

Leveraging Business Analytics to Competitive Advantage

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Abstract

We are living in the Digital World and Electronic Exchange of information is the reality today. With reliable & secured Internet available 24*7*365 days at low cost and Mobile Computing becoming the standard of life, Information exchange is happening electronically at a very rapid pace than ever before. With extensive usage of Social Media Applications, Internet of Things and other digital technologies, lots of data are transmitted across the digital networks. E-Word of Mouth is having high impact on various products/services offered by business firms. Feedbacks, Reviews, ratings or user comments about any product or service are captured digitally. Data Driven Decision making is the current business imperative and Business Analytics (BA) is one of the key capabilities that enable a company to drive effective Business Planning and help achieve Competitive Advantage. Top Management Consulting Companies like McKinsey, Boston Consulting Group, Bain & Company acknowledge Business Analytics as one of the key capabilities a company should possess to build a data driven strategy, drive business planning and gain competitive advantage. Google, Apple, Amazon, Netflix are some of the companies that have leveraged Business Analytics to drive business planning and maximize Competitive Advantage. This being the current business scenario, this paper differentiates Business Intelligence and Business Analytics, discusses the role of BA in Business Planning and capture details of companies that have leveraged Business Analytics to gain competitive advantage.

Keywords: Business Analytics, Business Intelligence, Business Planning, Competitive Advantage

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1 INTRODUCTION

E-Business or Digital Business is the de-facto standard for conducting business today. Brick and Mortar companies are slowly augmented and will be replaced by digital firms. Amazon, Cisco, Dell are some of the firms that are 100% digitalized and have gone paperless. This being the current business scenario from business side, digital mode of communication is the preferred medium from

consumer side also. Smartphones and Mobile Devices are adopted extensively by public and e-Word of mouth is changing the fate of many businesses/products/services. User reviews, blogs, facebook and twitter posts, Linked-In and WhatsApp messages are shared among consumers every microsecond. Emoji's, Photos, Images, Videos and several forms of digital responses are shared among consumers in high volume and high velocity.

Big data is the current technological landscape and Decision Makers are compelled to analyze this Big data to understand the sentiments of consumers and take smarter decisions in a timely manner. Data driven decision making has become a competitive necessity and Business Leaders are now analyzing this information to not only optimize their current business performance but also predict and perform futuristic business planning. In this context, this paper discusses Business Analytics as a key enabler for data driven decision making and highlights companies that have leveraged Business Analytics to gain Competitive Advantage.

2 REVIEW OF LITERATURE

Bill Schmarzo(2016) highlights the advantages of Business Analytics and points out that Business Analytics help companies build differentiated capabilities thereby driving competitive differentiation not competitive parity. The author mentions some of the Companies exploiting Business Analytics for Competitive advantage include Amazon, Apple, American Express, Visa, Netflix and Google.

Bart Baesens (2015) states that Big data is a reality and it helps gain business advantage. The various Business Analytics techniques like Predictive Analytics, Descriptive Analytics, Survival Analytics, Social Network Analytics are discussed in detail and the real time applications of Business Analytics to gain competitive advantage were highlighted by the author.

Seema Acharya & Subhashini Chellappan (2014) enumerate the business benefits of Analytics and emphasize that big data and analytics have boosted in getting business gains, improving operational efficiency, efficient marketing and customer service. The authors stress the coexistence of BI and BA technologies to perform information processing, analysis and emphasize that Business Analytics as a key enabler to make smarter decisions.

Alexis Leon (2014) distinguishes Business Intelligence and Business Analytics and clarifies Business Analytics use extensive data to perform statistical and quantitative analysis to perform modeling and drive fact based management. The author states that some of the benefits of employing Business Analytics include Proactive decision making, Risk Mitigation, understanding business better and acting effectively, instantly. The author concludes that both BI and BA improve the overall performance of the company using it.

3.1 Research Objectives

1. To differentiate Business Intelligence & Business Analytics
2. To discuss the role of Business Analytics in Business Planning
3. To capture details of companies that have leveraged BA to gain Competitive Advantage

3 RESEARCH METHODOLOGY

Descriptive research design and Deductive approach is used for this study. This is a conceptual study based on secondary source of information collected from the different research articles, papers and reports related to Business Analytics and its Applications. Databases such as J-Gate, EBSCO, Research Gate and other reputed databases has been used to download all the relevant literature on Business Analytics from global to local perspectives.

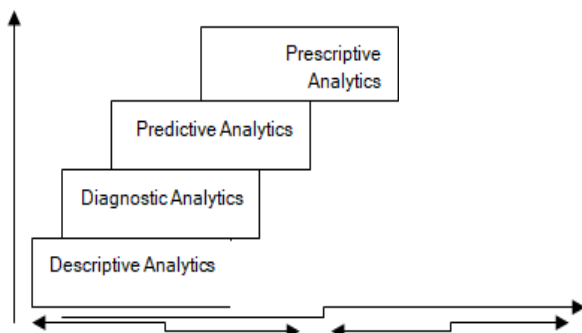
4 DISCUSSIONS

Gartner defines 'Business Analytics comprises of solutions used to build analysis models and simulations to create scenarios, understand realities and predict future states'. Business Analytics helps to take better and faster decisions, improves operational efficiency and provide better customer service and satisfaction. BA finds its applications in Recommendation Systems, Fraud detection, Credit risk modeling, Churn Prediction, etc. Business Analytics Solutions are offered by both Proprietary and Open Source Vendors. Some of the popular

proprietary vendors include SAS, Tableau, Microsoft, Qlik, IBM, etc., and some of the popular Open Source software's include R, Rapid Miner, Weka, etc.,

Business Intelligence Vs Business Analytics:

For several decades now, Business Leaders and Managers have been analyzing historical data and were using various methods to optimize current business performance. In order to achieve this objective, Data warehouses were built by consolidating data from various data sources and Data marts. Some of the analysis techniques widely used were Online Analytical Processing (OLAP), Data Mining and so on. This method was very effective till the advent of Internet or till the point where structured data was the common mode of communication.



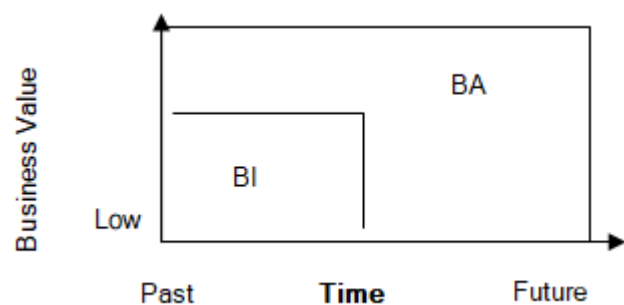
RDBMS technologies and Data warehouses developed by companies like Teradata, Oracle and Netezza was serving the needs of managers who were primarily focused on improving their current business performance and identifying the reasons for not achieving their targets. In other words, this technology helped managers who were focusing on analyzing what happened? [Descriptive Analytics] and Why it happened? [Diagnostic Analytics]. The tools, technologies that supported this business landscape was termed as 'Business Intelligence'. But today, the business scenario is different and there is a very big change in the business landscape. With the advent of Internet and Smart devices, unstructured data is occupying 80% of the digital data spectrum and the traditional Data Warehouse technologies are

augmented with next generation technologies like 'Hadoop' to manage unstructured data. Business Leaders are now building 'Data Lakes' to manage unstructured data along with Data warehouses.

This being the technological aspect, there is total change in the thinking from the business world. Modern leaders are now thinking on What will happen? [Predictive Analytics] and What actions to be taken to make it happen? [Prescriptive Analytics] to maximize their Competitive advantage. The tools, applications and technologies supporting Predictive Analytics and Prescriptive Analytics is termed as 'Business Analytics'.

Role of Business Analytics in Business Planning:

While Business Intelligence focused on monitoring current state of business and Retrospective reporting, the focus of Business Analytics is beyond performance monitoring and is geared to help take decisions for futuristic action. Business Analytics or Data Science help identify new business opportunities, improve current business operations and also prevent from future problems. In a general context, Business Intelligence focuses on exploring past performance to optimize current business performance and Business Analytics focuses on gaining future Business Opportunities and drive Business Planning.



The Business Value of BI is relatively low & the Business Value of Business Analytics is very high.

Companies that have leveraged BA to gain Competitive Advantage:

Business Analytics help companies to improve

Operational efficiency, plan marketing campaigns by understanding the expectations of specific customer segment, understand market need and initiate new product development activity to satisfy the demand, recommend similar products based on customer preferences, etc.

Information collected through Big data from several sources in high volume, variety and velocity are investigated and explored by companies to get insights which thereby helps them to gain competitive advantage. This information helps them to identify current trends in the market, potential gaps in their offerings, get to know the feedback of user experience and expectations from their product features or services, etc.,

The following table provides a snapshot of companies that have achieved Competitive Advantage using Business Analytics.

Snapshot of Companies achieving Competitive Advantage using Business Analytics.

Company	BA Applications
Amazon	Recommendation Systems suggesting ‘Customers who bought this item also bought’...
Netflix	Movie Recommendations/Targeted Advertising
Google	Target Advertising and ranking pages
American Express & Visa	Fraud Detection; Churning Customers
Apple	Innovation and Product Development
Capital One	Optimal time to market offers to clients
General Electric	Increase Efficiency of Jet Engines and Gas Turbines
Starbucks	Choosing location for their new store to maximize revenue
Coca Cola	Customer Acquisition and Retention
Pepsi	Efficient Supply Chain Management
United Overseas Bank	Risk Management

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citation [7].

7.3 Additional Formatting and Style Resources

Additional information on formatting and style issues can be obtained in the IJSTR Style Guide, which is posted online at: <http://www.ijstr.org/>. Click on the appropriate topic under the Special Sections link.

4 CONCLUSION

Today, we are in the era of ‘Fact based Management or Data driven decision making’. Lots of data is getting generated from various sources and it is highly imperative for companies to understand the market trends and demand before actionizing their decisions. Business Intelligence and Business Analytics tools enable companies to speed up the information processing activities and help management take proactive decisions. Several vendors are competing in the market to provide valuable Business Analytics Solutions and companies have started leveraging Business Analytics to achieve Competitive Advantage. Gartner’s summit on Data and Analytics (2019) states that ‘Augmented Analytics’ equipped with Machine Learning and Natural Language Processing is the future of Business Analytics and already BA vendors have started packaging these capabilities in their BA Solutions. It can be concluded that Future Business Managers can use Augmented Analytics to get better insights quickly and precisely which thereby help improve their overall Business Performance and Customer Satisfaction.

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