The Impact of Disruptive Technologies on Employee Attrition

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ABSTRACT - Purpose: The purpose of this research study is to understand the implications of disruptive technologies on employee attrition. Disruptive technologies are the ones which are new, modern and innovative and which bring about a lot of changes in the organization which incorporates them. These high- tech developments impact the employees and might be followed by employee attrition if they are not able to grapple with the updated techniques or if their work is replaced by machines requiring no human assistance. The study intends to highlight the effects of employee attrition. Further it analyses the transforming human resource roles with the technological advancement and the solutions to manage both technology update and human capital.

Research Implications: This is a research based on secondary resources which has aimed at getting an insight on one of the major workforce challenges i.e. employee attrition, because of technology development and transforming skill requirement. The future research might use the alternative methods wherein empirical evidence can be provided by using primary data.

Originality: The paper highlights the relationship shared by technology disruption and employee attrition and recommends the possible solutions to resolve the pertinent issue.

Keywords: Employee attrition, Disruptive Technology, HR and employee retention.

I.   INTRODUCTION

'A truly disruptive technology not only changes the way that people think but also the way they operate.' – Unknown

The organizations that invest in the digitalization surpass the performance of their peers over a period of time. Such organizations are braced for disruption, better equipped to monetize newborn or modern digital channels competent enough to establish a bigger user base. According to Clayton M. Chritensen, disruptive technology is a term used to describe a new and unexpected technology that can affect existing technologies.[1] The five major disruptive technologies fueling the global economy and paving the way for world of tomorrow are Artificial Intelligence (AI), Blockchain, 3D Printing, Virtual/ Augmented Reality and Internet of Things.[2] These are called disruptive because they cross tipping point in performance or price or ubiquity or increased accessibility and/ or capabilities as compared to the incumbent technologies. In addition to the boons hi-tech brings along with, machinery replacing human employment has been a constant concern since the commencement of industrial revolution. However, these innovations may impact the employees and their jobs in a

negative way, for the technological advancements, to some extent replace the labour as a factor of production or these developments are beyond the knowledge of operation of the existing employees. Within Human Resource, attrition is defined as a reduction in the workforce as a result of retirement or resignation, without plans to fill or replace that vacant job position. Sometimes used interchangeably, but employee attrition is different from employee turnover because the vacancies created by the former process aren't filled immediately, but in the latter process, there is a short metric and vacancies need to be filled immediately via rehiring. Employee attrition further affects the organizations which ultimately have to suffer the loss of the labour, a part of which might have been its main assets. This study revolves around understanding employee attrition as a repercussion of inventions of disruptive technologies.

II.   REVIEW OF LITERATURE

1.   Employee Attrition

- **Chiradeep Basumallick (2020)** has highlighted about the employee attrition. Attrition can be an outcome of several factors like absent professional growth, inhospitable work environment, weak leadership or diminishing confidence in the market value of the company. The author says that sometimes attrition is beneficial too depending upon the kind of talent lost

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[1] (*Disruptive Technology - an Overview | ScienceDirect Topics*, n.d.)

[2] ("5 Disruptive Technologies Shaping Our Future," 2020)

the reason which made them leave and the impact it has on the business. Companies should opt for assessing culture fit when hiring, offering learning opportunities, offering a competitive pay package, conducting thorough exit interviews and regularly monitoring employee satisfaction in order to avoid employee attrition.

- **S. Rabiyathul Basariya and Ramyar Rzgar Ahmed (2019)** conducted an exploratory and subjective research on 100 subjects to understand the factors of employee turnover in the association. Working conditions, welfare, payments and compensation, association with the collaborator, and professional growth are significant elements relevant to turnover. Providing faithful, intriguing and great work environment is crucial for the associations to curtail the whittling down level.

2. Human Resource and Workforce owing to Technological Development

- **Emma Parry and Valentina Battista (2020)** have highlighted the impact of emerging technologies on the work and human resource function. Where these technologies help in automating the tasks and quickly taking the complex decisions, HR Professionals have to face several challenges to update employees' skills. Better the HR possesses skills and understands the new technology and its implications, better can they help employees in skill development, maintain mental well-being and work organization, and also ensure sustainability of the organization.

- **Dr. T. Viswanathan and Dr. Neha Chhabra Roy (2018)** have discussed the impact of technology disruptions on workforce with special reference to Indian Banks using secondary data and primary data collected through focus group interviews and survey questionnaires. Adoption and influence of technology modifies processes, delivery channels, training and development and declines the human intervention making most of the jobs redundant. Prominent mitigation measures on the job training, retired officials support to groom workforce, competency mapping, skill-based allowances, etc have been suggested to high zone of challenges in the banking sectoring owing to technology disruptions.

- **Deborah Sharon Stanley and Vaneeta Aggarwal (2021)** have emphasized on the positive impact of disruptive technologies on HRM practices. For the survival in Industry 4.0, the organizations require evolution of HR functions at the pace of industrial development. Imbibing disruptive technologies is advantageous because of consequent reduced cost, increased profitability, employee friendly HR functions, creation and growth of learning culture, and automation of repetitive and monotonous work.

3. Employee Retention and Related Strategies

- **Bomboma Kalgora et al. (2016)** conducted review of the pre- existing studies in order to understand the factors that determine employee retention. Compensation, working environment, work- life balance, opportunities contributing too development, freedom, social support, management/ leadership, training and development broadly form the crucial factors. A significant part of business's success depends on employees and talent, hence retention is paramount.

- **Md. Uzzal Hossain and Ishita Roy (2016)** have highlighted the concept of Human Capital Management (HCM) and how it is competitively advantageous for an organization. It relates to creating an organizational system for attracting, developing, retaining and motivating the high skilled people for they are efficient at the work they do and hence their unitary cost is reduced. Effective utilization of its human resource can give an upper edge to the organization over its rivals, for having which designing a complete HRM model and establishing employment relationship is vital.

- **John Stokoe (2017)** has discussed about the people's indispensability even in the fourth digital industrial revolution and future. Companies that adopt technologies for their sake without proper business planning, end up struggling with adjusting tech in the business and ultimately loose people important for their success. For squeezing the benefits of transformation, organizations need to have a system of empathetic leadership to create culture that facilitates people to come up with innovations, creations and willingness to make decisions that grow value. Accurate application of technology that people of the organization are well- versed with is profitable.

III. RESEARCH METHODOLOGY

The current study revolves around the employee attrition as one of the outcomes of technological advancement in the organization. This research is based on secondary data gathered from distinctive literatures pertinent to the various facets relevant to the topic of study. The auxiliary data is gathered from online articles, research papers, reports, books, etc. The emphasis has been laid on how the organizations change owing to adoption of disruptive technologies and the considerations that have to be made for smooth transition without employee attrition becoming one of the consequences.

IV.   OBJECTIVES

- To study the implications of employee attrition on the functioning of the organization.

- To study the transformation in Human Resource roles in organizations due to advent and utilization of disruptive technologies

- To study the solutions that can strike a balance between disruptive technology and employee retention.

V.   SIGNIFICANCE

The study on the topic, 'The Impact of Disruptive Technology on Employee Attrition' has been conducted in order to understand the transformation in the skill and knowledge requirement of the employee due to the transition because of adoption of new modern technology. The study analyses the concept of employee attrition, changing HR roles due to disruptive technologies and the solutions which can balance out talent retention and hi-tech. This research is of importance to students, research people, scholars and HR managers.

VI.   LIMITATIONS

This research has certain limitations as well. Firstly, the study is entirely based on the secondary sources such as research papers, journal articles, etc. and primary data has not been collected. Secondly, the study might not be absolutely comprehensive because of paucity of time and money based limitations. Lastly, sufficient literature review mightn't have been reviewed.

VII.   FINDINGS

- **To study the implications of employee attrition on the functioning of the organization.**

To begin with, employee attrition is a consequence boiled down to owing to various antecedent factors such as job dissatisfaction and stress, irrational expectations from the employees, organizational culture, unpredictable environment at work, lack of recognition of opinions, supervision criteria, unpreparedness for upcoming twists, unsatisfactory income level or even the employee themselves. Personal factors of the employees are also important which can further influence the perception of the other factors like organizational, social and economic. Employee attrition can be voluntary i.e. the employees themselves make the decision of leaving the organization or it can be involuntary i.e. the employees are fired, dismissed or are made to leave the organization in any other form as per the decision taken by the organization itself.[3]

There several implications that the organization has to face with regards to employee attrition. The organizations have to incur direct costs inclusive of enrollment, recruitment

and selection and training and development, and indirect costs such as lack of morale, harm to the position chain, affected enterprise standing, etc. There are high chances of culture clash because of the old, experienced and already adapted employees leaving the organization and getting replaced by the new employees coming from different background and work culture.

Employee attrition leads to loss of the difficult to replace acquired knowledge[4], because the employees who, through their long association with the organization, have acquired required skills and knowledge leave the organization, voluntarily or involuntarily. Productivity lessens until new employee gains an accurate level of skill and knowledge and adapts with the organizational management mechanism and culture. Another challenge is for the team/s the employee was a part of, since even one member leaving the team hampers its smooth functioning and coordination. For instance, with the departure of a key engineering lead, the team dynamics of people working under them get disturbed.

- **The transformation in Human Resource roles in organizations due to advent and utilization of disruptive technologies**

Discovery and use of disruptive technologies bring about digital transformation which indicates the change in business processes, operations and structures for exploiting the benefits of the new technology.[5] Digital transformation is followed by a sea change in human resource management because it results into consequences for the capabilities and competencies of the HR role. For achieving the positive impact of disruptive technology, Human Resource Management (HRM) plays a significant role in training and development and management of talent, performance and reward.

Advancements in technology can result into numerous changes in the workplace which can be as dramatic as the breakdown of the conventional employment relationship. In general and positive sense, new technologies opens up new opportunities for HRs like increasing efficiency at work, decreasing burden of administrative work and allowing them to focus more on strategic orientation of the company they are a part of.[6]

The far- flung usage of artificial intelligence (AI) and robotics replaces humans in most of the instances. The long- term employment of the people gets affected, leading to disintegration of traditional set up of employment and getting replaced by gig economy. Owing to modernly innovative technology becoming a part of the workplace, a new generation of employees, possessing highly distinguished attitudes, replaces the previous ones. Increasing dependence on the high-tech developments

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[3] (Bacha, 2016)

[4] (*Understanding the Impact of Attrition on an Organization*, n.d.)
[5] (Fenech et al., 2019)
[6] (*Full Article: Conceptualising the Future of HRM and Technology Research*, n.d.)

changes the skills requirements, hence making the working of the existing workforce complex and incompatible with what the transiting organizational structure demands. If the employers aren't able to modify their current human process to become automated and adapt to the changed nature of job by getting trained about the advanced techniques, they put themselves in the risk of losing their jobs, whether through voluntary resignation or layoff. The transubstantiated organizations call for the employees to have increased skill variety, interdependence and autonomy, as well as increased creative, social, cognitive and technical skills, to perform the non- automated tasks and to complement the machines.[7] Furthermore, the new technology when affects the employment through robotics, the routine work of manufacturing workers gets taken over by those industrial robotics.[8] A research study found that for every robot added per 1,000 workers in the U.S., wages decline by 0.42% and the employment-to-population ratio goes down by 0.2 percentage points — to date, this means the loss of about 400,000 jobs.[9]

Considering the existence of such obstacles, the development and recruitment of the relevant competencies becomes a crucial role of the HR. The HR has the task of re- designing the leadership development programs that can tackle the challenges of managing the employee, unknown and inexperienced to the newly adopted technologies and the modern work context, and coordinating them, the humans, with the machines. Moreover, the HR has to increasingly address the concerns related to employee well-being and ensure that because 24/7 connectivity and contact, they do not overwork but try to stay disconnected outside their working hours.

- **To study the solutions that can strike a balance between disruptive technology and employee retention.**

Retention of good employees is significant and it can be ensured by regularly checking on and analyzing the data to predict which employees are more likely to resign and encourage them to stay by training them and enabling smooth adaptability. Technology disruption requiring manpower can turn out to be successful for the organization only if the human resource is efficiently managed. It is the duty of the leaders to ensure the preparedness of the employees by providing the revised training at an earlier stage, so that the challenge of employee attrition because of their cluelessness to grapple with the novel incorporated technology is nipped in the bud.

The companies need to align the technology strategies with the workforce challenges and mustn't leave the aspect of retention of the experienced and intelligent employees to oblivion. The capability of the companies in the transition

from traditional to digital work environment depend on how well it is equipped to utilize its talents through identification of their competencies, placing the right person for the right job, developing the competencies through training programs and rightly addressing the competency gaps.[10]

A sustained competitive advantage is attained when the HR professionals focus on synergetic work of human capital and technology. The effort to achieve this synergy encompasses understanding the adaptability requirements of the employees and training them to modify their manner of work so that the modern technology can become a positive asset instead of a liability and a competitive position is maintained in the industry. The HR has to fulfill their obligation of assisting employees in navigating to new digitally evolving world of work, with special emphasis on skill development, mental well- being and work organization.

With the adoption of new technology, organizations might just enjoy the ease and pace of work, indicating that they are only focused at accomplishing organizational goals. However, they mustn't sideline the individual goals and growth of the employee but reduce the attrition rate by providing the required learning and development opportunities to stimulate their career growth. The HR professionals should instead take advantage of the big data for conducting timely and effective analytics with respect to engaging and retaining employees for long- term association. In this era where we have upto five generations working, the leaders need to rightly choose the people strategy and cater to their diverse needs while the transition owing to technology disruptions goes on.

VIII.   SUGGESTIONS

Following are some recommendations to this research study:

- The organizations should ensure that employee engagement isn't compromised. The employees considered engaged tend to perform better and pass on their exuberance and skill throughout the organization. The adopted technologies can boost employee engagement in relevant ways. For example, social- media engagement provides chances of developing interaction between employees and employer, building brand image with employees' involvement on social media, employee engagement in finding information about existing competitive brands, etc.

- The organizations should keep looking for attaining more talent, but at the same time should also tap the potential that exists within the employees by providing them with opportunities and incentives, so that such employees feel supported and in- turn their capabilities can contribute as assets for the organization. For uncovering the hidden talent, the organizations need to have a growth mindset that

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[7] (Frey & Osborne, 2017)

[8] (Liu & Grusky, 2013)

[9] (*A New Study Measures the Actual Impact of Robots on Jobs. It's Significant.*, n.d.)

[10] (*Final-161118.Pdf*, n.d.)

every employee is talented and innate ability to develop that needs to be provided conducive culture at organization.

➢ Amidst continuous digital transformation and enthusiasm to compete to be known as the best, the organizations shouldn't risk employee loyalty which is like to evaporate during the challenging times. Giving certain control to the employees, being fair amongst the employees, recognizing their work, etc. helps in maintain employee loyalty and thus employee retention.

➢ In the age of AI, it is still vital to retain the existing employees because they are aware about the company culture, customers, dynamics of work, etc and losing them will be followed by investment in recruiting and developing suitable human capital from the scratch. Retraining or re-skilling is helpful and pragmatic option for it will be cheaper and less burdensome.

IX. PERFORMANCE ANALYSIS

The research has showcased one of the highly possible implications of modern and innovative technological developments for the organizations incorporating them and that is employee attrition. With advent of AI and robotics, things are moving towards automation, vastly replacing the dependence on humans. Where it complements well with the high- skilled labour, it poses threat to the jobs of the low- skilled labour due to lack of compatibility with the new technology. Hence, employee attrition is the obvious impact if human resource management and skill development programs aren't in place.

The outcomes of this study are based on the ascertained objectives. So, firstly, employee attrition disturbs the organizational structure and the yields, especially when the most resourceful and knowledgeable employees are no longer part of the organization; secondly, with disruptive technologies being brought into the organization's working, the roles of HR professionals transform for they have obligation to ensure employee retention, talent management and competency development of the employees; and thirdly, the organizations need to ensure that there is a balance between disruptive technology and employee retention in a way that human capital is efficiently managed and further effectively trained as the technology alone, without humans, cannot yield optimum successful results for the organization, making it important for devising strategies to avoid the situation employee attrition.

Augmented Intelligence is useful and should effectively be used by HR for attracting, retaining, growing, motivating and growing the employees in the organization. Instead of digressing complete attention towards automation and AI, such technologies should be used in simultaneous fashion for these provide a platform for the purpose of improving the organizational performance with the resourceful people a part of it.

X. CONCLUSION

The conducted research's focal point was to analyze how employee attrition is one of the negative implications of the advent and utilization of the disruptive technologies. It can evidently be concluded that there is a strong relationship between employee attrition and technology disruptions, for the former has great chances being lead to by the latter. Although the technologies lower the utilization of labor as a factor of production, however these can't perfectly substitute the human capital and employee attrition impacts the organization with the loss of highly useful workforce. Hence, as the study has investigated, it is paramount to timely realize the importance of employee retention through skill development programs, mental health consideration, talent and performance management, and filling the competency gap. No doubt, new generation employees are important to be recruited and selected to become a part of the organization for they have better knowledge about how to use the latest technology, but then it is the responsibility of the HR Professionals to manage and fulfill the diverse requirements of the different generations working for the organization. The study has identified that the role of HR changes and expands with the change in organization's working structure and thus, supporting the employees through the transitional phase, during which modern technology is incorporated, is integral in order to reduce the employee attrition rate and retain them, especially the ones who're strongly knowledgeable and flexible.

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