

BUSINESS ANALYTICS – ENABLING TOOL FOR MICRO, SMALL & MEDIUM ENTERPRISES

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Abstract: *Micro, large share of enterprises in most countries and are cornerstone of economies. They are major source of employment and income in most countries. However, they need to be competitive to survive and grow in the present era of liberalized and digital economy, making national boundaries almost irrelevant. Most of the SMEs are inward looking and not very competitive. They merely survive and sooner than later, cease to exist.*

One of the reasons for this lackluster performance is their inability to access and analyze right kind of information for decision making. Large corporates can afford to hire world class consultancy firms like McKinsey, Price Waterhouse Coopers, etc. whereas MSMEs find it almost impossible to afford them. These large firms get extra advantage, as the information generated by analysis of data collected using reliable research methodology, accurately serves the purpose of aiding them in making decisions under intricate situations.

Also, data related to visitors of social media sites and navigation patterns on portals are widely used by large firms for predictive analysis. On the other hand, decision making at MSMEs is often based on ad-hoc methods or gut feeling making them more vulnerable to failures. Although, globalization has led to increased competition, it also offers opportunities for expansion of business, for firms with strategic and competitive strengths.

Furthermore, the size of firm does not matter. In this era of digital economy, business success is strongly associated with up-to-date information and knowledge of markets, consumers and competitors acquired using scientifically proven research methods. Business research is vital for sustainability of SMEs in global economy. To grab opportunities that globalization offers, MSMEs need information to support their decisions on target markets, product-mix, branding, consumer perception, trends, supply and demand forecasting and quality control.

The present research paper Analyse the importance of Business analytics and their effectiveness in SME sector.

Keywords: MSME, Financing Challenges, Business Analytics.

I. INTRODUCTION

Business analytics software market in India is forecast to grow at 9.6 percent year-on-year through 2019, reaching \$583 million (roughly Rs. 3,442 crores), as compared to 6.8 percent across Asia-Pacific region, a report said today. Organizations are proceeding cautiously in their adoption of analytics. Use of business analytics

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within companies has grown over the past year, but at a moderate rate. Analytics also tend to be used narrowly within departments or business units, not integrated across the organization. Business analytics is still in the emerging stage. While business analytics have gone main stream, most organizations still rely on traditional technology. While business analytics have gone main stream, most organizations still rely on traditional technology. Spreadsheets are the number-one tool used for business analytics. Organizations still view business analytics rather narrowly – primarily as reporting tools (dashboards and Key Performance Indicators) or forecasting – technologies that have been around for a while. And when it comes to use, most organizations still rely on those old standards.

Spreadsheets continue to be the most commonly used tool for business analytics. Dashboards/KPIs and forecasting rank second and third in use. So while organizations have warmed to the idea of utilizing their data for insights, most remain at the fundamental level in their use of analytical tools – a clear indication that business analytics is in the emerging stage. Intuition based on business experience is still the driving factor in decision-making. Analytics are used as part of the decision process at varying levels, depending on the organization. SME's are looking to analytics to solve big issues, with the primary focus on money: reducing costs, improving the bottom line, and managing risks.

It is widely accepted that Small & Medium Enterprises are the backbone of modern market economies, thus play an important role particularly in developing countries. In most countries, SMEs are the dominant form of business organizations, accounting for over 90% of the business population, and they play a key role in driving sustainable economic growth and job creation. Bringing SMEs up to speed with the digital revolution is not just a matter of improving their quarterly profits, but also about creating growth and jobs. In the digital age, no business can thrive without better use of BA. Few authors emphasized that SMEs grow two to three times faster when they embrace technology.

Whether it is a tech start up or a provider of traditional products or services, thanks to capabilities such as the use of social networks, cloud-based services and data analytics SMEs can expand their business reach to new clients and markets. By 2015, the analytics market in India is expected to hold 21% of the overall Indian KPO market opportunities of 336 billion. Although this market has been in existence since early 2000, the exponential growth in data generation, significant decrease in data storage cost and increased need of companies to make decisions based on actionable insights, have increased the demand for data analytics services.

MSME sector plays a pivotal role in the development of India's economy. The sector is largely unorganized with more than 94% of the units being unregistered. The government has formulated a number of policies for the development of MSME sector in the field of credit, technological up gradation, marketing, entrepreneurship

development, etc. Though the sector has shown a growth trend in terms of increase in the number of MSME units, investment in fixed assets and employment generation yet there have been a number of challenges that have led to various inefficiencies of the units at various decision making levels. Currently the need of the hour for this sector is to get itself familiar and geared with the data oriented information technology and use the same in the development and expansion of the companies.

Most MSME business owners make decisions based on a best guess basis or on their perception of business environment as they do not see the value of investment in business analytics tools. For the MSME operating in an intensely competitive environment, the ability to access and process information with speed and accuracy is critical.

Business Analytics (BA) tools are just as valuable for small business as for large ones. The solutions provide capabilities that help companies ensure information integrity, transform decision-making, and optimize business performance. Whether in time of an economic downtrend or an upswing, it is equally important for the MSME to efficiently aggregate information from a wide variety of sources and consolidate them to derive useful insights and transform the business. Ultimately, making effective use of analytics will be the hallmark of the well-managed MSME, showing that it is an enterprise that can always effectively tackle crucial business questions and thereby, ensuring timely, accurate and informed business decisions.

II. INDIAN MSME SECTOR OVERVIEW

India's MSME sector is considered the backbone of the economy, contributing 45% of the industrial output, 40% of country's total exports, employing 60 million people, creating 1.3 million jobs every year and producing more than 8,000 quality products for the domestic and international markets. According to the Ministry of Micro, Small and Medium Enterprises, the number of MSME units in India has grown at a CAGR of 5.4% during FY07 – FY12, and stood at 44.7 million at the end of FY12. The investment in these units rose at a CAGR of 7.8% during the same period. Strong growth in total investment in MSMEs is indicative of their expanding footprint and growing importance in India's economy. MSMEs are diverse in terms of size, products and services offered, turnover and technology adoption. The spectrum is broad. On one end are high-growth enterprises in developed sectors, such as textiles and garments, auto components, health care, education and telecom equipment. At the other end are sub-contractors and the more slow-growing informal, small retail and unorganized sector, such as village and cottage industrial units. Remarkably, more than 24.5 million (94%) of MSMEs are unregistered. Indian MSMEs have moved up the value chain from manufacture of simple goods to sophisticated products. They have also entered the services sector. MSMEs are

now faced with global competition and to remain profitable in this business environment it is imperative for them to adopt newer technology and have a more forward looking approach towards their business.

III. LITERATURE REVIEW

Over the last few decades there has been a tremendous growth in SMEs. More and more of such enterprises are now struggling to survive due to immense pressure created both by globalization and giant multinational companies (e.g., Mulhern & Stewart, 2003). As SMEs contribute significantly to a nation's gross domestic product (GDP) and provide employment to a large number of people, therefore it is in the interest of governments to encourage their survival and growth. Definition of SMEs Defining small and medium enterprises (SMEs) is not a simple task. This is because there are much different definitions as there are interlocutors. Given that SMEs reality and size can a lot from sector to sector, or according to economy and timeframe considered, a single definition is not easy (Vilasea, 2013).

Actually, there is no commonly accepted definition of SMEs; many times they are described with number of employees or annual turnover. In fact, definitions vary with the level of particular economy in consideration. BA is the use of tools and techniques, such as data mining, pattern matching, data visualization and predictive modeling, for the continuous methodological exploration of past business data to develop new insights about the business performance and facilitate business planning. The primary goal of any analytics exercise in a company is to inform the management about the health of the business, at times forewarn of impending problems/opportunities and throw light on what to best expect in the medium-term future. – (Business Analytics to Help Micro, Small & Medium Enterprises (MSMEs) Spark Innovation & Gain Competitive Advantage) .An internal consultancy role responsible for investigating business situation, identifying and evaluating options for implementation of business systems, defining requirements and ensuring the effective use of information systems in meeting the needs of the business is called as Business Analytics. The term 'business analytics' now defines technology that uses data analysis to understand business issues in a way that can guide decision-making. The effective use of business analytics has been shown to provide companies with a competitive edge. – (The Current State of Business Analytics, Bloomberg Businessweek).

IV. OBJECTIVES OF THE STUDY

- To study the awareness of Business Analytics in SME's
- To study the purpose of requirement of BA in SME's
- To identify the BA tools mostly used in SME's
- To identify the awareness of effectiveness of BA tools for SME's .

V. METHODOLOGY

The study is primarily based on qualitative literature survey method. It facilitates in-depth analysis related to Business Analytics for the MSMEs. Extensive review of the literature provided useful insight about the major challenges that the MSMEs are facing today. The study is based on secondary data, which has been collected from various MSME Annual Reports, International Finance Corporation Report on MSME Finance in India, and credit rating agency reports.

VI. CHALLENGES FACED BY MSMEs IN INDIA

It has been observed that the MSME lack the abilities of the larger enterprises to deal with economic and functional issues. The challenges and issues faced by MSMEs at different stages of their lifecycle are of a diverse nature and hence a substantial amount of time and energy of the MSME entrepreneur is spent on overcoming these challenges. Such a trend needs to be reversed as it is inimical to the growth of these units & is not sustainable in the long run.

- 1. Absence of Adequate and Timely Finance and High Cost of Borrowing:** Lack of adequate finance from banks and other formal sources together with absence of transparency regarding their financial condition is proving to be a stumbling block in growth of MSMEs in India. While rising input costs are eating up their profits, high costs of borrowing have worsened the situation for them. Primary reason for the cost of credit remaining high for MSMEs is high-risk perception among banks pertaining to this sector. Technology solutions such as business analytics tools can play a pivot role in assisting small business with better financial management and maintaining customer relationship. Adopting these methods/ tools would in turn help in generating a heightened confidence among lenders regarding transparency, sound business goals and well-developed business plans in respect of such units.
- 2. Inadequate Marketing and Branding Strategy:** Marketing and branding has been one of the key areas of concern for MSMEs mainly due to unavailability of finance and lack of awareness regarding appropriate marketing and branding strategy. Most of the MSMEs fail to get enough buyers or generate enough enquiries because of their inability to develop Unique Selling Point (USP) for their products or services. Their lack of market awareness and difficulty in identifying the USP of their product and service makes it difficult for them to understand their target audience. Moreover, their area of operation is largely limited to a regional target audience. Very few MSMEs explore out of their regional markets and make efforts to build a two-way communication channel across farther markets. The market unawareness and delay in the information gathering due to

the greater physical distance barrier is one challenge that can be easily overcome by various tools offered by BA.

3. **Delayed Payments:** A major concern for MSMEs that has a bearing on their finances is the long time taken by larger corporates in making payments for items procured from MSMEs, especially from their ancillary units. Delayed payments by large enterprises tend to raise sickness of MSMEs by reducing the working capital available with a unit for productive use. Timely payments from customers will help MSMEs in reducing their working capital requirements leading to lower interest costs, improved profitability and a positive impact on the long-term health and sustainability of India's MSME sector. Given the limited credit enjoyed by MSMEs from the financial institutions, the financial costs for availing a loan are quite high for an MSME. BA helps to monitor collections processes, to show what customers buy and how they pay, enabling managers to identify overdue balances and other receivables bottlenecks. It also enables the companies to improve their recovery rate.
4. **Non-availability of Suitable/ Appropriate Technology:** MSMEs need to be technology literate to compete effectively, in the backdrop of increased competition in a global environment and the uncertainty generated by business cycles and more particularly due to factors such as global downturn in the recent years. MSMEs will have to continuously incorporate latest technology into their production processes as well as in their marketing and management functions to cut costs, gain efficiency, and achieve economies of scale. However, the cost associated with the implementation or adoption of technology, installing and maintaining information systems, and maintaining skilled workforce to operate the technology are high and as such would be a challenge for many small firms. Nurturing competitiveness among MSMEs by helping them to adopt newer technology will improve the productivity across the value chain and create a more forward thinking and responsive sector.
5. **Increasing Competition:** MSMEs face intense competition from the large domestic firms and multinationals armed with improved technology, financial strength, managerial ability, skilled workers, marketing skills, better product quality, and wide range of products. The small firms find it difficult to maintain their existence in such conditions. As the Indian economy opens up to global competition, MSMEs must find ways to innovate to succeed in this business environment. BA tools help in the creation of new revenue potential and enhancement of customers' convenience through value-added services. It helps in determining future buying patterns and makes it easier to prepare for seasonal demand fluctuations.

- 6. Non Availability of Skilled Manpower and Increasing Labour Cost:** Large firms pay higher remuneration and employ skilled workers. The MSMEs have to operate with unskilled or semi-skilled workers. Thus, the MSMEs suffer from low managerial capabilities, higher inefficiencies in decision making and lower productivity levels at the factory or the field levels. Moreover, due to the small scale of operations, skill development and continuous training of the manpower is difficult for the MSMEs. There is a need for the government to intervene and create a higher supply of more skill oriented manpower than just generalized degree holders. Having an appropriate quantity and mix of full and part time employees affects labour cost per hour and labour efficiency. Analytics based tools enable companies to capture complete and accurate snapshot of their employee labour activities and help in decreasing labour costs, improving workforce efficiently and managing talent effectively.

VII. BUSINESS ANALYTICS CREATING COMPETITIVE MSMES

Business Analytics is the use of tools and techniques, such as data mining, pattern matching, data visualization and predictive modeling, for the continuous methodological exploration of past business data to develop new insights about the business performance and facilitate business planning. The primary goal of any analytics exercise in a company is to inform the management about the health of the business, at times forewarn of impending problems/opportunities and throw light on what to best expect in the medium-term future. These tools help identify and develop new opportunities, providing companies with competitive market advantage and long-term stability.

MSMEs are expected to contribute significantly to this growth of the BA sector business. The appetite for intelligence information among MSMEs is definitely on the rise. Indian MSMEs are facing a greater need to take faster strategic decisions based on real-time analysis from large volumes of volatile and diverse data. They are increasingly turning toward such tools, to drive themselves on a fast growth track. At present, the penetration of BA among SMEs is minimal. Earlier, major players in the analytics industry had been concentrating on the large sized industries for a long time as a result of which, the scale of most of the common analytics products available in the market is either too large or unaffordable for MSMEs. The situation has since changed due to the advent of analytics products focusing the MSME market. The advent of such products has helped in significantly decreasing the cost of adoption of analytics products for MSMEs. Total BA usage among the internet dependent SMEs is 13.2%; however with aspirations of offering greater business value to the customers and to deal with domestic and global competitive challenges, the MSMEs in India are turning to true business assessment and performance management solutions. Forecasting, business analytics and

similar tools are vital for them in order to manage the amount of data generated – it grows at an exponential rate with the accumulation of all-types of data - financial & accounting data, sales & marketing data, production data, HR related data, etc. It is vital not only to possess data; but to be able to analyse it with a view to gain business insight. Unfortunately, this is one task that many MSMEs are not equipped do. And this is precisely the reason for the adoption of BA tools by them.

BA tools include scorecards, dashboards, analytics, data mining and reports with drill downs. BA typically combines high-level data from each department in order to gain an understanding of how the organization is functioning as a whole. BA helps in identifying the critical strength and weakness of the business and presents ways to increase efficiency and enhance revenue. It also enables MSMEs to estimate how much investment can be put to use and gain control over inventory investment. BA helps in providing solution to some critical issues:

- (a) How to decide product pricing and discounts/ deals How much to reorder of an existing product line.
- (b) How can the inventory levels be optimized for maximum profit.
- (c) How to track the most profitable transaction.
- (d) Enhance new product introductions by understanding purchasing trends and better forecasting.
- (e) How different markets and customer segments will respond.

Business analytics has become an important requirement for companies that want to be competitive – and stay that way. While certain kinds of advanced analytics have been on the market for decades, adoption is finally increasing for a number of reasons, including the economic climate, the availability of computing power, the growth in the amount and variety of data, and a greater appreciation of the power of analytics. The companies are moving towards more forward-looking analytics in order to increase operational efficiency, reduce fraud and waste, deliver incisive marketing campaigns, improve financial outcomes, and predict business risk.

VIII. CONCLUSION

1. The need of the hour is to empower the MSME sector so that it is able to take its rightful place as the growth engine of the economy. In order to achieve this target it is necessary to support the MSMEs, educate and empower them to make optimum utilization of the resources.
2. The MSMEs need to be educated and informed of the latest developments taking place globally and be helped to acquire skills necessary to keep pace with the global developments.

3. In order to move up the value chain and increase their penetration, it is fundamental that quality and quantity of relevant data is coming from a structured data source. Most MSMEs keep their data in an unstructured format which cannot be used effectively. Database for the large enterprises which can be used for analytics is available at several places in a structured way. For MSMEs, this database is not available. Hence, rated enterprises play a greater role in compiling such granular data which could lead to better analysis of this sector. Rating agencies garner a lot of data while assigning rating to companies and this data is stored in their database, in a structured format and is readily accessible, which can be later used for the benefits of MSMEs. With the help of BA tools, this database created by rating agencies can be integrated with the company specific data to provide MSME users with a complete view of their business performance.
4. Business Analytics is emerging as a tool in helping MSMEs improve their performance and gain real time insight about the business. MSMEs can vastly improve the effectiveness and accuracy of business planning without implementing a large and expensive system.
5. MSMEs must seriously consider these analytics based tools which would help improve their sales, optimize inventory, understand customer and product behavior patterns, etc with a view to build up more efficient, robust, progressive & profitable business.

References

- Development Commissioner of MSME., (2009), *Micro, Small and Medium Enterprises in India: An Overview*, Ministry of MSME, Government of India. http://dcmsme.gov.in/ssiindia/MSME_OVERVIEW09.pdf , accessed on May 5, 2010.
- Laghu Udyog Bharti. (n.d), *The Indian Small Scale Sector: An Overview*. <http://www.lubindia.org/ssi/what-is-ssi.php> accessed on July 16, 2010.
- Report of Prime Minister s Task Force., (2010), *Micro Small and Medium enterprises*, Government of India. http://msme.gov.in/PM_MSME_Task_Force_Jan2010.pdf, accessed on June 23, 2011.
- Factors Influencing Small and Medium Enterprises (SMEs) in Adoption and Use of Technology in Cote d'Ivoire, *International Journal of Business and Management*; Vol. 9, No. 8; 2014 ISSN 1833-3850 E-ISSN 1833-8119.