Negative impact of artifical intelengence and robotics on indian economy

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***Abstract*- The negative impacts of AI and robotics on the Indian economy highlights the potential challenges and concerns posed by the rapid advancement of these technologies. As AI and robotics continue to evolve, they bring forth both opportunities and risks for economies worldwide, including India. This abstract discusses how the widespread adoption of AI and robotics could potentially lead to several adverse effects on the Indian economy.**

The integration of AI and robotics into various industries has the potential to disrupt traditional labor markets, particularly in sectors that rely on low-skilled jobs. The automation of tasks could result in job displacement for a significant portion of the Indian workforce, leading to unemployment and underemployment. Furthermore, the transition to an AI-driven economy may demand a different skill set, leaving many workers struggling to adapt.

***Index Terms*- AI, robotics, Indian economy, challenges, concerns, job displacement, unemployment, underemployment, Skill set, income inequality.**

INTRODUCTION

The rapid advancements in Artificial Intelligence (AI) and robotics have undoubtedly brought about significant technological progress and innovation across various sectors. However, alongside the benefits, there are also negative impacts that can be observed on the Indian economy. These impacts stem from a combination of factors, including job displacement, changes in labor markets, economic inequality, and potential disruptions to traditional industries. Let's delve into some of these negative impacts in more detail:

Job Displacement: One of the major concerns of AI and robotics is the potential displacement of human workers by automation. As more tasks become automated, particularly in industries like manufacturing, agriculture, and customer service, there is a risk of job losses for workers in these sectors. In a country like India, with a large labour force, this can lead to significant unemployment and underemployment challenges.

Skill Mismatch: The implementation of AI and robotics necessitates a shift in skill requirements. The jobs that are being created in fields related to AI development and maintenance often demand a higher level of technical expertise. This can lead to a mismatch between the skills possessed by the existing workforce and the skills demanded by the evolving job market, potentially leaving many workers without viable employment opportunities.

Economic Inequality:The negative impacts of AI and robotics might exacerbate economic inequality. The individuals and companies that have the resources to adopt and adapt to these technologies will likely benefit, while those who lack access to such resources may be left behind. This can further widen the income gap between the technologically adept and the technologically disadvantaged.

Disruption of Traditional Industries: Industries that are more labor-intensive and less technologically advanced could face disruption due to the introduction of AI and robotics. For instance, in agriculture, traditional farming practices might be replaced by automated systems, affecting the livelihoods of small farmers who heavily rely on manual labor.

Ethical and Legal Challenges: The use of AI and robotics raises ethical concerns related to job displacement, data privacy, bias in algorithms, and the potential for loss of human control over critical systems. Addressing these concerns requires careful regulation and oversight, which can also impact the economic landscape.

Rural-Urban Divide: The negative impacts of AI and robotics might disproportionately affect rural areas, where access to advanced education and training in new technologies might be limited. This could exacerbate the existing rural-urban divide and hinder inclusive economic growth.

LITERATURE REVIEW

1 **Laura Abrardi, Carlo Cambini**

The advent of Artificial Intelligence (AI) has indeed brought about profound economic implications and created a host of new challenges for policymakers to grapple with. The socio-economic impact of AI technologies encompasses various dimensions such as growth, employment, inequality, market dynamics, competition, consumer privacy, and biases. Let's delve into each of these areas

2 Bilal Manzoor

The broad utilization of artificial intelligence (AI) within the realm of civil engineering has furnished civil engineers with a diverse array of advantages and prospects. These encompass extensive data aggregation, evaluations of sustainability, and enhanced productivity. The trajectory of the construction industry is progressively veering towards prioritizing sustainability through the

integration of digital technologies. To address this context, the current study conducts a methodical review of existing literature with the intention of delving into the impact of AI in civil engineering on the trajectory of sustainable development.

3 Robert J. Holton

Recent innovations in robotics and artificial intelligence have triggered discussions about their potential to bring about significant economic and social transformations. However, it's important to critically evaluate these claims and not succumb to a deterministic view that technology alone drives these changes. Instead, taking a political-economic and sociological approach can help us better understand the complexities involved

Objectives of the study:

I. Assess the effects of automation on employment in India. Are jobs being displaced?
II. Examine the impact on productivity and efficiency in industries.
III. Investigate the implications for income distribution and wage disparity.

Scope of the study

Study on the negative impact of AI and robotics on the Indian economy would typically involve a comprehensive examination of various aspects, including economic, social, and technological factors. Here's an outline of the key areas to consider when conducting such a study

RESEARCH METHODLOGY

Primary data:

It refers to First Hand accounts or information collected directly from original sources as part of a research study. The primary objective of gathering primary data is to obtain accurate and reliable information that can be used to address research questions or solve specific problems.

Secondary data:

It refers to information that has been previously collected and stored from various sources. These data are typically gathered and organized by agencies or entities for specific purposes. Secondary data can exist in both published and unpublished forms.

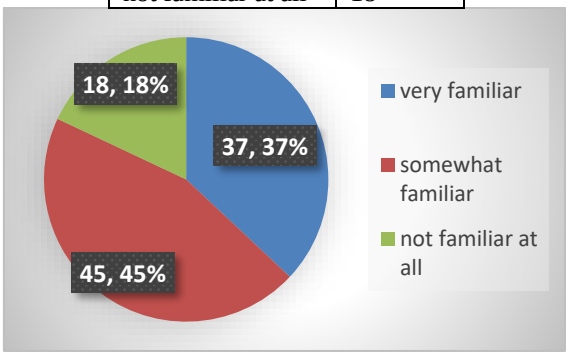
SAMPLE DESIGN:

A sample design serves as the foundation or guide for selecting a survey sample and has a significant impact on various critical survey components. In a broader context, researchers aim to collect data through a survey from a specific target population or universe. To accomplish this, it's essential to create a sampling frame that accurately represents the target population from which the sample will be drawn.

Analysis of public opinion

1 How familiar are you with the concept of Artificial Intelligence (AI) and Robotics

very familiar	37
somewhat familiar	45
not familiar at all	18

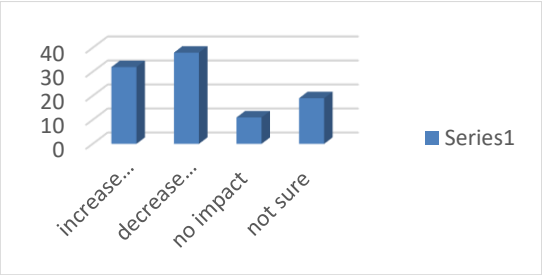


Analysis

Based on the responses, it seems that the majority of people (37 out of 100) are "very familiar" with the concept of Artificial Intelligence (AI) and Robotics. Additionally, 45 people are "somewhat familiar," and 18 people are "not familiar at all" with these concepts.

2 How do you think AI and robotics might impact income inequality?

increase income inequality	32
decrease income inequality	38
no impact	11
not sure	19

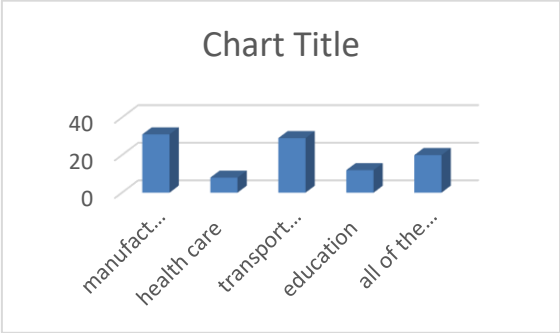


Analysis

The above table shows AI and robotics have the potential to both increase and decrease income inequality. On one hand, automation could displace certain jobs, leading to income disparities if individuals lack opportunities to transition to new roles. However, AI-driven innovations may also create high-paying positions in tech and AI development, potentially reducing inequality. The outcome will largely depend on proactive policies and investments in education and retraining to ensure a more equitable distribution of benefits. The net impact remains uncertain, as it hinges on how societies navigate this technological shift.

3 Which industries in India are most susceptible to job losses due to AI & robotics?

manufacturing	31
health care	8
transportation	29
education	12
all of the above	20

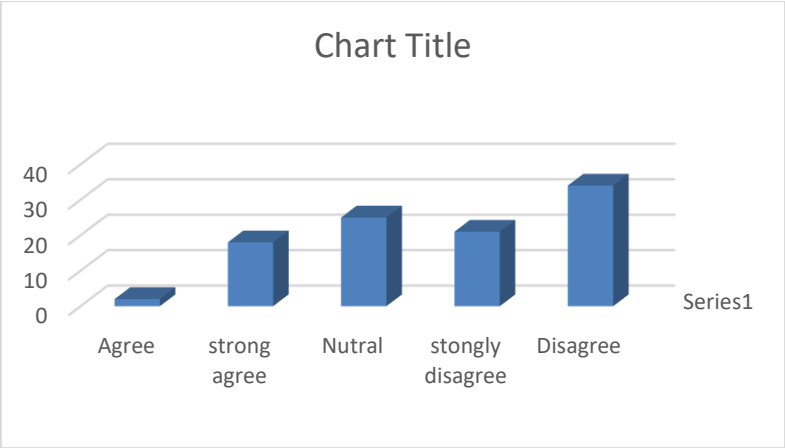


Analysis

31% of manufacturing and 29% of transportation are more susceptible to job losses due to AI and robotics, while 8% healthcare and education may see changes in job roles but are less likely to experience significant job displacement. 20% of the "all of the above" option reflects a recognition that multiple sectors may be affected to some extent. The actual impact on jobs will depend on various factors, including the pace of technology adoption, workforce reskilling, and regulatory measures.

4 Are there adequate regulations in place to govern the deployment of AI and Robotics in India?

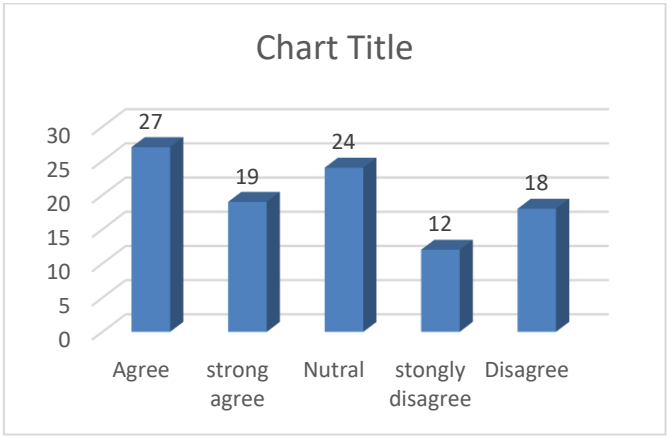
Agree	2
strong agree	18
Nutral	25
stongly disagree	21
Disagree	34



Analysis:
The combined count of those who agree or strongly agree is 20, while the combined count of those who disagree or strongly disagree is 55. This suggests that a larger portion of respondents (55) have concerns or do not believe that there are adequate regulations in place, while a smaller portion (20) believe that regulations are sufficient or appropriate.
It's important to note that this data represents the opinions of the respondents and does not provide a comprehensive assessment of the actual regulatory landscape for AI and robotics in India. The adequacy of regulations can be a complex and evolving issue, and the opinions of individuals may vary based on their perspectives and experiences. To get a more accurate and up-to-date assessment of the regulatory environment in India, one would need to consult legal experts, government documents, and relevant stakeholders in the field of AI and robotics.

5 do you believe that AI & Robotics are having a negative impact on the Indian economy?

Agree	27
strong agree	19
Nutral	24
stongly disagree	12
Disagree	18



The combined count of those who agree or strongly agree is 46, while the combined count of those who disagree or strongly disagree is 30. This suggests that a larger portion of respondents (46) believe that AI and Robotics are having a negative impact on the Indian economy, while a smaller portion (30) either disagree or are neutral on the issue.
It's important to note that these opinions are subjective and may be influenced by various factors, including the respondents' perspectives on the effects of AI and Robotics on employment, industry dynamics, and overall economic growth in India. To gain a more comprehensive understanding of the impact of AI and Robotics on the Indian
economy, one would need to consider a range of economic indicators, data, and expert analysis.

Conclusion:
In conclusion, while AI and robotics hold the potential to drive significant economic growth and innovation, their unchecked implementation could lead to adverse effects on the Indian economy. Addressing the challenges of job displacement, income inequality, sectoral disruption, and ethical concerns requires a comprehensive approach involving policymakers, industry leaders, and education institutions. Strategies must be devised to reskill and upskill the workforce, promote inclusive technology adoption, and establish a regulatory framework that balances innovation with societal well-being.

ACKNOWLEDGMENT
These excerpts provide different perspectives on the impact of AI, ranging from economic and societal implications to its role in specific industries like civil engineering. Each author emphasizes the need for careful analysis and consideration of the multifaceted effects of AI on various aspects of our lives.

REFERENCE:

1. Mittelstadt, B. D., Allo, P., Taddeo, M., Wachter, S., & Floridi, L. (2016). "The Ethics of Algorithms: Mapping the Debate". Big Data & Society, 3(2), 2053951716679679
2. Nasscom. (2018). "Policy Paper on Artificial Intelligence". National Association of Software and Service Companies (Nasscom).
3. Sundararajan, A. (2016). "The Sharing Economy: The End of Employment and the Rise of Crowd-Based Capitalism". MIT Press
4. Mittelstadt, B. D., Allo, P., Taddeo, M., Wachter, S., & Floridi, L. (2016). "The Ethics of Algorithms: Mapping the Debate". Big Data & Society, 3(2), 2053951716679679
5. McKinsey Global Institute. (2017). "A Future That Works: Automation, Employment, and Productivity
6. World Economic Forum. (2018). "Towards a Reskilling Revolution: A Future of Jobs for All". World Economic Forum