

Trends and Challenges in Era of Big Data Analysis

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Abstract— Big Data is generating many business opportunities regardless of computer power or physical storage at hand it needs some techniques to use this unstructured data. Marketing is considered as vital field many scholars have done marketing research in order to set some trends in managerial practices. Several surveys have been determined for understanding the customers and in their behavior. This paper will focus on the preceding discussion on the trend over the years has been to conduct multiple studies, implement field experiments, and accumulate data from authentic consumers in an effort by consumer researchers to increment generalizability of their results and develop theories that explicate authentic-world situations.

Key words: Big Data, Big Data Analysis

I. INTRODUCTION

In today's world more and more quantity of data is flowing unceasingly on the web such as GPS trackers, persons posting on facebook and titter, word files or PDF files on internet, sensors, government data and more. Huge amount of data is flowing and the rate at which it is flowing leads to the term called "big data". These data sources have 3 major characteristics that are "velocity, variety and volume" extracting subsidiary information from this unstructured data needs extra potential, technical support and organisational support.

Big Data is generating many business opportunities regardless of computer power or physical storage at hand it needs some techniques to use this unstructured data. Presence of this huge quantity of data needs analysis and extracting new information is necessary in order to produce business value Example can be seen in many internet sites from healthcare to communication to convivial science, where the analysis of massive data sets sanctions to unveil obnubilated information in form of example cluster and patterns. This sizably voluminous data analysis is withal utilized in determining and analysis of messages posted on social media for example the days before Indian Prime minister Elections, many news channels provided their own real time polls extracted from twitter posts.

In this paper I will provide an overview of the trends and challenges of marketing in the era of big data analysis.

A. Trends:

Marketing is considered as vital field many scholars have done marketing research in order to set some trends in managerial practices. Several surveys have been determined for understanding the customers and in their behaviour. These surveys were generally done on small level or small samples were taken for the convenience. Customer is king and its satisfaction is prime motive to marketing practitioners. An effect to these theories generally comes out from the pupils who apply them in organisations after learning in schools or from scholarly books. But now increasingly data can be collected widely from web pages

for scholarly analysis. Now approaches are directly amassing data available on portals for example bizrate.com they accumulates rating on purchases of consumers from thousand of stores (Dholakia and Zhao, 2010). Instead of using small samples or using fictitious data for research now real time data can be analysed. To give this light for examining the effect of online ratings given by readers, Chevalier and Mayzlin (2006) accumulated data like book characteristics and reviews from the public websites of www.amazon.com and www.bn.com.

In addition to collecting data from social portals as mentioned above, scholars have been taking advantage of digital made available by many enterprises like Twitter that collect data and scholars can use data made available by twitter through its API and access it from other sources also.

B. Challenges

Marketing gurus faces many challenges, issue is not lack of data but searching and analyzing of data that helps in taking best decisions and leads to expertise. Big data are noisy, which means that they need to filtered and cleaned before use which needs right skills and capabilities, people who are aware of new mathematics equations and newest statistical methodology finds diamonds out of coal mines. In today's scenario data presence in term of volume, variety, velocity and veracity has become a major challenge for management firms for example, there are responsible works to the quality of sensor data, that take into account sensor precision and failures seen e.g. (klein and Lehner 2009).

C. Inside Challenges

First challenge is to fully exhaust the data present inside the organisation for example individual goes to bank in order to open an account with the bank, bank is having all the details and should use in order to please the customer this will leads to profitability of the organisation.

Exordium of loyalty cards, debit cards and credit cards has engendered a prodigious amount of data availability to the organisation issuing equipollent. Supermarkets, coffee houses are sending offers and coupons at short interval to the card holders on their past and present demeanor. Many companies are prosperous in this practice which is called business Intelligence by filtering their own organisation data. Internal data such as purchase history of customer, source of the customer and the channel of purchase is available at no cost whereas for purchase compartment at competitors and lifestyle data has to be purchased. In a review of quantitative model research for direct marketing, Bose and Chen (2009) reports many latest technology is available for doing research but mostly using artificial neutral network modelling techniques.

On top of it even if who is using amazon.com for shopping is doing search for the products he/she needs and putting it in wish list or buying it directly from there portal gets real data what purchases are been made by whom by that they can give excited discounts and coupons to would be customer in future so as to increase the sales. Geo-based

Targeting is done sometimes you get into the ice cream parlour and you get a coupon of 20% off on ice cream.

D. Outside Challenges

Second difficulty is extracting data from external sources such as research purchased from the specialized research companies. Survey, panel and scanner data for example used by consumable products companies like Unilever, Procter and Gamble, Johnson and Johnson. (McKinsey and Company 2013) this consulting firm thinks what sources you have present inside the firm and what are present externally how you can use them for your benefit whether it is about number of vehicles on the road, whether data or the competition data what competitor is quoting in the market for same kind of product. Use of social networking portals is going common in marketing strategies analysing the data generate and using the data from outside with data present is one of the other hurdle that needs to be solved. Qualitative data is generated by posts in company community groups have similar problem because of this only multiple challenges and hurdles have occurred in front of scholars. Yahoo, facebook and twitter for example having a treaty with data shift to provide information what customers are saying on the Tumblr depending on historic and real data (Reisinger 2013).

E. Serious Problems

As the preceding discussion on scholarly research has shown, the trend over the years has been to conduct multiple studies, implement field experiments, and accumulate data from authentic consumers in an effort by consumer researchers to increment generalizability of their results and develop theories that explicate authentic-world situations. Philomaths more fascinated with presage have built models and tested them with 'Authentic' data; by accentuating more preponderant statistical generalizability, employing stimuli and settings that provide more ecological validity, these researchers have more directly addressed the issue of managerial pertinence. But as Bose and Chen (2009) note, few researchers have incorporated managerial issues such as costs into their direct marketing models or have been able to validate their models with current data. They withal note that if authentic data was made available, because it inclines to be sizably voluminous, it engenders its own quandaries: "new concerns emerge such as computational time, software and hardware support, congruous explication of results, etc." (p. 14). Despite the accentuation on quantitative models, consequential differences subsist in data amassment, analysis and interpretation methods prevalent among marketing philomaths and those that are more popular among marketing practitioners. These differences highlight the serious issues that are liable to govern future research by marketing philomaths.

1) Data for Determining:

Research study are able to be generalized to real-life settings because external data is present in wide form and promises that it is real but collecting data is time consuming and expensive because filtering unorganised data needs time and new technology which leads to increase in cost. Bose and Chen (2009) find that most scholars doing research do not emphasise on data preparation even when data influence whole research. Even if real data is present widely on the internet from companies its access is not to everyone or

universal if researchers gets access to data they generally gets access to data which has no proprietary value to organisations now and has no managerial relevance "since no data was collected after the implementation of their dynamic multi-mailing models it was not clear how their devised models actually influenced customers behaviours" (Bose and Chen, 2009, p.15). When data is not properly present researchers have to use their own methods so as to overcome this data problem.

Moreover easily available public data also does not give free authority to the researchers to use it because it sometimes betrays the ethics of the research done. These kinds of ethical issues are sometimes ignored because scholars are keenly interested in using real time data. Trends in marketing research is a lengthy topic having wide branch the ultimate goal of any study is how the stream of research can benefit any organisation for predicting the needs and behaviour of the customer. Issue is size of data needed in any scholarly report as data is available but using it is really critical determining it is of great need.

F. Building Theory and Generating Knowledge

Timely research in consumer behaviour done by many data sources which includes online surveys, departmental stores experiences they have surely increased the understanding of market to the users and also helps to know the psychology of humans. Scientific researches in marketing help to focus on trends and challenges which help to develop tools and techniques in the era of Big Data. Big data helps to set theory on regular intervals because of widely present everywhere on internet, govt offices and even internally in the organisation using them in a efficient way by researchers helping various organisation to exploit their potential to optimum level. Boyd and Crawford (2012) Said something strongly "Just because Big Data presents us with large quantities of data does not mean that methodological issues are no longer relevant. Understanding sample, for example, is more important now than ever"

II. CONCLUSION

The official statistics society can be benefited from the possibilities offered by immensely colossal data but must invest in research and skills development of their people. Internet, social media, location and geographical positioning systems and mobile devices are regenerating markets and marketing ideas just by leading their daily lives, customer leaves a big sets of data points each day every minute. Soon the data generated on internet will check the ability of companies and scholars to process such data for their own use.

These challenges exist at various levels. Business houses needs to analysis this data so that they can use different approaches and influence their potential customer in order to buy things from them or use their services, Research firm needs to analysis tsunami of data in order to sell this data to various firms who need the data for better functioning. Academic researchers especially in field of marketing struggle to balance the desiderata of understanding casual explication and predictive precision.

In coming future the challenges of big data will be met by various methods which have to be continuously adapted by the time because customers are humans they are

not robots they change, experiments, get bored, contradict themselves and shift gears. Thus big data analysis in marketing does not allow you to keep sticking to traditional ways of doing research.

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