission and objectives in order to bring about a sustained performance of business objectives and an effective customer relationship. Customers can own the data on the Web 2.0 site and exercise control over that data (Anshari and Alas, 2015). For instance, when a bank acquires a new customer through marketing orientation, the customer will determine the value of each activity received from the organization. When the customer perceives the value is positive he/she will be happy and satisfied. Otherwise, he/she may consider finding another banking organization for better value, which will give him/her satisfaction.

1.2. Big data

Big data is at an early stage, as most related technology and analytics applications were first introduced only around 2010 (Gantz and Reinsel,2012). Big data is a new generation of managing strategies, technologies and architectures, designed to economically extract value from very large volumes of a wide variety of data by enabling

high velocity capture, discovery, and/or analysis (Laney, 2015). There are three main characteristics of big data: the data itself, the analytics of the data, and the presentation of the results of the analytics (Anshari et al., 2015). Big data is defined as an extremely large volume of data that are analyzed with technology to show the patterns of human development or anything related to the society since big data leads to more precise analysis thus helps to bring more accurate decision making and more efficient work. Big data is high volume, velocity and variety information assets that demand cost-effective, innovative forms of information processing for enhanced insight and decision-making (MGI: McKinsey Global Institute, 2015). Big data sources can be created by people or generated by machines like sensors gathering climate information, satellite images, GPS signals, digital pictures and videos, and transaction records.

The growth in big data is not only because a growing number of smartphone users, but also triggered by other smart mobile devices or pervasive computing abilities that is multiplying quickly (Anshari et al., 2015). For instance, a marketing officer in a remote area can collect and transmit real-time data on every transaction made. Many of these smart mobile devices are able to interact with their users over mobile networks namely pervasive computing. Pervasive computing exchanges data and interacts with people or computers and other smart devices. More than 30 million interconnected pervasive computing are now deployed worldwide, in areas such as security, health care, the environment, transport systems or energy control systems, and their numbers are growing by around 30% a year (Gafni and Geri, 2013).

One of the most important sources of big data is the Open Government Data (OGD). There is a growing trend in OGD initiative in many countries. When the society becomes relying on internet, social networks, and mobile technology, then OGD will accelerate the impact of big data for economic growth in the region. OGD proactively publishes real-time data to be used by the public for tasking, triggering new ideas of business initiative, and improve decision making for corporations and SMEs. There is an ongoing paradigm shift on the issue of government data from the perspective of data as being (secret) assets or proprietary of the government to the paradigm that the government's data as public goods that will provide

more benefits when they are shared to the public in real time so that people gains value from the extracted data (Mutchler et al., 2011). After the financial crisis in 2008, OGD was considered a way to create value from data which can be freely used, reused and distributed by anyone where it gives more value, influence, and more impact when it is shared with the public to the more open environment (Ritter, 2015). The value of OGD as part of the big data source will definitely play an important role in driving the success of banking sectors.

II. LITERATURE SURVEY

Foss et al. (2008) [1] provides two guidelines of the CRM concept. First, a CRM concept that is too narrow-based often contributes to the failure of CRM projects. Second, a contributing factor to the failure of CRM projects is when a firm views CRM from a limited technology perspective or undertakes CRM in a fragmented way. A CRM system is a firm tool that is technology-based for developing and leveraging consumer knowledge to nurture, maintain, and strengthen profitable relationships with consumers.

Woodcock et al., (2011) [2] argue that by engaging consumers through a social media channels, firms can provide consumers with personal experience which is crucial in order to keep them interested, informed, engaged and maybe even entertained. Over time, firms learn to tailor solutions to individual consumer needs. However, a social media channel cannot replace traditional CRM channels, but it can contribute to increased business insight. Combining a traditional CRM channel, e.g., a consumer loyalty club with a social CRM channel e.g. mobile phones containing GPS services, enables firms to offer a specific deal to a consumer. This deal would be based on earlier purchasing behavior and the location of the consumer at that specific moment. Further, a CRM system containing the social media channel could increase a "personal touch" in the B2C relationship since the social media channel contains information about consumer's feelings, thoughts, opinions etc. on a more personal level than traditional CRM channels.

Davenport., et al., (2010) [3] a big contributor in successful firms. Business Intelligence (BI) can be defined as a broad category of applications and

technologies for gathering, storing, analyzing and providing access to data in order to improve decision makers for enterprise users. In some literature, BI is referred to as the successor of decision making systems, and also to facilitate various kinds of enterprise reporting tools. A standard BI system includes data sources where transactional data is accumulated, data warehouses / data marts, reporting and visualization tools, but also predictive analytics and modeling.

Buttle (2001) [4] CRM can be used in several different ways; where the main reason is to strengthen already existing relationships. Both firm A and firm B collect consumer data from various sources: customer incentive programs, customer service center, a point application, and through external firms that conduct market researches. Hence, it can be argued that both firms are willing to get as much information as possible from consumers in order to strengthen the relationships.

Hecht and Jablonski [5] compared different NoSQL systems in regard to supported data models, types of query supported, and support for concurrency, consistency, replication, and partitioning. Hecht and Jablonski concluded that there are big differences among the features of different technologies, and there is no single system that would be the most suitable for every need. Therefore, it is important for adopters to understand the requirements of their applications and the capabilities of different systems so that the system whose features better match their needs is selected.

Habich et al. [6] propose Web services that coordinate data Clouds for exchanging massive data sets. The Business Process Execution Language (BPEL) data transition approach is used for data exchange by passing references to data between services to reduce the execution time and guarantee the correct data processing of an analytics process. A generic data Cloud layer is introduced to handle heterogeneous data Clouds, and is responsible for mapping generic operations to each Cloud implementation.

Starfish [7], a data analytics system built atop Hadoop, focuses on improving the performance of

clusters throughout the data lifecycle in analytics, without requiring users to understand the available configuration options. Starfish employs techniques at several levels to optimise the execution of MapReduce jobs. It uses dynamic instrumentation to profile jobs and optimises workflows by minimising the impact of data unbalance and by balancing the load of executions. Starfish's Elastisizer automates provisioning decisions using a mix of simulation and model-based estimation to address what-if questions on workload performance.

Lee et al. [8] present an approach that allocates resources and schedules jobs considering data analytics workloads, in order to enable consolidation of a cluster workload, reducing the number of machines allocated for processing the workload during periods of small load. The approach uses Hadoop and works with two pools of machines – core and accelerator – and dynamically adjusts the size of each pool according to the observed load.

Chen et al. [9] envision an analytics ecosystem where data services aggregate, integrate, and provide access to public and private data by enabling partnerships among data providers, integrators, aggregators, and clients; these services are termed as DaaS. Atop DaaS, a range of analytics functionalities that explore the data services are offered to customers to boost productivity and create value. This layer is viewed as AaaS. Similar to the previously described work, they discuss a set of possible business models that range from proprietary, where both data and models are kept private, to co-developing models where both data and analytics models are shared among the parties involved in the development of the analytics strategy or services.

Boulding et al. (2005) [10] agree that strategy lies at the heart of successful CRM. Before embarking on CRM, an organization should analyze the growth opportunities available within the business environment and make decisions about the nature of customer relationships that are appropriate for chosen customer segments. Here the primacy of the customer has to be recognized and signaled throughout the firm. The customer should be viewed as an important stakeholder critical to the firm's success in the future, and not just regarded as a 'target market'. For success

in CRM, it is clear that organizations need to consider their current position within their industry and the future role they can realistically play within it. However, the primacy of the customer must remain amid other strategic considerations.

III. CHALLENGES

1. Although these interactions constitute a rich source of data, they create challenges to companies aiming to devise marketing strategies.
2. Despite our focus on the various challenges associated with social CRM, we are by no means naysayers with regard to the use of social media in CRM strategies.
3. Big data analytics set relevant challenges to policy makers as to the way to design cultural policies and to deal with privacy issues.
4. The problem is that each of the communication channels may unknowingly use their own customer intelligence data to interact with a customer without realizing that a different message may be being delivered to the same customer via another communication channel.

IV. IMPORTANCE

1. Analytical CRM is a solid and consistent platform which provides analytical applications to help predict, scale and optimize customer relations.
2. This can only be achieved through application of leadership that understands the unchanging timeless principles for KM and Analytical CRM using a data mining structure that transforms organizations to become far more responsive and effective players in a growing economy.
3. The application of the analytical approach helps the business organizations to

understand the benefits that are achieved through continuing analysis of the customer data.

4. The application of DM in CRM has produced immense profit for the service sector industries.
5. The growth of the aCRM through the application of the DM has produced some serious concern related to the security.

V. DISCUSSION

The structural descriptions for CRM, become more clear. Buttle [4] defines four types of CRM that are mainly used today, depending on the roles that CRM play the state of CRM research proceeds using the customer lifecycle framework (acquisition, development and retention), and we shall describe the issues and methodological challenges unique to each stage. While technical discussions on big data analytics and algorithms are abundant [11], a comprehensive theoretical framework of big data as cooperative assets and its role in value co-creation is absent in the literature. As market competition increasingly becomes data competition, a better understanding of how big data transforms from resources to valuable and governable properties.

VI. CONCLUSION

Based on indication from multiple problems that study proposes a development model that describes how big data is distorted from resources into cooperative assets in value co-creation procedures. We identify four types of customer roles in value co-creation context and analyze four diverse big data info resources generated by these roles: transactional, communicational, participative, and transboundary. The empirical literature in marketing has traditionally favored parametric models (such as logistic or probity regression or parametric hazard specifications and zero-inflated poisson models) that are easy to interpret for various data mining technique.

REFERENCES

- [1] Foss, B. Stone, M. Ekinici, Y. (2008). What makes for CRM system success - or failure? *Database Marketing & Customer Strategy Management*. Vol. 15 pp. 68-78.
- [2] Woodcock, N., Green, A., Starkey, M., (2011) Social CRM as a business strategy. *Database Marketing & Customer Strategy Management*. Vol.18 pp. 50-64.
- [3] Davenport, H, Harris, G, Jeanne & Morison, R. (2010). Analytics at Work: Smarter Decisions, Better Results. *Harvard Business Review Press*.
- [4] Buttle, F.A. (2001). The CRM value chain. *Marketing Business*. pp.52-55.
- [5] R. Hecht, S. Jablonski, NoSQL Evaluation—A Use Case Oriented Survey, in: Proceedings of the International Conference on Cloud and Service Computing(CSC 2011), IEEE, Hong Kong, 2011, pp. 336–341.
- [6] D. Habich, W. Lehner, S. Richly, U. Aßmann, Using Cloud Technologies to Optimize Data-Intensive Service Applications, in: Proceedings of the IEEE 3rd International Conference on Cloud Computing (CLOUD 2010), 2010, pp. 19–26.
- [7] H. Herodotou, H. Lim, G. Luo, N. Borisov, L. Dong, F.B. Cetin, S. Babu, Starfish: A Self-tuning System for Big Data Analytics, in: Proceedings of the 5th Biennial Conference on Innovative Data Systems Research (CIDR 2011), 2011, pp. 261–272.
- [8] G. Lee, B.-G. Chun, R.H. Katz, Heterogeneity-Aware Resource Allocation and Scheduling in the Cloud, in: Proceedings of the 3rd USENIX conference on Hot topics in Cloud computing (HotCloud 2011), USENIX Association, Berkeley, USA, 2011.
- [9] Y. Chen, J. Kreulen, M. Campbell, C. Abrams, Analytics ecosystem transformation: A force for business model innovation, in: Proceedings of the 2011 Annual SRII Global Conference (SRII 2011), IEEE Computer Society, Washington, USA, 2011, pp. 11–20.
- [10] Boulding, W., Staelin, R., Ehret, M., and Johnston, W. J. (2005): A Customer Relationship Management Roadmap: What is Known, Potential Pitfalls and Where to Go, *Journal of Marketing*, 69 (4), pp. 155–166.
- [11] M. Salehan, D.J. Kim, Predicting the performance of online consumer reviews: a sentiment mining approach to big data analytics, *Decis. Support Syst.* 81 (2016) 30–40.