

A Study on People Analytics Maturity in Selected Private Mid-Sized Organizations.

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Abstract

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The paper aims to analyze the level of People Analytics Maturity in selected private Mid-sized organizations in Northern India. A rigorous literature review of DELTA Plus model (Davenport, 2018), Blast Analytics Maturity Assessment Framework, Web analytics Maturity model and Gartner's Maturity Model for data analytics was conducted to formulate the structured questionnaire. The questionnaire was then sent to the HR managers working in Private sector organizations in Northern Indian states. The Data collection started in January 2023 and 17 responses of managers could be gathered. Preliminary analysis of the data revealed that most of the organizations are at advanced level of people analytics maturity. Most of the HR managers were using Data analytics for advanced reporting and decision making. The analysis was also only limited to descriptive statistics and were not attempted to predict and prescribe solutions. The findings of the study are relevant for HR professionals of Mid-sized organizations. The People analytics maturity may be augmented through fostering a culture of analysis. There is a strong imperative to strengthen the necessary infrastructure for gathering storage and analysis of data. Changes for scaling up data analysis and maturity will require quantum changes in leadership and corporate commitment.

Keywords: DELTA Plus models, People Analytics, People Analytics Maturity Model

1. Introduction

Over the last decade, there have been unprecedented disruptions in the way business is conducted. Digitalization gained further momentum after pandemic hit the conventional way organizations planned and conducted their business.

The emergence of HR technology including people analytics is becoming an integral component of Strategic HR planning, skilling, managing attrition, and ensuring wellbeing of employees.

People analytics is the analysis of data pertaining to people and organization with the aim of gener-

ating insights and taking decisions based on evidence. Data related to people include demographic and performance data, job history, compensation, learning, wellness, customer satisfaction, team relationships, diversity and so on. With the increase in complexity and volatility of business environment, people analytics will play an instrumental role in predictive and prescriptive analytics.

The Deloitte Human Capital Trends Report (2020) states that 65 percent of the organizations plan to navigate the challenges of uncertainty by extensively utilizing data analytics. However, the understanding of people analytics in Indian or-

ganizations is still at a very nascent stage. Most of the organizations have a misconception that establishing a HR management system is enough. Most of the organizations also do not have the required infrastructure and clarity of purpose to drive people analytics.

According to the Deloitte India report on 'Data Maturity in India: The Aspirational Journey' Indian organizations are not mature in terms of data maturity and lack the ability to handle and manage data.

The report also states that the organizations are not able to handle and manage data properly. This can be attributed to the lack of required skills and knowledge, right tools and technologies (Deloitte, 2022).

People analytics will be a key driver in spearheading changes required to navigate complexities, uncertainties, and volatilities imminent for organizations. Therefore, it is imperative that organizations assess the impediments to implement people analytics.

The study is aimed at understanding the different models and frameworks of Analytics maturity assessment framework. A thorough literature review of different models and framework of People analytics maturity is conducted. The study also attempts to analyze the level of People Analytics Maturity in selected private Mid-sized organizations in Northern India.

2. Literature Review

Dr. Jac Fitz-enz in the year 1978 ushered the idea of metrics that can evaluate the impact of HR activities on the various performance outcomes of the organizations and was the pioneer in introducing the concept of HR Analytics (Jain and Nagar, 2015). Post great recession of 2008, organizations realized that there is need of evidence-based management practices to ensure resilience in wake of unforeseen challenges that organizations confront

(Reddy and Lakshmikeerthi, 2017). Big data in HR led to the evolution of HR analytics which led to evidence-based decisions making aimed at problem solving (Reddy and Lakshmikeerthi, 2017).

HR analytics can be construed as an integrated process that targets at augmenting individual and organization's performance through insights generated from high quality data analytics (Kirtane, 2015). Lochab et al. (2018) defines HR analytics as analysis and evaluation of HR practices on organizational performance outcomes (Like sales and customer service). As per Jain and Nagar (2015), HR analysis involves generation of insights through analysis of qualitative and quantitative data. Kapoor and Sherif (2012), describes HR analytics as compilation, management, and analysis of HR related data for assisting in decision making. Reddy and Lakshmikeerthi (2017), defines Evidence based HR as combination of critical thinking and data analytics to analyze connection between HR related practices and organizational outcomes. Jabir et al. (2019) describes HR analytics as understanding of why certain incidents happened and what can be the best possible solutions based on evidence and logic. "People analytics, also known as talent analytics or HR analytics, refers to the method of analytics that can help managers and executives make decisions about their employees or workforce" (Cornerstone, 2018) HR analytics and HR Metrics are important aspect of sustainable HRM Practices (Kirtane, 2015). In the contemporary business world, decisions are largely driven by descriptive, prescriptive, and predictive analytics aimed at increasing the efficiency and effectiveness of management decisions. Data related to human resources is analyzed to arrive at logical decisions that contribute to achievement of strategic goals of the organization.

Although data analytics is everywhere, but every organization is on different position of the analytics continuum. An organization must assess its

position on analytics continuum, to identify challenges and opportunities data analytics can offer. The lowest level on the continuum is descriptive analytics, which primarily provide answer to the question “what happened?”. This is followed by diagnostic analytics, which answers the question “Why it happened?”. Descriptive and diagnostic analytics can be deciphered as basic analytics. This is followed by advanced analytics comprising of predictive analytics, which comprises about predictions for future based on data and scenario analysis. At a more advanced level prescriptive analytics provide answers to the question “What should be done? “It aids in decision making to achieve strategic goals of the organization. Application of artificial intelligence (AI) technologies and superlative quality analysis resulting in automation of the decision-making process is termed as Cognitive analytics. It results in enhancement of efficiency of decisions taken. Different stages of analytics do not exist in isolation but rather they co-exist and complement each other (Król, & Zdonek, 2020).

A review of major analytics maturity models is summarized in the subsequent paragraphs.

Analytic Processes Maturity Model (APMM)

Categorize organizations on different levels of analytics maturity. The basic level of organizations that can build reports through analytics followed by deployment of models by organizations. The third level of organizations have crystallized a process for building and deploying analytics that can be replicated to other contexts. At the fourth level organizations have integrated data analytics in the enterprise wide functions that are consistent with strategic goals of the enterprise. At the fifth level of maturity, enterprises whose analytics is strategy driven are placed (Grossman,2018).

Analytics Maturity quotient Framework proposed by Piyanka, (2019) calculates analytics maturity

of the organization based on the mathematical equation:

$$AMQ = DQ \times (0.4 \times L + 0.3 \times P + 0.2 \times D + 0.1 \times I),$$

Where AMQ refers to Analytics Maturity Quotient, DQ refers to data quality which can have any numerical value between 0 and 10. L refers to the degree of data driven leadership. If there are no leaders who believe in taking data driven decisions, then the value is 0 and if all the leaders retort to data driven decision making the value is 10. D stands for integration of data in the process of decision making and in similar ways as variable L may take value from 0 to 10. I stand for agile infrastructure which may take any value between 0 and 10.

Blast Analytics Maturity Assessment Framework places organization on different levels of analytics maturity based on the performance on data management, strategy, governance evolution, insights, and resources. The various levels of organizations based on maturity levels are laggard, follower, competitor, leader, and innovator (Król, & Zdonek, 2020).

The DELTA Plus model is based on following components:

D= (Data) Availability of high-quality data in organizations

E= (Enterprise) It refers to enterprise culture and ecosystem towards analytics

L= (Leadership) it refers to Leadership ability to utilize data analytics for strategic decision making

T= (Targets) refers to orientation of analytical activities with strategic targets

A=(Analysis) refers to analytical skills of employees in the organizations

With the introduction of data analytics, analytical techniques and Technology capability are added as integral component in assessment of analytical maturity of organizations.

An organization can be placed in the continuum based on their performance on all the above-mentioned components. At the starting point of continuum, the analytically impaired organizations are placed. Such organizations are laggards in terms of data analytics and are devoid of any formal evidence based approach to decision making. Next on the continuum are organization with localized analytics, in such organizations the data analytics is localized at the backend. There is no coordination between different units that can coordinate for decision making. Next level of organizations are labelled as Aspirational Analytics, these organizations are actively aspiring to implement data analytics although they may be lagging and slow in the present context. At the next level those organizations that make extensive use of data analysis are placed and are labelled as Analytical companies. These companies, although make use of extensive analysis but have not integrated strategic orientation in analytics. At the pinnacle of the continuum are organizations the leverage data analytics to create a source of competitive advantage, and these are labelled as analytical competitors (Davenport et al,2010, Davenport ,2018).

Gartner's Maturity Model for Data and Analytics categorizes organizations on five levels of data analytics maturity. Organizations that are at basic level do not exploit data analytics fully, data analysis is only limited to reporting in silos. Opportunistic organizations aim to formalize the system of data analytics, but lack of leadership and infrastructure is still an impediment. Systematic organizations have incorporated a system for data analytics, but the strategic orientation is still missing. Differentiating organizations identify data analytics as instrumental to strategic performance. Transformational organizations ensure that Data

and analytics is central to their strategy. The organizations also ensure that a designated Data and analytics officer is there on the board of the company (Gartner, 2018).

The Web analytics maturity model specifically assesses an organization based on the extent of web analytics. The six scoring dimensions include management, governance, and adoption, Objectives definition, scoping, The analytics team and expertise, The continuous improvement process and Analysis methodology; and Tools, technology, and data integration. The organizations with lower scores are termed as Analytically impaired while those with superlative scores are categorized as analytically impaired (Hamel, 2009).

The TDWI (Transforming Data with Intelligence) Analytics Maturity Model) assess the level of implementation of data analytics based on a self-administered questionnaire comprising of 35 questions. The organizations may be at nascent stage, at this level organizations do not frequently use data analytics. The second stage "Pre-Adoption" involves establishing an analytical culture. The third stage Early adoption is characterized by introduction of analytical process and tools in the organization. The next stage "Chasm" is a stage that requires organizations to navigate obstacles and difficulties while transforming to a data driven culture. The organizations that are successfully able to navigate the obstacles advance to corporate adoption where analytics is widely recognized as instrumental to achieving strategic goals. The most advanced stage can be termed as mature/ Visionary where organizations leverage analytics programs through an agile and robust infrastructure with well-established data management strategies (Halper & Stodder, 2014).

All the models of Data analytics enable an organization to assess their level or maturity for leveraging analytics for achieving strategic objectives. The organizations can also identify the obstacles

faced by organizations in achieving transformational benefits of data analytics. According to the People Matters Workforce Analytics Study 2016, 38 percent of companies use data analytics only for reporting, while 36 percent use it to answer what and why in organizations. As a result, 74 percent Companies are still immature and do not use analytics for strategic HR functions. The report also revealed that only 23 percent of Companies had talent analytics system in place (Arora, 2016).

It is evident that many organizations are still at nascent stage in terms of People analytics strategy and implementation. Many organizations have now started using for operational reporting, but as far as strategic orientation is concerned, organizations are struggling to incorporate people analytics into strategic decision making (Peeters, et al 2020). People analytics research is still in its infancy and there is a strong imperative to conduct more research to understand the context and relevance of people analytics (Tursunbayeva, 2018). Therefore, the study is an attempt to probe the level of maturity in different Mid-sized Private Organizations

3. Methods

For the study, descriptive research employs the

quantitative approach. A structured questionnaire adapted from Academy to Innovate HR blog is the research instrument. The structured questionnaire had multiple questions related to various dimensions of HR analytics maturity. The responses were collected on a scale of 0 to 3. Where 0 score was assigned to strongly disagree, 1 to disagree, 2 to agree and 3 points were assigned to response of strongly agree.

The sample included HR professionals of selected private Mid-sized organizations in Northern India. For reaching out to the sample, snowball sampling was employed. The online survey was conducted during the period of February to March 2023. A total of 50 HR professionals were contacted for the survey, and only 17 respondents completed the response. So, the response rate is 34 percent. The descriptive analysis was conducted to decipher the responses of HR professionals.

4. Findings and Discussion

The descriptive statistics is summarized in Table I .

As summarized in Table I, the sample comprised of HR Professionals from various sectors including retail, real estate, banking, I.T .

Table 1.Descriptive Statistics

1.	Sector to which your organization belong:	Number of respondents /Frequency
	Banking	3
	E-Commerce	4
	I.T	4
	Others	4
	Real estate/Infrastructure	2
Please indicate your level of agreement with the following statement: At my Organization, Employee database is captured and updated regularly.		
	Agree	4
	Disagree	1
	Strongly agree	12
Please indicate your level of agreement with the following statement: At my organization HR provides dashboards and relevant metrics to managers/executives		
	Agree	11
	Strongly agree	6

Please indicate your level of agreement with the following statement: At my organization HR is involved in data driven trend analysis and data benchmarking	
Agree	6
Strongly agree	11
Please indicate your level of agreement with the following statement: At my organization HR can analyze attrition rates for different groups of employees for ex high potential vs low potential employees.	
Agree	9
Disagree	3
Strongly agree	5
Please indicate your level of agreement with the following statement: At my organization HR decisions are based on data analysis.	
Agree	9
Disagree	2
Strongly agree	6
Please indicate your level of agreement with the following statement: At my organization, HR analyses data based on integrated data from compensation, performance , training etc.	
Agree	8
Disagree	2
Strongly agree	7
Please indicate your level of agreement with the following statement: At my organization, HR provides actionable solution based on data analysis.	
Agree	12
Disagree	1
Strongly agree	4
Please indicate your level of agreement with the following statement: At my organization HR continually develops predictive models to support strategic decision making.	
Agree	4
Disagree	5
Strongly disagree	8
Please indicate your level of agreement with the following statement: At my organization HR engages in strategic workforce planning based on different scenarios.	
Agree	4
Disagree	1
Strongly Agree	1
Strongly Disagree	11
Please indicate your level of agreement with the following statement: At my organization there is representation of Corporate level HR official on board of the company.	
Agree	3
Disagree	1
Strongly Agree	2
Strongly disagree	11

Source: Data Analysis of the Primary data (Questionnaire source: <https://www.aihr.com/blog/test-hr-analytics-maturity-level/>)

As per the survey majority of the HR Professionals agreed that Employee data base is captured and maintained regularly and employees are provided access to HR Dashboards and metrics. Majority of the professionals also agreed that HR is involved in data driven trend analysis and data benchmarking, analyzing attrition reasons and levels, compensation , training etc. As per the descriptive statistics, majority of decisions are data driven. However, the respondents disagreed that HR uses data analytics for strategic workforce planning through prescriptive analytics. Twelve out of 17 surveyed disagreed that a corporate level HR officer is there on the board.

As per the Academy to Innovate HR Blog, the scores of an organization on the responses are coded on the scale of 0 to 3 where

Strongly disagree: 0 points
Disagree: 1 point
Agree: 2 points
Strongly agree: 3 points

Subsequently the points are summated to arrive at the Maturity scale where

0-5 points: Level 1
6-11 points: Level 2
12-18 points: level 3
19+ points: level 4

The level 1 organizations utilize data analytics merely for operational reporting while Level 2 organizations are able to provide access to dashboards and metrics to all the employees. But still these organizations have not incorporated strategic orientation in HR analytics. Level 3 organizations conduct predictive analytics while Organizations at level 4 are at the highest level of analytics maturity. The Chief HR Officer is represented on the board of the company and is engaged in strategic workforce planning.

Table II presents the scores of the 17 organizations surveyed

Table II. Analytics Maturity Score of Surveyed Organizations

Organization	Score	Level
1.	17	3
2.	16	3
3.	14	3
4.	16	3
5.	22	4
6.	22	4
7.	19	4
8.	21	4
9.	25	4
10.	21	4
11.	16	3
12.	18	3
13.	14	3
14.	23	4
15.	16	3
16.	21	4
17	17	3

Source: Data Analysis of the primary data (Scoring formula - <https://www.aihr.com/blog/test-hr-analytics-maturity-level/>)

As per the scores calculated nine organizations are at level 3 of the analytics maturity while rest eight organizations are at the level 4. It means that all the organizations surveyed are at advanced level of analytics maturity.

The findings are consistent with the report on State of Data Science in Domestic Indian market released in 2021 Aim Research. According to the report Analytics adopting is growing rapidly in Indian companies and is reported to be 74.5% in 2021. Pandemic has accelerated the rate of digital adoption. However, the findings contradict the findings of the Report on People analytics maturity in India, Deloitte (2022). According to the findings of the report. 22 percent of organizations introduced people analytics in the last 5 years, but they have not yet started using new types of data and only 23 percent of the organizations who are at advanced maturity level in terms of people analytics.

As the organizations are constantly grappled with the challenges of Uncertain, Volatile, Ambiguous and Complex business environment, Data Analytics helps to build resilience and agility in organizations. HR is no longer only a staff functioning, assisting line managers with recruiting and employee lifecycle management. HR is now increasingly playing a strategic role in all the organizations, with the intent of creating value for the employees and the organizations. Hence adoption and maturity of organizations in terms of People analytics will be instrumental for organizational success.

5. Limitations and future scope of the study

The study is based on snowball sampling with very few respondents, hence the findings can not be deemed to be applicable on the entire population of Indian Private Mid-Sized organizations.

The study is still at its nascent stage and hence very limited variables were considered for the study. For a rigorous study more variables and context

need to be incorporated in the survey instrument.

Qualitative research will also enhance the understanding of the antecedents and precedents of People analytics maturity.

Since the organizations have recognized the strategic importance of people analytics, further research in the domain of analytics maturity will help professionals to plan an implement people analytics in organizations.

References

1. Arora Vikas , People Matters Workforce Analytics Study (2016) accessed on 23 February, 2023 <https://www.peoplesmatters.in/article/hr-analytics/workforce-analytics-how-mature-are-organizations-13135>
2. Blast. Analytics Maturity Assessment. Blast Analytics & Marketing. Available online: <https://goo.gl/v13P5r> (accessed on 28 January 2022)
3. Cardinal Path. Benchmarking Your Organization's Analytics Maturity? ebook; Cardinal Path: New York, NY, USA. Available online: <https://goo.gl/KgeAWH> (accessed on 12 March 2023).
4. Cornerstone, 2018 People analytics Retrieved from <https://www.cornerstoneondemand.com/glossary/people-analytics>
5. Davenport, T. H., Harris, J. G., & Morison, R. (2010). Analytics at work: Smarter decisions, better results. Harvard Business Press.
6. Davenport, T. (2018). DELTA Plus Model & five stages of analytics maturity: A primer. International Institute for Analytics, 1-12.
7. Gartner Survey Shows Organizations Are Slow to Advance in Data and Analytics. Gartner Newsroom. Available online: <https://goo.gl/pAhfbt> (accessed on 11 Feb 2023).
8. Global Human Capital Trends Report, Deloitte (2020) accessed on Feb 11 ,2023 <https://www2.deloitte.com/cn/en/pages/human-capital/arti->

- cles/global-human-capital-trends-2020.html
9. Grossman, R. L. (2018). A framework for evaluating the analytic maturity of an organization. *International Journal of Information Management*, 38(1), 45-51.
 10. Halper, F., & Stodder, D. (2014). TDWI analytics maturity model guide. TDWI research, 1-20.
 11. Hamel, S. (2009). The Web analytics maturity model. A strategic approach based on business maturity and critical success factors. Recuperado de http://www.cardinalpath.com/wpcontent/uploads/WAMM_ShortPaper_091017.pdf.
 12. Jabir, B., Fali, N. and Rahmani, K. (2019), "HR analytics a roadmap for decision making: case study", *Indonesian Journal of Electrical Engineering and Computer Science*, Vol. 15, No. 2, pp. 979-990.
 13. Jain, A. and Nagar, N. (2015), "An Emerging Trend in Human Resource Management", *SS International Journal of Economics and Management*, Vol. 5, No. 1, pp. 1-10
 14. Kirtane, A. (2015), "corporate sustainable HR Analytical practices", *Journal of Management & Administration Tomorrow*, Vol. 4, No. 1, pp. 33-40
 15. Król, K., & Zdonek, D. (2020). Analytics maturity models: An overview. *Information*, 11(3), 142.
 16. Lochab, A., Kumar, S. and Tomar, H. (2018), "Impact of Human Resource Analytics on Organizational Performance: A Review of Literature Using R-Software", *International Journal of Management, Technology And Engineering*, Vol. 8, pp. 1252-1261.
 17. People analytics maturity in India, Deloitte (2022) accessed on Feb 20, 2023 < <https://www2.deloitte.com/in/en/pages/human-capital/articles/people-analytics-maturity-in-India.html>
 18. Peeters, T., Paauwe, J. and Van De Voorde, K. (2020), "People analytics effectiveness: developing a framework", *Journal of Organizational Effectiveness: People and Performance*, Vol. 7 No. 2, pp. 203-219. <https://doi.org/10.1108/JOEPP-04-2020-0071>
 19. Piyanka, J. (2019). The Analytics Maturity Quotient Framework. Aryng LLC. Available online: <https://goo.gl/3RwiYJ> (accessed on 28 September 2019).
 20. Reddy, P.R. and Lakshmikeerthi, P. (2017), "HR Analytics' - An Effective Evidence Based HRM Tool", *International Journal of Business and Management Invention*, Vol. 6, No. 7, pp. 23-34.
 21. State of Data Science in Domestic Indian Market, Aim Research (2021), accessed on March 07, 2023 <https://analyticsindiamag.com/state-of-data-science-in-domestic-indian-firms-2021/>