

The Influence of Artificial Intelligence on Employment Trends in the United States (US)

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Abstract:- This paper examines the Influence of Artificial Intelligence on Employment Trends in the United States (US). The rapid development of AI technology is creating significant disruptions in traditional labor markets, leading to concerns about unemployment and inequality. The paper highlights the importance of understanding the effects of AI on the labor market and the need for proactive steps to address any negative impact as well as the policy options available to address these challenges, including retraining and education programs, regulation of AI use, and tax policies. It also considers the potential costs and benefits of these options and the stakeholders who are impacted by them. This paper recommends investing in education and training programs for workers, creating tax incentives for affected communities, promoting research and development of AI technologies that complement human workers, and implementing policies to promote the responsible use of AI. The paper also discusses bureaucratic barriers to participation that may hinder effective implementation of these recommendations. Finally, it recommends a combination of retraining and education programs and tax policies to promote investment in new technologies and job creation.

I. INTRODUCTION

The rise of artificial intelligence technology is transforming the US economy, leading to both opportunities and challenges. The use of AI technologies such as machine learning, natural language processing, and robotics is changing the types of jobs available, the skills required to perform them, and the way work is organized. This transformation raises important questions about the influence of AI on labor markets, including the possibility for job displacement, changes in skill requirements, and the implications for income inequality.

While AI has the potential to boost productivity, reduce costs, and create new jobs, it is also creating significant disruptions in traditional labor markets, leading to concerns about unemployment and inequality. The policy challenge is to promote the benefits of AI while mitigating its negative impacts on workers and communities. This paper will analyze the policy options available to address this challenge and recommend a course of action.

II. BACKGROUND

The US government has taken some steps to address the impact of AI on labor markets. In 2019, the White House issued an executive order calling for increased investment in AI research and development, as well as efforts to promote AI education and workforce development. The government has also established the National Artificial Intelligence Initiative Office to coordinate federal AI policy and research. However, there is currently no comprehensive national policy on the impact of AI on labor markets.

The stakeholders impacted by the impact of AI on labor markets include workers who are at risk of losing their jobs due to automation, as well as businesses that may benefit from increased productivity and reduced costs. In addition, communities that rely on industries that are vulnerable to automation, such as manufacturing and transportation, are also at risk.

Past and present federal or state government responses to the policy problem of AI in labor markets have been limited. The legislative history of the policy problem is still developing, and stakeholders impacted by the policy include workers, policymakers, labor unions, and industry representatives. The increasing use of AI in various sectors of the economy has led to concerns about job displacement and income inequality, which could have broader economic consequences.

A. Analysis of Solution Options:

The impact of Artificial Intelligence (AI) on labor markets in the United States (US) presents a complex policy problem that requires careful consideration of various solution options. This section analyzes the most viable solution options and assesses their costs, benefits, and potential disadvantages, as well as the political obstacles to their adoption, implementation, and enforcement.

➤ Option 1: Investing in Education and Training Programs

One possible solution to the impact of AI on labor markets is investing in education and training programs for workers to help them adapt to changing job requirements. This option involves creating programs focused on reskilling and upskilling workers, as well as initiatives to increase access to AI education and training for underrepresented groups. Hence, retraining and education would help workers develop new skills that are in demand in the emerging AI economy. The benefits of these programs include equipping workers with skills that will enable them to thrive in the new

economy and reducing the likelihood of unemployment. However, these programs can be costly and may not be effective for all workers. The stakeholders who benefit from this option include workers, businesses, and the economy as a whole.

- *Costs:*

This option would require significant financial resources to create and implement education and training programs, including costs associated with developing curricula, hiring instructors, and providing necessary equipment and facilities. Additionally, it may take time for these programs to produce results, which could delay the immediate impact of this option.

- *Benefits:*

Investing in education and training programs can help workers adapt to the changing demands of the labor market and acquire the necessary skills to thrive in the age of AI. This could lead to increased employment opportunities and higher wages for workers, as well as reduced job displacement and increased economic growth. Hence, workers who participate in these programs stand to benefit the most from this option, as they will be better equipped to succeed in the labor market. Employers may also benefit from a more skilled workforce.

- *Disadvantaged:*

Individuals or workers who are unable to participate in these programs due to lack of access, financial constraints, or other barriers may be disadvantaged.

- *Governmental Policy Actors:*

The government, specifically the Department of Education and the Department of Labor, is responsible for the adoption and implementation of these programs. This implies that the responsibility for adoption, implementation, and enforcement of education and training programs falls primarily on the federal and state governments, as well as private organizations such as universities, training institutions, and industry associations.

- *Political Obstacles:*

Funding education and training programs may face opposition from some policymakers who may view it as an unnecessary expense. Additionally, there may be disagreements about the appropriate level of government involvement in creating and implementing these programs.

➤ *Option 2: Promoting Ethical AI Development and Use*

Another top solution to the impact of AI on labor markets is promoting the responsible use of AI. This option involves creating guidelines for ethical AI development and use, transparency requirements for AI systems, and regulations to prevent AI bias and discrimination.

- *Costs:*

Implementing this option would require the development of ethical AI standards and the establishment of regulatory frameworks to enforce them. This would require significant financial resources and may involve a complex

bureaucratic process. Additionally, there may be legal and ethical concerns about the potential impact on privacy and civil liberties.

- *Benefits:*

Promoting ethical AI development and use can help ensure that AI is deployed in a way that maximizes its benefits for society while minimizing its potential negative impacts on workers and the broader economy. This could lead to increased trust in AI systems and greater acceptance of their use, which could facilitate their adoption and development.

- *Who Benefits and Who is Disadvantaged:*

Society as a whole stands to benefit from the responsible use of AI, as it can prevent negative impacts such as job displacement, discrimination, and other ethical concerns. However, this option may be disadvantageous to AI developers who may face increased regulation and oversight.

- *Governmental Policy Actors:*

The responsibility for adoption, implementation, and enforcement of ethical AI standards and regulations falls primarily on federal and state governments, as well as regulatory agencies such as the Federal Trade Commission (FTC) and the National Institute of Standards and Technology (NIST).

- *Political Obstacles:*

There may be resistance from industry stakeholders who may view regulations as a burden that stifles innovation. Additionally, there may be disagreements about the appropriate level of government involvement in creating and implementing these regulations.

➤ *Option 3: Universal Basic Income*

Another option to address the impact of AI on labor markets is to implement a universal basic income (UBI) program. This would involve providing every citizen with a certain amount of money on a regular basis, regardless of their employment status. The goal of UBI is to ensure that everyone has a minimum standard of living and can meet their basic needs, even if they are not able to find work due to job displacement caused by AI.

- *Costs and Benefits:*

The cost of implementing a UBI program would be substantial, as it would require a significant amount of government spending to provide everyone with a basic income. However, there are also potential benefits to this approach. By providing a guaranteed income, UBI could help alleviate poverty and reduce income inequality. It could also provide a safety net for workers who are displaced by AI, allowing them to meet their basic needs and pursue education or training to acquire new skills.

- *Who Benefits and who is Disadvantaged:*

UBI would benefit low-income individuals who may not have access to job opportunities or have been displaced by AI. It would also benefit those who are unable to work due to disability or caregiving responsibilities. However, higher-

income individuals may not see as much benefit from UBI, as they may already have sufficient income to meet their basic needs. Additionally, some may argue that providing a basic income to everyone, regardless of their employment status, may disincentivize work and lead to a reduction in productivity.

- *Policy Actors:*

The implementation of a UBI program would likely require significant policy changes at the federal level, and policymakers would need to work together to establish funding sources and determine the amount of the basic income. The government, specifically the Department of the Treasury and the Department of Health and Human Services, is responsible for the adoption and implementation of UBI.

- *Political Obstacles:*

The political obstacles to implementing UBI is that it could be viewed as a form of welfare or socialism by some individuals or political groups.

- *Summary:*

Universal basic income (UBI) is a policy that provides a guaranteed income to all citizens regardless of their employment status. The benefits of UBI include reducing poverty and providing a safety net for workers who have been displaced by AI.

- *Other Options to Consider Include:*

- *Regulation and Taxation:*

Regulation and taxation are policy options that aim to manage the impacts of AI on labor markets. Regulations can be used to limit the use of AI in certain industries or to require businesses to provide benefits to workers who have been displaced by AI. Taxation can be used to fund retraining and education programs or to provide a basic income to workers who have been displaced by AI. The benefits of these options include mitigating the negative impacts of AI on workers and promoting social equity. However, these options may limit innovation and reduce the competitiveness of US businesses. The stakeholders who benefit from regulation and taxation include workers, businesses, and the government. The government, specifically Congress and regulatory agencies such as the Federal Trade Commission and the National Labor Relations Board, is responsible for the adoption and enforcement of regulations and taxation policies.

- *Job Guarantee Programs:*

Job guarantee programs are designed to provide employment opportunities to workers who have been displaced by AI. The benefits of these programs include reducing unemployment and providing stable incomes for workers. However, these programs may not address the root cause of the problem, which is the displacement of workers by AI. Furthermore, they can be costly and may not be effective for all workers. The stakeholders who benefit from job guarantee programs include workers and the economy as a whole. The government, specifically the Department of Labor and the Department of Transportation, is responsible

for the adoption and implementation of job guarantee programs.

Political obstacles to the adoption, implementation, and enforcement of these policy options include partisan polarization, interest group opposition, and bureaucratic resistance. The adoption of policy options such as UBI and job guarantee programs may face political opposition from those who view these policies as socialist or anti-business. Regulation and taxation policies may face resistance from businesses and industry groups who view these policies as harmful to their competitiveness.

III. RECOMMENDATIONS

Based on the analysis, this paper recommends investing in education and training programs for workers, creating tax incentives for affected communities, promoting research and development of AI technologies that complement human workers, and implementing policies to promote the responsible use of AI.

Retraining and education programs should be designed to be accessible to all workers, including those in low-wage and gig economy jobs. Tax policies should be designed to promote investment in emerging industries, such as AI, while also ensuring that the benefits of these industries are shared more equitably. Moreover, implementing a UBI program could be a promising approach to addressing the impact of AI on labor markets, particularly in providing a safety net for those who are displaced by AI.

However, it should be implemented in conjunction with other policies, such as education and training programs, to ensure that workers are able to acquire new skills and adapt to changing job requirements. These options can help mitigate the negative impact of AI on the labor market in the US. To achieve success, policymakers need to work with stakeholders to gather information and collaborate on research. Additionally, policymakers need to address bureaucratic barriers to participation and the political obstacles to UBI to ensure its successful adoption and implementation.

IV. CONCLUSION

Artificial intelligence (AI) is now consistently transforming labor markets in the United States. This paper has examined the different effects of AI on employment, highlighting both opportunities and challenges. On one hand, AI drives productivity, innovation, and the creation of new job categories. On the other hand, it poses significant risks of job displacement, particularly in routine and manual occupations.

Policymakers and stakeholders must address these challenges by investing in education and training programs that equip the workforce with skills relevant to the AI era. Additionally, there should be a focus on creating a regulatory framework that ensures ethical AI deployment, safeguarding workers' rights while fostering technological advancement.

In conclusion, while AI presents unprecedented opportunities for economic growth and efficiency, a balanced approach is crucial to mitigate its adverse impacts on the labor market. Through collaborative efforts, the United States can harness the benefits of AI while ensuring inclusive and equitable labor market outcomes.

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APPENDIX

➤ *Empirical Research Questions that Emerge from this Paper or Policy Topic Include:*

- How do different AI technologies impact labor markets in different industries and regions of the US?
- What are the most effective approaches to designing retraining and education programs for workers impacted by AI-related job displacement?
- How can tax policies be structured to incentivize investment in emerging technologies while ensuring equitable distribution of the benefits?
- What are the most effective methods of enforcing regulations on AI use to ensure that the technology is used in a way that benefits workers and communities?
- What are the distributional effects of AI on labor markets in the US?
- How can policymakers promote the responsible use of AI?
- What are the political obstacles to the adoption and implementation of policies to mitigate the negative impact of AI on labor markets?

➤ *Proposals for Future Research Projects could Include:*

- A study of the effectiveness of different retraining and education programs for workers impacted by AI-related job displacement, including analysis of program design, accessibility, and outcomes.
- An examination of the impact of different tax policies on investment in emerging technologies and job creation, including analysis of the distribution of benefits across different industries and regions.
- A comparative analysis of the effectiveness of different regulatory approaches to AI use, including analysis of enforcement mechanisms and impacts on innovation and job creation.
- Future research projects could explore the effectiveness of different policy solutions to address the impact of AI on labor markets in the US.