

Impact of Artificial Intelligence on Employment Generation

Poornima B. S.

Associate professor, Dept. of Economics, GFGC, Channarayapatna,
Hassan.

DOI: <https://doi.org/10.5281/zenodo.17221980>

ABSTRACT:

India has emerged as a global economic powerhouse, boasting the world's fifth-largest economy. With a GDP projected to reach \$15 trillion by 2030, India aims to become the third-largest economy globally. This remarkable growth trajectory is driven by a mixed economy model, where the public and private sectors coexist. Historically, agriculture has been the backbone of the Indian economy, supporting a significant portion of the population. However, the focus has gradually shifted towards technological advancements, as evident in initiatives like Digital India and the adoption of Artificial Intelligence (AI). These advancements aim to modernize various sectors, improve efficiency, and enhance overall economic competitiveness. Despite impressive growth, India faces several challenges, including poverty, income inequality, unemployment, and environmental concerns. Unemployment, in particular, remains a significant hurdle. While AI offers immense potential for economic growth and innovation, its impact on employment in developing countries like India remains a complex issue. AI can automate tasks, improve decision-making, and create new job opportunities. However, it also poses risks such as job displacement, the need for reskilling, and the exacerbation of existing inequalities. The fear is that AI may disproportionately impact low-skilled workers in developing countries, leading to further job losses and social unrest. Therefore, India needs to carefully navigate the AI revolution. While embracing AI's potential for economic growth, it is crucial to mitigate the potential negative impacts on employment. This requires proactive measures such as: Equipping the workforce with the necessary skills to adapt to an AI-driven economy, Providing support to those who may lose their jobs due to automation and ensuring that AI technologies are developed and deployed responsibly, considering their social and ethical implications. By strategically leveraging AI while addressing its potential downsides, India can harness the power of technology to drive inclusive and sustainable economic growth, ensuring that the benefits of progress are shared by all its citizens. This article looks at the employment situation in India, AI impact on employment and explains AI and Employment in global level and India. This paper based on secondary sources. The findings of this study contribute to the understanding

of the AI impact of modern digital technologies on the employment generation in India as well as people in developing countries. Indian Employment growth rate is very low and Unemployment rates are declining recent years. AI benefit for developed countries, not for developing countries. Developing countries already having unemployment problems and high population density. So AI negatively impact in developing countries like India. Because the Indian economy has not able to create enough remunerative jobs in the non-farm sectors for new educated youth labour force jobseekers, which is reflected in the high and increasing unemployment rate.” In Indian context AI benefit take long term on employment generation.

KEYWORDS:

Indian Economy, Employment, Artificial Intelligence, Unemployment.

.....

Introduction:

India and China, the two main developing economies, India’s recent growth flow has captured global attention, placing it as a difficult contender. Highlighting the significance of this upward trajectory, John Chambers, Chairman of the US India Strategic Partnership Forum, remarked, “By the end of this century, India will not only surpass China, but will be 100 per cent bigger in terms of GDP”. His positivity wasn’t rooted in lofty predictions, but in the tangible advancements India has made over the past decade, powered by transformative policies and reforms that have reshaped its economic landscape. This set the tone for discussions on the country’s extraordinary rise and its future potential on the global stage. India is likely to be the third largest economy with a GDP size of \$15 trillion by 2030. The economy of India is currently the world’s fourth largest in terms of real GDP (purchasing power parity) after the USA, China and Japan and the second fastest growing major economy in the world after China. Today, it is the 5th largest with a GDP of USD 3.7 trillion (est. FY24), despite the pandemic and despite inheriting an economy with macro imbalances and a broken financial sector. A New Era of Economic Prosperity with GDP projected to grow 7% and over 151,000 startups, India is reshaping its economy through technological advancement. Mean While Indian Economy is a fastest growing economy in which Agriculture is the back bone of the economy. 50 percent of the India’s population are on the below poverty line. Majority of the people of India are leading a poverty line. Indian economy is affected by it. That

is why India is termed as developing economy by modern views. Increase in country's productive capacity as measured by comparing gross national product (GNP) in a year with the previous year. Increase in the capital stock advances in technology and Improvement in the quality and level of literacy are considered to be the principal causes of Economic growth. In recent years, the idea of sustainable development has brought in additional factors such as environmentally sound processes that growing an economy. India has a large population and is one of the world's most population countries in the world.

In addition to market performance, the roots of India's growth can be outlined back to strategic initiatives such as Digital India, this initiative aimed to transform India into a digitally empowered society. One of the most significant outcomes of Digital India is the transformation brought about by the Unified Payments Interface (UPI), which has reshaped the way Indians transact. In the mode in the year 2018, NITI Aayoga launched the National Strategy for Artificial Intelligence, focusing on using AI for inclusive growth. Conversely, developing markets and low-income countries have lower AI exposure rates of 40% and 26%, respectively, suggesting fewer immediate disturbances. However, these nations often lack the infrastructure and skilled workforce to harness AI's benefits, which could worsen global inequality over time. Overall, AI presents both challenges and opportunities for the future of work. The role of AI as a growth enabler in the Indian Digital Economy is immense. But the path is filled with difficulties. According to the latest data from the Centre for Monitoring Indian Economy (CMIE), an independent think tank, the unemployment rate in India stood at 7.8 percent in September 2024, a decline from 8.5 percent in August 2024. The labour participation rate fell from 41.6 percent to 41 percent, and the employment rate fell from 38 percent in August to 37.8 percent in September.

Artificial Intelligence (AI) has rapidly evolved, becoming an integral part of various industries, revolutionizing the way we live and work. However, the increasing integration of AI has sparked debates about its impact on employment. Is AI a threat, replacing jobs and leaving a trail of unemployment, or is it a catalyst for new opportunities, creating jobs we never imagined? The Indian economy has not been able to create enough remunerative jobs in the non-farm sectors for new educated youth labour force applicants, which is reflected in the high and increasing unemployment rate.

What is Artificial Intelligence?

Artificial intelligence (AI) is technology that enables computers and machines to simulate human learning, comprehension, problem solving, decision making, creativity and self-sufficiency.

Why Artificial Intelligence:

Artificial intelligence (AI) makes it possible for machines to learn from experience, adjust to new inputs and perform human-like tasks. Using these technologies, computers can be trained to accomplish specific tasks by processing large amounts of data and recognising patterns in the data.

Review of literature:

Yang Shen 1 and Xiuwu Zhang(2024). Their article entitled “The impact of artificial intelligence on employment: the role of virtual agglomeration. This article they have been identified the Sustainable Development Goal 8 proposes the promotion of full and productive employment for all. Intelligent production factors, such as robots, the Internet of Things, and extensive data analysis, are reshaping the dynamics of labour supply and demand. In China, which is a developing country with a large population and labour force, analysing the impact of artificial intelligence technology on the labour market is of particular importance. Based on panel data from 30 provinces in China from 2006 to 2020, a two-way fixed-effect model and the twostage least squares method are used to analyse the impact of AI on employment and to assess its heterogeneity. The introduction and installation of artificial intelligence technology as represented by industrial robots in Chinese enterprises has increased the number of jobs. The results of some mechanism studies show that the increase of labour productivity, the deepening of capital and the refinement of the division of labour that has been introduced into industrial enterprises through the introduction of robotics have successfully mitigated the damaging impact of the adoption of robot technology on employment. Rather than the traditional perceptions of robotics crowding out labour jobs, the overall impact on the labour market has exerted a promotional effect. The positive effect of artificial intelligence on employment exhibits an inevitable heterogeneity, and it serves to relatively improve the job share of women and workers in labour-intensive industries. Mechanism research has shown that virtual agglomeration, which evolved from traditional industrial agglomeration in the era of the digital economy, is an important channel for increasing employment. The findings of this study contribute to the understanding of the impact of modern digital technolo-

gies on the well-being of people in developing countries. To give full play to the positive role of artificial intelligence technology in employment, we should improve the social security system, accelerate the process of developing high-end domestic robots and deepen the reform of the education and training system.

Statement of the problem:

India is Agriculture based economy. India is most populated country and also to provide employment all eligible graduates big challenge for the economy. Meanwhile Artificial Intelligence also implementing the all sectors in the economy this will leads to lead to massive job displacement, especially in routine and repetitive tasks. Automation has already made its mark in industries like manufacturing, where robots have taken over gathering lines.

Objectives of the Paper:

- » To Analysis the understanding the Impact of AI on Employment

Methodology:

This paper based on Secondary sources collected by the websites

Analysis of the paper:

Understanding the Impact of AI on Employment:

Artificial intelligence (AI) is about making computers do things that normally need human intelligence. This means creating programs that let computers learn, make decisions, and understand language. AI is used in everyday technology, like helping your phone understand voice commands, suggesting movies you might like, and even in robots that can move or do tasks on their own. AI is a big part of making gadgets smarter, helping them figure out what you need without being directly programmed for every task. The AI's impact on employment is both good and bad depending upon various circumstances.

India, known for its developing population and technological landscape, faces the challenge of Artificial Intelligence (AI) integration and its impact on job creation. As industries adopt AI technologies like machine learning and robotics to boost efficiency, concerns arise about employment. While AI can create new roles and transform existing ones, there are fears of job displacement as AI automates tasks traditionally done by humans. An IMF analysis reveals that nearly 40% of global employment is exposed to AI. In advanced economies, around 60% of jobs could be

affected, with half benefiting from AI integration and the other half facing reduced labor demand, potentially leading to job losses and lower wages. Conversely, emerging markets and low-income countries have lower AI exposure rates of 40% and 26%, respectively,

Some Positive Impact of Artificial Intelligence on Employment:

AI's integration into various industries has heralded a wave of transformative opportunities, creating new avenues for job creation and enhancing productivity. Here is some of the impact of artificial intelligence on employment:

Automation of Repetitive Tasks: One of the foremost benefits of AI or AI impact on employment is its ability to automate ordinary and repetitive tasks. By delegating such responsibilities to machines, human workers can redirect their efforts toward more creative and value-added activities.

Enhanced Decision-Making: AI-powered analytics empower businesses to make data-driven decisions swiftly and accurately.

Job Creation in AI Development and Maintenance: The AI impact on employment has led to the creation of new job roles, from AI engineers to data analysts. The growing AI industry has encouraged demand for skilled professionals proficient in machine learning, data science, and AI development. Consequently,

Improved Customer Experience: This elevates customer satisfaction levels and fosters loyalty, thereby sustaining employment in service-oriented sectors.

Time Management: AI technology helps save time management in working place

After understanding the positive impact of AI on employment, let's move on to discuss its negative impact, including potential job displacement, skill gaps, and the challenges of adapting to rapidly evolving technologies.

Negative Impact of Artificial Intelligence on Employment

Despite its transformative potential, AI's rapid advancement also engenders concerns regarding its adverse effects on employment. Here are some of the key negative impacts of AI on employment:

- » Job Displacement.
- » Skill Mismatch:

- » Economic Inequality
- » Ethical Concerns

Findings:

AI is important to train people for new jobs, make fair job rules, and use AI responsibly to create a fair job market for everyone.

It can do repetitive tasks, help in making better decisions, create new jobs in AI, and make customer service better.

But it can also take away jobs, make it hard for people to find work that matches their skills, increase the gap between rich and poor,

Whether AI is helpful or harmful depends on things like how fast technology is advancing.

As well as what policies are in place, and how society reacts.

Suggestion:

Indian economy has demonstrated a remarkable ability to bounce back and convert challenges into opportunities while striving to achieve strong, sustainable, balanced, and inclusive growth. Developing nation's immediate disruptions. However, these nations often lack the infrastructure and skilled workforce to harness AI's benefits, which could worsen global inequality over time. While adopting Artificial Intelligence avoiding problems need to train people for new kinds of jobs, make rules about jobs and think about what's fair when using AI.

Conclusion:

In conclusion, artificial intelligence effect on employment is in many ways, offering various opportunities and challenges. AI can boost productivity, create new jobs, and improve customer service. However, AI impact on employment can also cause job loss, skill mismatches, and increased inequality. The future of work depends on how we handle these changes. We need to train people for new jobs, make fair job policies, and use AI ethically.

References:

1. <https://sageuniversity.edu.in/blogs/impact-of-artificial-intelligence-on-employment>
2. Yang Shen l& Xiuwu Zhangl (2024).The impact of artificial intelligence on employment: the role of virtual agglomeration. Humanities and social sciences communication
3. <https://www.theiotacademy.co/blog/ai-impact-on-employment/>
4. <https://www.drishtiiias.com/blog/impact-of-ai-and-automation-on-indias-employment-landscape>
5. <https://www.degruyter.com/document/doi/10.7208/9780226613475-012/pdf?license-Type=restricted>
6. James BessenArtificial Intelligence and Jobs: The Role of Demand.Published by University of Chicago Press 2019
7. https://www.ilo.org/sites/default/files/2024-08/India%20Employment%20-%20web_8%20April.pdf
8. https://www.google.com/search?q=problems+of+indian+economy&rlz=IC1VDKB_enIN1023IN1023&oq=Inproblems+of+Indian+economy&gs_lcrp=E
9. <https://www.investindia.gov.in/blogs/indian-economy-overview>

Funding:

This study was not funded by any grant.

Conflict of interest:

The Authors have no conflict of interest to declare that they are relevant to the content of this article.

About the License:

© The Authors 2024. The text of this article is open access and licensed under a Creative Commons Attribution 4.0 International License.