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Use of Robotics in HR Practices and Its Impact on Production

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Abstract
According to the current global scenario, advancement of robotics technology accelerated tremendous productivity increases, improved revenue generation, advanced the organisational decision-making process, and ultimately contributed in boosting economy. Digitalized industries can enhance the value of robotics as it has breakthroughs to numerous segments of industries and has a plausible contribution to the market. Purpose of the secondary research is to investigate how robotics adds value to improve organisational process and its effects on the valuable assets of an organisation.

HR is believed to be management pillar and acts as a negotiator between talent acquisition and employee engagement in various tasks. HR has never been traditionally associated with emergent technology or faced any failure to deploy in any sector. But atomization has always been suspected, as robotics in HR can lessen the hustle in the industry's workforce due to shifting from a manual paradigm to an atomization paradigm, which will result in a scarcity of jobs for the talent market, displacing tremendous intuitive techniques. This study highlights the role of RPA in HR operations, as research paper is descriptive in nature depending on reliable secondary data source and required research data is collected from reports, journals and websites. Hence this paper is limited to few industries only. The research conclusion indicates that adoption of automation along with HR Practices has more positive indication than negative ones in the industries. But before they worsen, several concerns brought on by robotics HR need to be coping with it.

Keywords: HR Practices, Atomization, Robotics.

INTRODUCTION

Robotics' arrival in India has been a decade now. Many countries have even officially announced the inauguration of robot services in nearly every (Vedder, R., & Guynes, C. S., 2016) . And now, we are surviving in the digitalized world where robots are here to handle HR functions more effectively and efficiently than humans; several changes can be expected in the way HR would convey its personnel functions comprising planning, accounting, material handling, allocation of resources, collectively Production as well (Kotalkar, Ms. Suvarna G., 2020). HR should adapt to the atomization change for its deployment practicing to realize their sake of conductive and prudent techniques. The literature review, Methodology, Discussion, and Conclusion are the four sections of this article. This paper will basically focus on Production and Manufacturing Industry (MI), include a few organizations in particular sectors. This is because there are numerous industries and organizations that have developed and adopted automation and robotics in their daily operations. As a result, the automation and robotics connected to above industries will receive more focus.

But first, let's learn more about robotic technology and its exact nature. (Prangnell and Wright, 2015). Robotics is the process of developing robots to perform a particular task assigned to them. It is a familiar concept of engineering which necessitates designing, manufacturing, and robots operating. It refers to the up gradation of standard employee functioning for better and faster results in fabrication, manufacturing, and distribution of available surplus. Like any establishment, if you're looking to assemble your products more quickly, robotics leads you to speed up your industrial functions. Also, if you need to make run-of-the-mill managerial efforts slightly efficient, bundled software practice mechanization would be more appropriate for your task. The purpose of robotics was to generate intelligent operating machines (robots) that can lend a hand to human beings. (Mohamad Kamal Md Dahlan1, 2019). However, in the current scenario, it is pretty evident that these machines are on the verge of replacing "hands at work", creating unemployment.

The rapidly growing field of robotics is ever more sophisticated and complex; it requires a significant number of trained technicians to impart expertise in framing the structure, agenda, and maintaining an entire system of mechanics. Naturally, this machinery complication of the system has spawned five dedicated robotic ground

1.1) Human-machine interface (HMI): Human-machine interface (HMI) is the only mode that leads a user to build a connection and communicate with the robot. (Federico Berruti, Graeme Nixon, Giambatista Taglioni, and Rob Whiteman, 2017) Most specifically, the methods offer us a set of pre-programmed instructions to be executed. These automated machines are exceptional, acquiring the proficiency to converse with a human-made controller smoothly. A gaming controller is one of the best examples of a (HRI) Human-Robot Interface. In mechanized segments, the touch screen computers on each machine or even the technically centralized control room are also a variety of HRI. There, humans can convey instructions to the conveyor or other running equipment to perform at the shop floor level.

1.2) Mobility or locomotion: For any machine, in completing a task, it is required to be able to move in its environment well. And in machine language, the displacement of machines is said as Mobility/locomotion. For example, the petty of robots can imitate human actions, those working on assembly lines or one who's framing is focused on human anatomy. The drone's airborne devices are fluently utilizing paddlewheels. Other machines, like rovers deployed on Mars and other celestial bodies, need wheels for their displacement. For any surroundings, the use of robotics devices is identified by the engineer designing the mobility system.

1.3) Manipulator and Effectors: It is a technique used to manipulate any substances directly without tangible interference from the operator. (Benitez, J., Ray, G. and Henseler, J., 2018)They are the substitute for robotics that supports the movement. And even control things that are split apart. Formerly this software deals with life-threatening radioactive or bio-hazardous substances with robotic arms. So this mechanized life-saving attempt protects us from various hazardous processes.

1.4) Programming: This systematic function includes a skilled writing operating system that helps a machine recognize things around and set strategies with its execution. (Ballestar, M. T., Grau-Carles, P. and Sainz, J., 2019) For instance, programming legged robots to move freely at any place requires full control of the operator in sensing, perception, and other functions when needed.

1.5) Sensing & Perception: In the same way, like us, these robotics gadgets have too acquired human senses for gathering information about their environment. These collected data help them better understand the robot, what physical space it occupies, what areas of assistance are, and even encounter any obstacles blocking its path.

1. LITERATURE REVIEW

Robots are the latest and fastest up gradation in the long-term evolution of global technological networks beings. (Mohamad Kamal Md Dahlan1, 2019). Robotic engineering is a new trend for some fabricating economic sectors, but traces of these machines have been from decades. On delve in Stone Age, robotics techniques have rapidly grown in numeral software and by intensifying capabilities.(Mrs. Ashwini Sheth1, 2021). For all that being controversial, the majority assumes it is a wonder of the modern world, so by bringing together ancient production methods with highly advanced modes of automation; industries can rampant hike their production cost to get massive returns on their investments. As way of analyzing the impacts of robotics on HR Practices, the literature review of this research paper will touch on the benefits and problems brought by robotics to human races.

1.1. Adaptation of HR Deployment.

HR is handling many complex issues, and globalization to centralization has unwillingly eroded the significant challenges facing HR departments in this current world as staffing, induction, motivation, leadership development, and adaptation of corporate culture (Yamini Meduri*Pavithra Yadav*, 2021). Robots are never contemplation to be capable of replacing HR, but, as an alternative, helping to support driven processes. Let's elaborate on the statement mentioned above by understanding the practices of HR.

HR plays a significant role in any company's culture as it focuses on its development, reinforcement, and substantial changes in the production processes.HR also performs its features in management, training, recruiting, calling service, information provider, and on boarding the company's values. (Penttinen, E., Kasslin, H., & Asatiani, A. (2018), 2018) In conclusion, HR has significant work to exercise in business. Keeping this into consideration, Robots are now designed in such a way that they can perform all these activities without any hustle and on time (Charles Sutherland, , 2013). They can receive and make phone calls and provide access to information regarding production/manufacturing. Robots are not needed to be trained repeatedly. Once data is fed remains forever until and unless any interruption takes place.

According to reports, industries like Japan and China are gearing up to invest in robotic technologies to provide information, services, check-in services, and check-out services to glorify their enterprises and ensure the best out of them. (Mendling, J., Decker, G., Hull, R., Reijers, H. A., & Weber, I., 2018). Production is considered an extended attribute in any company, including many employees who mark their lives through work. Dispersing them from jobs due to the advancement of technology doesn't seem ethical in any sense. (Phil Fersht, 2012)Those workers are financially dependent, are always hard-hitting, and are left behind with nothing in hand. Ultimately they are deprived of minimum subsistence allowances.

Machines and robots are fascinating and add to the developmental strata of any country's work sector. Still, the reality is grounded upon the notion that unemployment is widely spread out' because these companies automate their workforce faster than expected.

According to a World Economic Forum study, 'Companies are accelerating their digitization above the global average. The survey of the effects of (AI) Artificial Intelligence at workplaces has proved that the 'future of work has arrived early and will replace a million jobs in the upcoming years. (Cline, B., Henry, M., & Justice, C, 2016). (AI) Artificial intelligence is a brain power activity with equipment that lines up with having decision-making abilities like mortals and impersonators in their overall procedures. This fascinating technology may also be applied to any machine that exhibits behaviour auxiliary to the normal brain, such as rote learning, brainstorming, and decision-making. (Iain M. Cockburn, Rebecca Henderson,Scott Stern, 2018) (AI) Artificial intelligence is characterized as the ability to rationalize and take immediate actions that can achieve desired goals. Machine learning (ML) is substituted for artificial intelligence; it refers to the concept that computer programs can easily learn on their own automatically and opt for new information from their environment without any human assistance or interference.

Based on a few researches investigation and a study conducted through a task-based model. (Prasanna Tambe,2, Peter Cappelli, 2 and Valery Yakubovich, 2018)The automation context expedites a few basic norms that look to rule the interaction of us with machines. Given below are six general tendencies on which machines automation functions and its relationship to labors that facilitate measurement:

a) Automation substitutes for labour: Imagine if machines are competent in handling work assigned by us, undoubtedly will be completed with immense precision, sky-scraping speed, and at a shallow rate. (Prasanna Tambe1, Peter Cappelli1,2, and Valery Yakubovich1, 2019) Yet limitations exist for substitution. It is an unwilling invitation to unemployment in society. Also, hunger and poverty will reach their fullest. Few other researchers have an opinion about robotics. It may wipe away jobs, pushing the world to an end. (Bo Cowgill, erekDenrell, Christina Fang, and Chengwei Liu, 2018). At the same time, others assumed that artificial intelligence (AI) would give birth to more jobs than it has taken away. (Cowgill, 2018) Consequences can be depicted in industries' employment rates by the occurrence of automation to different assigned tasks after technological advancements, such as the employment rate trickling below radically soon after the prologue of automated machinery, and so said, as automation has substituted for the workers.

b) Machines substitute for tasks, not jobs: Industrial Revolution marked the presence of mechanization but was in cover till the current pace of automation rising took place. (Phothong Saithibvongsa, 2018) Hard to believe but true that jobs are disappearing more created to automation as machines replace laborers. Jobs are bundles of duly assigned tasks that machines will substitute for every function in any occupation and even in unexpected destructive scenarios.

Mechanization is unlikely to replace labour forces. (Maslekar, 2020) It can be applications, tools, machines, and robots. These gravitate have been occurring for a very long time and are predicted to be continued for a prolonged future. That is why few strongly believe that mechanization and AI (Artificial Intelligence) will conquer monotonous work. Even though rhythmic schedules, we can utilize more instances by primary duties or pieces of job contributing added value to the organisation. (acques Bughin, 2017) New technological innovations come with two significant effects, the displacement effect and the productivity effect, that can affect the employment rate. (Frey, 2017) The displacement effect would be directly displacing employees or workers in their previous work tasks, and the productivity effect would increase labour demand because of technological processes. Automation benefits are as under –

- Minimize the cost of the workforce.
- Improve product quality.
- Increase productivity in the organisation.
- Time-saving procedure.

c) Automation also complements labour: An industry carrying out numerous activities at the workplace that machines can't finish is complemented by it—leading to the leftover workforce being more precious. (Viehhauser, 2020)A recent method of cutbacks costs through automation is minimizing working hours. For example, consider previous means of mechanization, evaluating it with the present time. (Min K. Lee, Daniel Kusbit, Evan Metsky, and Laura A. Dabbish, , 2021)Mechanization techniques are sufficient to perform simple and manual tasks allotted to them.AI (Artificial Intelligence) allocated with other up-and-coming machinery can lead to more efficient creation facilities and superior product quality with less wastage of material and time. Hence automation can maintain estimated functions along with new tasks. It can offer workers extra time to put all their efforts into making a more prominent brand image and primarily focusing on the organization's set vision and missions.

d) Automation can bring a rise in demand, creating jobs: Automation-obsessed price and product quality refinement will raise worker demand to the extent that offsets would-be job fatalities. (María Teresa Ballestar,, 2020) Automation technology can replace labour in repetitive or routine tasks, but it can never be replaced by physical labour in non-routine tasks. This is because a non-routine job involves human efforts, emotions and decision-making abilities, which is why many experts assume that future innovations will increase productivity in work environments. (Mark Muro, 2019)However, the growth of technological innovations such as AI may hurt low-skilled class workers because many low-skill workers are involved in repetitive tasks or simple routines.

e) Capital and labour augmentation spurs innovation: If mechanization necessitates handling daily schedules, sedentary occupation. We are capable enough freed-up in developing innovative products and skills. The largest platform for money reserves from automation can quickly be done by Lessing their working hours. (Frank, M., Autor, D. and J. B, 2019) Every economy to keep its GDP constant in the long run global trend in which industries can thoroughly commence both manual labour and resources supplements upgrading of techniques engage in innovative funds that boost the productive capital and effort in performing their relevant errands. (Daron Acemoglu, 2019) Let's think about the prior mechanized methods compared to contemporary manufacturing labour multiplying technical transformation, which offers an eye-catching blueprint to macroeconomic analysis, as it steady not only with the ultimate steadiness of shares but also with medium-term swings in retort to alteration in stocks capital, supply of labour or technology.

f) Tech possibility is different from tech reality: Massive reasons are there to prove tribulations behind the technological adoption fall short of prospective; it can create a blunder to equate technological forthcoming with expected outcomes. (Acemoglu, D. and Autor, D., 2011) Methods an automated blow job has to deal with the approach worker rely on technology. It's essential to distinguish in two identical terms: substantial assets and contemporary expertise. Tangible assets are entire implement devices acclimated and used for manufacture consumption. Expertise refers to acquaintance, process and procedure adopted in manufacturing products and services. (Acemoglu, 2017) Auxiliary machinery is a subtle characteristic personified in substantial assets. Take the example mobile Samsung Galaxy Ultra—launched in favor of trading purposes; it is a considerable asset but differs from the original Samsung mobile and Samsung Ultra advancement features and techniques. Granting all this highlighted that introducing modern

machinery in substantial assets seems advantageous, as it will interrupt susceptible works that will substitute labour effortlessly.

1.2. Adaptation of Industrial Robotics and its impact on Manufacturing and Production Sectors.

The extension of digital transformation of world adoption of industrial robotics is essential. No easy endeavor is the development of today's most advanced robotic systems, as still; our world is standing in the middle of evolution, more likely from the adaptation of the agricultural era to the industrialized one. (Acemoglu, D. and Restrepo, P., 2019) In competitive manufacturing organizations, Industrial robots emerged as a cornerstone which aspires to combine high productivity, improvised quality, and flexibility at the least expensive market price. 2007 was reported for installing nearly millions of industrial robots, with predominant users in automotive industries. (Ballestar, M. T., 2019)Today excessive growth sectors such as (applied life sciences, foodstuff, electronics media, cosmological cells and logistics) and rising procedures of (overlaying, laser cladding fixing, precision assembly etc.) have gradually made more dependent on advanced robotics. (Ballestar, 2020) Robotic device installations numbers in these industries are growing in by inch. At the same time, industrial robot production is a side as forecasting, assimilation, and procedure of robotics employment cells by others. In different terms, being shaped sufficiently massive amount of product, the mechanical design must be faring enough of necessities for a vast collection of prospective applications. (What Is Robotic Process Automation (RPA)., 2020) Although its tuff gaining practice experience in different categories of automaton concerning consignment competence, and robot axes numbers, the working environment volume is rising for appliance categories such as coloring, assembly, palletizing, welding, and machining, along with daily routine management. (Mohamed, S.A.; Mahmoud,, 2022)The allocated labour design, encoding, and maintenance usually hone in on a particular area of professionals. HR is aforesaid as the backbone of any organisation. Robots have simplified our daily life to bread butter concept. The rise of the Robotics era took birth in the 21st century and occupied an important place in our history.

In the manufacturing industry, automation is quite familiar as it was introduced in the period of 1940s through a company named Ford Motor, which used specialized equipment to help manufacture copious mechanical products and electronic parts. Still, it made it highly expensive for the manufacturers to overthrow capital in tooling for new models, which limited production flexibility. The recent industrial revolution evaluation influences the adoption of prime forms of digital transformation, as robotics in industries are increasingly important in the existing perspective. The automation techniques occurrences have been ever since the elongated period; it is just that the rate at which it is happening has been mounting. [Asfahl, 1992].

Automation is never a newly formed incident. (Santiago Aguirre,Alejandro Rodriguez, 2017) Multiple automated processes have been in different fields, such as agriculture and Production. Mechanized systems of machines are here for a more extended period. Considering (AI) artificial intelligence in automating processes strongly affects other human capital. And based on experiences gained through long-running customers, businesses require a strategic approach. However, technological advancements with the rise of AI together have led to an immense increase in the pace of automation in recent years. Even though most industries are keenly interested in adopting these robotic technologies as a tremendous mode to bring productivity to its fullest, few apprehensions are raised regarding the cost impact of the transformation and its effect on employees. (Madakam, S.; Holmukhe, R.M.; Jaiswal, D.K., 2019) Robots, maximum cases, are applied to execute cyclic work routines and simplify the entire workflow. Robotic machines for production team up with humans to fabricate products, especially in deleterious work or material handling, which are lethal for humans. (Juntunen, K., 2018) Automation mounting resemblance by plying mechanization and equipment to reduce or replace labour through ancient methods. Even though robotic techniques are the sole segment on which the manufacturing industry frames automation. Machines acquiring three or six-axis robotic arms are brought forward for handling materials in companies with elect and locate duty, carrying out more rapidly and competently than labour alone.

None of the industries allows robot-free mobility in the workplace, believing they don't carry brains to sense for themselves. Thus, each of them is required to be sharply monitored from time to time. Humans only attain capabilities that one necessitates being predetermined accordingly for superior task management. The increasing numbers of operational robots can suppress the share of working hours between lower classes; AI-controlled or based robots boost

total productivity and average wages. And if the use of functional robots is increased over the years, then the effects of technology on employment will be more advanced and outstanding. Still, in the interim, machinists may get exhausted or troubled by rhythmic tasks; often, this can cause inaccuracy.(Federico Berruti, Graeme Nixon, Giambatista Taglioni, and Rob Whiteman, 2017)Robotics, through their core competencies, entirely eradicate any form of blunder. It's a myth among people that machines can suppress job openings. In circumstances where robots toil in the presence of human instructions, they could function soundly and generate a fortune in a quicker and low-cost mode. A survey conducted through a market research firm revealed that a maximum of random manufacturing takes place due to human error. These are a few benefits of robotics in manufacturing processes are:

- High rate of return (ROR).
- Diminution manufacturing and cost of power consumption.
- Up gradation of dependability
- Soaring exactness in addition to independent task performances.

1.3. Robotic Process Automation.

(RPA) is trouble-free but the most robust automation software that enables us to create our personalized gadgets or bots that make your business process easier and more efficient by running automated tasks over the internet. (Andreas M. Radke, Minh Trang Dang, Albert Tan, 2020). (RPA) Robotic process automation is modern technology rendered to industrial staff for configuring computer programs or "machines" to collect and encode application software to process any operation, manipulate information, trigger responses, and collaborate with other cybernetic systems. State where human capital and integration of (BPMS) Business process management systems is affordable few, neither can't be justified by prevailing business needs. The (RPA) Robotic process automation is an imminent software class contribution to the safe automation of enterprise processes. RPA acts like a transition component working amid human tasks and comprehensive business process automation.However, whilst implementing one robot is relatively straightforward, executing hundreds of robots across diverse processes and integrating automation across entire organizations is much more complicated. And so (RPA) Robotic Process Automation appears as a groupware deploy solution to computerize strategic business processes, including daily routine, ordered data and predestinarianism results. With RPA speeding up processing times and minimizing the expensive errors, processing costs decline and per-employee output increases. RPA will boost your trade to benefit from a wide variety of compensation. This is required to improve competence and cost reduction and grants a practical experience for customers. Although these are enormous mechanisms, only some robotic process automation challenges can reduce their effectiveness. (Graetz, G. and Michaels, G., 2018)Few robotic automation provocations face deficient mental ability, cost of execution, change management, security, extensibility, continuance and integration. (RPA) Robotic process automation is known as diligence exhortation for a short time ago and for validation. These RPA robots are energetic and inexhaustible and are always reliable and infallible. Much robotic process automation is there, but some of the most common include automating tasks such as data mining, data entry, email processing, payroll processing, employee on boarding, data analytics, troubleshooting and data rectification. If looking into the present and future, the top ruling RPA apparatus are Uipath**,** All round mechanization, Blue Prism**,** Microsoft Power Automate**,** Appian, Datamatics, Nintex RPA, SAP intelligent RPA, and Kofax

2. METHODOLOGY

This Current Research primarily uses Secondary data as this research is Descriptive and explicit in nature. And the required data for the research have gathered from multiple of Report, Journal, Website. The study is confined only to study the positive and negative impact of Machines and Robotic process automation (RPA) in human resource operations. And for that Purpose brief literature review is conducted of current topic related research papers.

3. DISCUSSION & LIMITATIONS

Technology is one of humankind's greatest inventions. It is ever evolving on the grounds of providing security and comfort, making people's lives cozy! Undoubtedly today, everything is now mechanized. The backup settings in our

electronic gadgets and security doors of our homes to our offices and almost every segment of our automobile. Robots are cyber-physical systems that combine the hardware and software components, network and communication processes at one common platform and assemble them to perform the desired task with little or no chance of error, which is automatically money, time and environment-friendly, off course.

On the other hand we must also need to be more fully aware of the potential of (AI) artificial intelligence, and few professionals believe that robotics and mechanization can get atop monotonous work. In the place of a cyclic schedule, people splurge quality moments in time through sophisticated tasks or work, adding supplementary assessment to the organisation. Robots are not trained enough to finish a job with total autonomy, so to achieve the most transformative benefits, the perfect combination of RPA tools, process engineering, and human skills are required to be realized and adopted to enjoy the highest potential of robotics. Because automating a poor process will still result in a poor outcome. Achieving the right combination occurs within a long-term strategic shift towards organisation-wide automation. Always remember that even though sugar increases the taste of food, excessive sugar can spoil your taste and health. In the same way, undue reliance on technology for every task will never bring good fruits to us.

4. CONCLUSION

A robot is a well-eminent artificial device working automatically and proficiently and hands over a given task. That's the reason we are too much fascinated by robots. Robotics, together with computerization, always gathers colossal attractions of crowds. Going dept into technology, we can encounter the vision of humans collaborating with machines. However, replacing employees with robots is an inevitable choice for organizations involved in Production. Industries relying on automation HR functions to bloom cost-effectiveness and increase production can face negative drawbacks like unemployment, societal inequality, safety interventions, and ethical issues. Hence, robotics is not the correct replacement in the overall HR process, but it is helpful to support effective driven methods

DECLARATION AND STATEMENT

- **Availability of data and materials:** We confirm that the Data supporting the findings of this research study are available within the article cited along. As this research is based on secondary sources so due to nature of research data that supports this study are available from the correspondence author on reasonable request.
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