HR Analytics: Effective Enabler for Sustainable Competitive Advantage of MSMEs

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Abstract

Though Micro, Small and Medium Enterprises (MSMEs) are considered to be drivers of economic growth, the fast changing global economic scenario has thrown up various challenges and opportunities for them. Apart from complementing to large scale sector, most of MSMEs have their own identity in making contribution to socio-economic development of the country. However, due to various challenges being faced, it is imperative that MSMEs focus on sustainable competitive advantage and various enablers for achieving it. Sustainable competitive advantages are organizational capabilities that are difficult to imitate or surpass; and provide an advantageous long term position over competitors. Organizations which have consistently high profitability will have a sustainable competitive advantage with a unique process or product or ability. HR Analytics is one of such essential processes an organization may have for sustainable growth and competitive edge.

Common applications of analytics include the study of business data using statistical analysis in order to discover and understand historical patterns with an eye to predicting and improving business performance in the future. Major HR analytics that play a significant role in an organization are Employee performance analytics, Leadership
analytics, Recruitment channel analytics, Corporate culture analytics, Employee churn analytics, Capability analytics, Capacity analytics, Competency acquisition analytics.

This paper will focus on exploratory and evaluative research on uses and effectiveness of HR Analytics in one of MSMEs in India named “Flourtech Engineers Pvt Ltd. (FLOURTECH) and find out the emerging trends as how the organization is applying HR analytics for sustainable competitive advantage, how much the organization value HR analytics and how do it communicate this across the length and breadth of the organizations. Whether the systems and structures which channelize the resources, support HR analytics initiatives to gain maximum benefit? It is also to be explored for linkages with technology and other drivers. A keen study is also required to find out as how the organization and similar MSMEs facilitate and enhance HR analytics for their long term advantage. The paper will conclude with the findings related to effectiveness of HR Analytics, especially for MSMEs, and various parameters of HR Analytics contributing towards a sustainable competitive advantage.

Key words: HR Analytics; Sustainable Competitive Advantage; MSME; Capability

1.0 Introduction

Despite increased competition due to fast changing business environment, Micro, Small and Medium Enterprises (MSMEs) continue to play a crucial rule by way of contribution to Gross Domestic Product (GDP), increased employment opportunities, enhanced accessibility to local population, balanced development along the length and breadth of the country and contribution to industrialization of rural and backward areas. MSMEs are the drivers of fast economic growth and have become highly vibrant and dynamic sector in India. However, there are a lot of opportunities and challenges for MSMEs in India due to fast changing global economic scenario. While there are opportunities to venture into untapped markets, consistent effort need to be taken for enhancing the productivity, optimizing the cost and upgradation of technology etc.

At this juncture, MSMEs need to explore the ways and means to provide them competitive edge for sustainable competitive advantage. HR Analytics is one of those
enablers which can provide them competitive superiority in the concerned market and sector be it manufacturing or service enterprises.

2.0 Review of Literature

2.1 Analytics

Sondergaard (2011) stated that “Information is the oil of the 21st century, and analytics is the combustion engine… pursuing this strategically will create an unprecedented amount of information of enormous variety and complexity”

A simple definition of analytics is "the science of analysis". A practical definition, however, would be that analytics is the process of obtaining an optimal or realistic decision based on existing data. Business managers may choose to make decisions based on past experiences or rules of thumb, or there might be other qualitative aspects to decision making; but unless there are data involved in the process, it would not be considered analytics.

Common applications of analytics include the study of business data using statistical analysis in order to discover and understand historical patterns with an eye to predicting and improving business performance in the future.

As per other definition, Analytics often involves studying past historical data to research potential trends, to analyze the effects of certain decisions or events, or to evaluate the performance of a given tool or scenario. The goal of analytics is to improve the business by gaining knowledge which can be used to make improvements or changes.

Many in the management school of thought associate the origin of analytics in management with Frederick Winslow Taylor’s work on task-management system using time study and selection of workers. However, the glimpses of the same was found in ancient Indian works like Sulba Sutras (800-200 BC) which talks about finding correct angles and optimal designs and use of the same in astronomical calculations and predictions. HR analytics in HRM specifically can be traced to Chanakya’s Arthasastra.

Systematic work on the development of measures to capture the effectiveness (Chaudhury and Barman, 2016) of an organization’s employees can be traced as far back as the days of scientific management (Taylor, 1911) and industrial and organizational psychology (Munsterberg, 1913). Methods of quantitative analysis and its use in decision
making were developed during the build-up of both men and materiel occasioned by World War II.

In contemporary times, HR analytics began with introduction of reporting and basic metric capabilities in early 1980s with use of Human Resources Management Systems (HRMS). The utilization of process-focused metrics such as time to fill, organization-oriented metrics including HR staff employee headcount and financial-based metrics such as cost per hire, led to efforts in the 1990s to use balanced scorecards to help HR leaders reflect goals and measure progress and results. By the 2000s early adopters, particularly companies that rely heavily on analytics in other areas of the business began applying more robust Business Intelligence (BI) capabilities to HR data.

### 2.2 HR Analytics

The concept of HR analytics can be defined as: a methodology for understanding and evaluating the causal relationship between HR practices and organizational performance outcomes (such as customer satisfaction, sales or profit), and for providing legitimate and reliable foundations for human capital decisions for the purpose of influencing the business strategy and performance, by applying statistical techniques and experimental approaches based on metrics of efficiency, effectiveness and impact. The significance of HR analytics perhaps stems from the fact that there is an increasing need that organizations feel with regard to developing a capability to measure how human capital decision affect the business and how business decisions affect human capital. By adopting HR analytics, organizations feel that there is greater value add possible in terms of strategic development and implementation.

Organizational capabilities and core competencies are both highly talent dependent and involves development of organizational social capital and individual skills and knowledge for which the role of HR is critical. As mentioned by Mayo (2008): “very few organizations have a fully integrated approach to Human Capital Measurement (HCM)” . In general, the main focus of HR is on collecting and reporting data about activities instead of outcomes, while the analyses are mostly very simplistic (e.g., limited analyses of drivers of outcomes). As a result, there is a need for HR to develop itself from descriptive metrics to predictive analytics. If you want better performance from your top employees—who are
perhaps your greatest asset and your largest expense— you’ll do well to favour analytics over your gut instincts.

Organizations collect and report data based on Human Capital Analytics Continuum (Pease et al. 2013). The ascent begins with Anecdotes, progresses with Scorecards and Dashboards, Benchmarks, Correlations, Causation, Predictive Analysis and end with Optimization at the top.

2.3 Importance of HR Analytics

As reported by Soumyasanto(2016), a survey by MIT and IBM reported that companies with a high level of HR analytics had:

- 8% higher sales growth
- 24% higher net operating income
- 58% higher sales per employee

Over 55% of organizations feel that an effective HR data analytics practice helps secure quality hires.

Boston Consulting Group has found that data-driven, analytical HR departments are more likely to play a strategic role in their organizations, and the survey data supports this. (Boston Consulting Group, Creating People Advantage, 2014-15)

Although organizations collect more HR and business data than ever, they still aren’t using that data effectively to predict workforce trends, reduce risks and increase returns, according to a Cornell University study.

To be useful, HR analytics must extend beyond reporting what is (the present) or what was (the past) to predicting and analyzing what will be (the future), according to most of the executives who participated in the study.

The most important HR metrics/analytics are those focused on the outcomes created in the human capital value chain,” says Jon Ingham in his Strategic HCM blog. And the analytics a company decides to use, should depend, in part, on the answers that will be most useful to the questions about how HR impacts the business, he says.
2.4 Key Goals of HR Analytics

The goal of human resources analytics is to provide an organization with insights for effectively managing employees so that business goals can be reached quickly and efficiently. The challenge of human resources analytics is to identify what data should be captured and how to use the data to model and predict capabilities so the organization gets an optimal return on investment (ROI) on its human capital.

- To identify opportunities for HR impact.
- To support organizational strategic planning.
- To prioritize the investments and actions.
- To demonstrate the bottom-line impact of HR practice and programs.
- To enable managers make better decisions regarding workforce management.
- To better align HR strategy and with corporate strategy.

2.5 Micro, Small and Medium Enterprises (MSMEs)
[adopted from MSME website of Government of India]

Micro, Small and Medium Enterprises (MSME) sector has emerged as a highly vibrant and dynamic sector of the Indian economy over the last five decades. MSMEs not only play crucial role in providing large employment opportunities at comparatively lower capital cost than large industries but also help in industrialization of rural & backward areas, thereby, reducing regional imbalances, assuring more equitable distribution of national income and wealth. MSMEs are complementary to large industries as ancillary units and this sector contributes enormously to the socio-economic development of the country.

In Indian context and in accordance with the provision of Micro, Small & Medium Enterprises Development (MSMED) Act, 2006 (India) the Micro, Small and Medium Enterprises (MSME) are classified in two Classes:

1. Manufacturing Enterprises:- the enterprises engaged in the manufacture or production of goods pertaining to any industry specified in the first schedule to the industries
(Development and regulation) Act, 1951) or employing plant and machinery in the process of value addition to the final product having a distinct name or character or use. The Manufacturing Enterprise are defined in terms of investment in Plant & Machinery.

2. Service Enterprises:- The enterprises engaged in providing or rendering of services and are defined in terms of investment in equipment.

The limit for investment in plant and machinery / equipment for manufacturing / service enterprises, as notified, are as under

Table 1: Classification of MSMEs

<table>
<thead>
<tr>
<th>Enterprises</th>
<th>Manufacturing Sector - Investment in plant &amp; machinery</th>
<th>Service Sector - Investment in equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro Enterprises</td>
<td>Does not exceed 2.5 Million rupees</td>
<td>Does not exceed one Million rupees</td>
</tr>
<tr>
<td>Small Enterprises</td>
<td>More than 2.5 Million rupees but does not exceed 50 Million rupees</td>
<td>More than one Million rupees but does not exceed 20 Million rupees</td>
</tr>
<tr>
<td>Medium Enterprises</td>
<td>More than 50 Million rupees but does not exceed 100 Million rupees</td>
<td>More than 20 Million rupees but does not exceed 50 Million rupees</td>
</tr>
</tbody>
</table>

As stated by Noor Naqschbandi(2017), the MSME sector, with millions of micro companies and thousands of small and medium-sized businesses, has an enormous economic, social and environmental impact. However, the sector faces several challenges, including strong international competition, pressure to use key resources like energy, water and raw materials more efficiently and to implement more environmentally sustainable production processes. By modernising and adopting green and inclusive innovations, India's MSME sector can create new economic opportunities and strengthen its long-term competitiveness.

Bhide et al.(2016) observed that MSMEs are a vital part of the Indian economy by contributing significantly to the economic progression and employment. It contributes 45% of the manufactured output, 40% of its exports and 8% of the country’s GDP. It provides employment to more than 60 million people

3.0 An inclusive Case of MSME:Flourtech

[Adopted from the website of Flourtech]
“Flour Tech Engineers Pvt Ltd.(Flourtech)” was incorporated in the year 1988, as a leading manufacturer, exporter and supplier of a broad range of Processing Machinery for our customers. Its product assortment includes Flour Mill Machinery, Rice Mill Machinery, Whole Wheat Chakki Atta Plant, Pulse Processing Plant, Spice Processing Plant, Soya Grit/D.O.C. Grinding System, Maize Grit and Corn Flakes Plant, Energy Food Plant, Besan Plant and Dalia Making Machine. These processing machinery are manufactured by employing finest grade basic material in full compliance with the set industry guidelines under the supervision of well trained workforce. To cater to the diverse demands of valued clients, Flourtech offers these products in different specifications. Apart from this, Flourtech is offering these processing machinery at leading market price. Offered products are highly appreciated across the market for their reliable performance and longer service life.

To manufacture the offered processing machinery as per the set industry norms, Flourtech has developed a well-equipped and designed infrastructure facility at its premises. To handle this infrastructure and execute business related tasks, the company has hired a team of deft professionals. To achieve the organizational goals and objectives, company professionals are working with full dedication and close coordination with each other. The company has been able to deliver all the offered processing machinery on time, as it has developed a wide distribution network. The company export in African Continent. The company has attained a distinct and dynamic position in the market.

**Skilled Professionals**

Flourtech has a team of highly skilled and talented professionals. These professionals have years of working experience in this field with the constant support and dedication of our employees. These professionals are selected through industry approved selection procedures. We are able to cater the diverse demands of valued customers. To improve and enhance their skills as per the upgraded trends and developments, Flourtech provide essential training to the employees periodically.

Types of professionals (approx. 190) in the company are:

- Production experts
Our Heritage

- Quality inspector
- Warehouse agents
- Procurement experts
- Sales professionals

Operational Infrastructure

To manufacture the vast assortment of processing machinery, Flourtech has developed a well-designed infrastructure unit at its premises. Its infrastructure facility is placed with all the required tools and equipment for the manufacturing of the offered processing machinery. For streamlined execution of all the business related tasks, Flourtech has segmented its facility into various departments such as manufacturing, quality, warehouse and R & D department. Each and every department is managed by our well qualified professionals in such a way that Flourtech is able to deliver all the products within promised period of time.

Vision

Become the foremost brand, providing all-inclusive solutions for requirements of food processing by offering innovative and efficient machines, equipment and allied services.

Mission

Development and progress of our company through high performance and innovative products that meet the requirements of international clients.

Quality Statement

Flour Tech Engineers Pvt Ltd. is a quality driven company with its central focus on achieving total customer satisfaction through the best quality products and services. To ensure that their valued clients get the best in the industry, they adhere to a strict quality control policy as per which a dedicated Quality Control Unit is established in-house at the factory premise.

Product Groups:

Product line include the following:

- Flour Mill Machinery
Our Heritage

- Rice Mill Machinery
- Whole Wheat Chakki Atta Plant
- Pulse Processing Unit
- Spice Processing Plant
- Soya Grit/ D.O.C. Grinding System
- Maize Grit & Corn Flakes Plant
- Energy Food Plant
- Besan Plant
- Dalia Making Machine

The above mentioned plant machineries have been developed utilizing state of the art technology to provide excellent results to the customers and delivering clients with supreme quality product yields that not just meet but exceed their expectations.

4.0 Methodology

As one of the authors has been providing consultancy services to Flourtech, the Observation method as a tool to Empirical Research has been prominently used. As a research strategy, case study has been used to contribute to the understanding about the knowledge of individual, group and organizational culture along with the related system and processes. Informal interaction, structured and unstructured interviews, Focus Group Discussions with the employees including departmental heads and top echelon of the company have been used for gaining the insights about the use of Human Resource Analytics in the Company.

Secondary sources of data has been the website or pamphlets, brochures meant for customers and employees.

5.0 Usage and effectiveness of HR Analytics in MSMEs

Most of the MSMEs in India are run by families or close group of entrepreneurs. Formalizing the Human Resource practices and formulating Human Resource policies in such organizations becomes very crucial for long term success. As the organizations grow in term of size and scalability, they feel the importance of Human capital and its
management. A few challenges in respect of use and effectiveness of HR Analytics may be enumerated as following:

- General Awareness about HR Analytics as a tool to improve performance
- Integrated approach encompassing inter-functional issues
- Formulating Knowledge management strategy to use effectively the explicit and tacit knowledge
- Convergence of Analysis at an organizational level
- Initiatives for exploring possible HR Interventions
- Valuing HR Analytics as an Intervention
- Incentivizing the HR Analytics
- Availability of technologically enabled Analytics platform
- Horizontal and Vertical Communication about the point of usage
- Top Management’s support
- Enabling System and Structures
- Channelization of Resources in the right directions
- Effective usage of Analytics report
- Presentation of Analytics data in focused and interesting manner
- Envisioning the benefits arising out of HR Analytics

6.0 HR Analytics as enabler for Sustainable Competitive Advantage

Sustainable competitive advantages are organizational capabilities that are difficult to imitate or surpass; and provide an advantageous long term position over competitors. Organizations which have consistently high profitability will have a sustainable competitive advantage with a unique process or product or ability. HR Analytics is one of such essential processes an organization may have for sustainable growth and competitive edge.

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sector, most of MSMEs have their own identity in making contribution to socio-economic development of the country. However, due to various challenges being faced, it is imperative that MSMEs focus on sustainable competitive advantage and various enablers for achieving it.

Through this study it has been seen that HR Analytics is a seamless blend of Datafication of HR and Humanization of Data. These tow aspects complement each other for effective utilization of HR Analytics in any organization with specific reference to MSMEs.

6.1 Datafication of HR
Datafication of HR is the process of converting the existing information about the various aspects of HR into HR Data. It is some kind of reverse engineering in the lower echelons of DIKW pyramid. It has been a modern technological trend turning many aspects of our life into computerized data and transforming this information into new forms of value. Datafication of HR can further be referred as enhanced ability to decipher the meaningful data out of HR practices and processes. It can be at transactional level, operational level or strategic level. However, it is very important to extract right kind of data from the right resources at the right time. Wisdom plays a greater role in such kinds of Datafication of HR. A need is now felt to Humanize the Datafied HR as a proper blend for greater effectiveness.

6.2 Humanization of Data
In an organization, the millions and millions of data are generated daily by the employees and various other stakeholders such as customers, vendors, consumers, support agencies etc. through the users activities with or without connected devices and. Such huge data needs to be humanized and converted into real insight from the world of bits and bytes. Humanizing data means processing the data directly in order to tell about the whole scenario. Whole scenario leads to gaining the insight of the organization.

Humanizing data also require making the data accessible to the employees who can use it to make decisions and unlock its value.

According to Strong (2015), the value of humanizing Big Data is that, with the right tools in place, your organization can develop tremendous business value without adding a new layer of skills to your personnel base. Tools such as predictive and spatial
analytics have historically been isolated in the hands of the very few. But if organizations are truly to unlock the value of Big Data, they must place powerful tools in the hands of those who will actually implement the insights they generate. This accelerates innovation and value creation. (www.alteryx.com)

6.3 HR Analytics Blend Model

As discussed above, HR Analytics is a unified blend of Datafication of HR and Humanization of Data. Through interaction with HR employees and C-suite executives of the Company, the following HR Analytics Blend Model has been formulated:

Figure 1: HR Analytics Blend Model

HR Analytics: Datafication of HR and Humanization of Data

### Datafication of HR

- Talent Sourcing Data
- Talent Hiring Data
- Employee Induction Data
- Employee Attrition Data
- Job Enlargement Data
- Job Enrichment Data
- Job Rotation Data
- Location Posting Data
- Employee Demographic Data
- Family Details Data
- Health Issues Data
- Medical Reimbursement Data
- Employee Productivity Data
- Employees Performance Data
- Group Performance Data
- Career Progression Data
- Payroll processing Data
- Salary/wage Revision Data
- Organizational Need Assessment Data & Survey Data
- Training Need Assessment data
- Competency Analysis and Mapping Data
- Succession Planning Data
- Employee Separation Data

### Humanization of Data

Wisdom

Knowledge

Experience

Information

Behavioral Data

Computerized Data etc.

Enabled by

Training, Technology & Coaching

Enabled by

Datafication Vision

Technolog

HR Practices

HR Policy

HR Insight
7.0 Benefits of HR Analytics for MSMEs

Effectively implemented HR Analytics policy and practices lead to the following:

- Reduced Talent sourcing cost and better Joining to Offer Ratio
- Increased competency levels of sources manpower
- Improved retention ratio
- HR Policies strategically aligned to business
- Better understating of employee productivity and parameters effecting it
- Better understanding of organizational values and culture
- Properly presented HR Dashboard for better decision making by the management
- Availability of evidence based guidance for people related matters
- Fixing pinpointed accountability
- Better understanding of HR processes impacting the bottom line
- Better insight of cause and effect relationship
- Improved control of HR processes and expenditure
- Fast corrective actions for aberrations
- Enhanced function and need centric competency development
- Superior resource utilization including human capital
- Identification of less effective employee interventions and critical people practices
- Improved welfare interventions and work-life balance
- Discovering determinants of employee performance driving business outcome
- Scientific talent planning to feed to the leadership pipeline
- Improved culture of analysis and decision making

8.0 Conclusion:

The Micro, Small and Medium Enterprises (MSMEs) continue to be a very important segment of the economy. MSMEs also have propensity for continuous innovation, creativity in business processes and resilience to quickly adapt to changing needs of
customers. Therefore, the proper implementation of HR Analytics is a key initiative for sustainable competitive advantage of MSMEs. It will further boost the growth and performance of MSMEs as the sector holds great potential for further expansion and fueling the country’s exponential growth in future.

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