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RESEARCH ARTICLE **OPEN ACCESS**

THE UNEQUAL REPERCUSSIONS: HOW RISING TECHNOLOGIES AGGRAVATE WORKFORCE INEQUITIES?

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ABSTRACT

Technological sceptics anticipate that advancements in technology will eliminate jobs. But proponents of technology argue that "non-routine" jobs might actually increase in number. A thorough literature analysis was undertaken in order to have a better understanding of how advances in technology would affect the nature of employment in the years to come. The main goal of this article was to grasp how new technologies provide opportunities, change the nature of occupations, make specific abilities necessary, and present new obstacles. A wide range of options for sculpting an ideal future are presented by the topics that emerged from this article, which emphasised the creative conflicts in the way technologies engages with job.

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INTRODUCTION

Overview of Emerging Technologies: The manner the job is done in enterprises has changed significantly as a result of the increased usage of modern technologies like cloud computing, internet of things (IoT), machine learning, robotic process automation, and artificial intelligence (AI). Modern technology has made it feasible to digitalize physical assets, combine vertical and horizontal value chains, communicate seamlessly, work virtually, and automate processes that were before impossible. Businesses like Amazon, Google, and IBM utilise artificial intelligence (AI) to enhance supply chain management and consumer satisfaction. Conventional jobs are being automated through automation, while Boston Dynamics and Intuitive Surgical are developing robotics. Walmart, Maersk, and JP Morgan are using blockchain to increase trust and streamline operations. Samsung, HTC, and Oculus are among the businesses developing virtual reality technology. Technological innovation creates problems in employment creation by combining efficiency, inventiveness, and convenience while simultaneously challenging conventional sectors, needing adaptation and foresight from politicians and industry. Along with the displacement of technology, reskilling and upskilling the workforce is becoming more and more important. People must continuously update their skills to be relevant as job roles change in line with technology improvements. Governments, businesses, and educational institutions must take the initiative to offer training programmes that give people the skills needed for new industries. Disparities in the availability of these training opportunities, however, have the potential to exacerbate social injustices and thwart initiatives to advance inclusive economic growth. likewise, rural communities and smaller cities face challenges due to the geographic concentration of technology-driven job opportunities in urban areas. Digital hotspots often push out areas with inadequate infrastructure or resources to support technology-based businesses, since they attract talent and investment. It will take calculated efforts in learning, training, technological infrastructure, and entrepreneurial ecosystems outside of cities to close this gap. In the end, novel inventions have a complex effect on job creation that demands meticulous oversight, even while they have enormous potential to boost economic productivity and growth. Through promoting cooperation among relevant parties and giving priority to inclusive growth tactics, communities can capitalise on the advantages of technological advancements while simultaneously reducing the disruptive impact on jobs. It is only via prepared adaptation and progressive policies that we can guarantee that whatever happens in the future will be inventive and fair for everybody.

REVIEW OF LITERATURE

Silva, V. (2022) Relationship banking has grown in importance within the workforce, enabling tellers to develop personal

relationships with clients and transition from being cashiers and deposit takers to financial services consultants.

Hackl (2020) emphasised the revolutionary potential of artificial intelligence (AI), virtual reality (VR), and augmented reality (AR), highlighting that advances in technology and automation will not result in the loss of human jobs. According to her, augmented reality, virtual reality, and artificial intelligence will create seven new careers in the future: chief empathy officer, business-to-robot-to-consumer (B2R2C) marketing manager, holographic stylist, virtual couture designer, autonomous car licence specialist, and augmented reality life designer.

Autor (2019) draws attention to the unequal stratification in metropolitan job markets brought about by the automation of lower-skilled, lower-end occupations. This has affected the professional skill gradient for non-college graduates, forcing low-skilled individuals into low-paying generic positions.

Ernst, Merola and Samaan (2019) cite that artificial intelligence (AI)-based employment applications as the biggest and most prevalent technical development that have affected emerging nations in recent years. They claim that the wage arbitrage that was previously enjoyed will be lost as a result of automation and the reshoring of work. They warn the emerging nations that failing to adjust to AI could lead to employment losses as well as income disparities both within and between nations. They come to the conclusion that automating "brain force" using machines rather than just "workforce" will undoubtedly be more effective and productive.

Dabirian, Paschen, and Kietzmann (2019), highlights that the information technology sector incurs significant expenditures for hiring, training, and development due to a shortage of highly skilled applicants and substantial labour mobility. They recommend employer branding as a way for businesses to overcome these obstacles and establish a reputation as "great places to work." They outline eight values that IT professionals consider when assessing IT employers based on a content analysis of almost 15,000 employee reviews, and they advise employer branding for IT companies to stay competitive in the labour market.

OBJECTIVES

To understand and gain insights on arising technologies that aggravates workforce inequities.

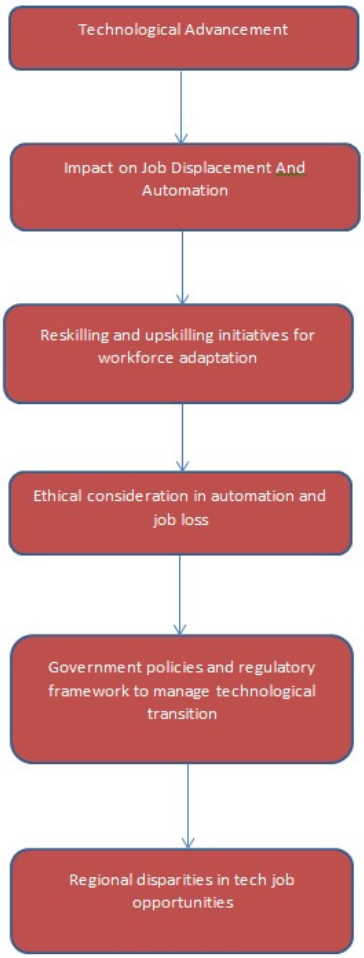
RESEARCH METHODOLOGY

The research study uses secondary data and is descriptive in nature. Secondary data is used to accomplish the aforementioned objective. The secondary data, which predominantly consists information on AI's. The secondary data was also taken from a number of specialized reference books on topics like automation, information technology, artificial intelligence, cloud system, block chain systems etc.

Influences of Arising Technologies Aggravating Workforce Inequalities

Conceptual framework that can graphically represent the interconnected elements and their relationships and highlight the difficulties in creating jobs as a result of emerging technologies. This is a basic diagram of the conceptual framework.

1. **Technological Advancement:** This is fundamental and refers to the quick creation and application of cutting-edge technologies like artificial intelligence, automated processes, and machine learning.
2. **Impact on Job Displacement and Automation**: This shows how employment roles change as a result of technology. improvements and how automation displaces conventional jobs.
3. **Reskilling and Upskilling Initiatives for Workforce Adaptation**: It illustrates how people have responded to losing their jobs and highlights the value of reskilling and upskilling initiatives to equip workers for new positions.
4. **Ethical Considerations in Automation and Job Loss**: This highlights the necessity for legal frameworks and considerations in the use of new technologies by symbolising the moral conundrums related to technology and job loss.
5. **Regulatory Structure and Policy Development to Control Technological Transition:** This arrow highlights how important it is for governments to create laws and policies to control how changes in technology affect employment and society.
6. **Regional Differences in Tech Job possibilities:** It highlights the requirement for policies to alleviate regional differences and advance accessible economic growth by recognising an imbalance of tech job possibilities.



Positive Influence of Technologies on workforce

New technologies such as artificial intelligence (AI) and machine learning are transforming the cybersecurity market by making it possible for businesses like McAfee and IBM to recognise security threats and create remedies.Big data analytics and machine learning are two modern developments that are revolutionising the field of data science, opening up new career opportunities, and attracting investment from major corporations like Microsoft, Google, and Amazon. New technologies such as virtual and augmented reality are transforming digital marketing, generating new employment opportunities, and improving customer interaction for businesses such as IKEA and Coca-Cola. Recent developments simplify labour procedures, increase efficiency, and promote production and profitability. For example, Amazon's usage of robotics in fulfilment centres saves delivery times while increasing customer happiness.

They also pioneer new sectors, such as virtual and augmented reality, that focus on sensory overload. The emergence of cryptocurrencies, a multibillion dollar sector with distinctive employment prospects, is a result of blockchain technology. Mobile apps have driven the gig economy, creating new freelancing opportunities in ride-sharing, food delivery, and home-sharing. However, the continually changing job market may result in unemployment and relocation.

Negative Influence of technologies on workforce

In numerous sectors, technological advances like automation and robotics are leading to job displacement and unemployment. Amazon's automated warehouses, self-driving trucks, and the trend towards high-tech and specialised manufacturing jobs are all examples of detrimental repercussions. The move to automation and robotics is resulting in major job losses. Furthermore, while outsourcing and offshoring are not contemporary innovations, they have become considerably simpler and common as a result of the advancement of electronic communication technology. Many corporations have chosen to relocate their operations to nations with lower labour costs, resulting in job losses in their native countries. For example, the outsourcing of call centre employment to countries such as India has been a major source of job displacement in the United States and other Western nations. The workforce is shifting rapidly, therefore employees with technological and digital abilities must adapt. Gig economies and platform-based labour present issues since freelancers lack pensions and safeguards. Algorithms for machine learning may be biased and discriminatory, raise the danger of cyber-attacks, and result in employment losses. Automation and robotics may potentially cause social isolation and lower job satisfaction. As we observe, technological advancements produce winners as well as losers. These instances demonstrate the actual and serious detrimental impacts of developing innovations on employment opportunities. As the speed of advancement in technology accelerates, people, organisations, and government must make investments in education and training programmes to assist workers obtain the skills required to compete in a quickly changing labour market.

CONCLUSION

Emerging technologies have transformed the work sector, bringing up diverse possibilities and enhancing productivity, but they also present issues such as algorithmic bias and social estrangement. To prepare, individuals, organisations, governments should invest in reskilling and upskilling programmes, practise responsible automation, and prioritise worker well-being. As new sectors emerge, employees can put their abilities to use in novel ways.

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