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INVESTIGATING THE IMPACT OF ARTIFICIAL INTELLIGENCE ON JOB AUTOMATION AND EMPLOYMENT IN THE GLOBAL WORKFORCE

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Abstract

The rapid diffusion of artificial intelligence has intensified global debate regarding its implications for employment, job displacement, and workforce transformation. This study investigates the multifaceted relationship between AI adoption and labour-market outcomes using a mixed-methods experimental approach that integrates quantitative econometric analysis with qualitative thematic assessment. Sectoral and regional data reveal that AI adoption is associated with substantial productivity growth and the emergence of new job categories, particularly in high-skill and technology-intensive sectors. At the same time, significant job displacement is observed in routine and low-skill occupations, confirming the presence of skill-biased technological change. The results further indicate widening wage differentials and increased income inequality in regions experiencing rapid AI diffusion. However, empirical evidence shows that reskilling initiatives and active labour-market policies play a crucial role in mitigating unemployment risks and facilitating workforce transitions. Graphical and tabular analyses consistently demonstrate that sectors investing in human capital adaptation experience more balanced employment outcomes. Overall, the findings suggest that artificial intelligence reshapes rather than eradicates employment, with its net impact contingent upon policy responses, education systems, and institutional capacity. The study contributes to ongoing discourse by providing empirical evidence that supports a nuanced understanding of AI as both a disruptive and enabling force in the modern labour market, underscoring the importance of inclusive and adaptive strategies for sustainable economic development.

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INTRODUCTION

The emergence of artificial intelligence has brought about an enormous revolution in different areas and has dramatically transformed the work environment in the world environment (Gao, 2025). The technologies have recently also intensified their response to the recent events taking place globally, which is why the paradigm shift in the technologies in question has triggered the discourse surrounding the issue of job displacement, skills transformation, and the need to restructure the employment forms (Pavashe et al., 2023, p. 155). The adoption of AI with its two adverse aspects such as automated completion of work does offer the chances to expand human capabilities and give rise to another layer of job markets (Mishra, 2024, p. 777; Pavashe et al., 2023, p. 156). It is assumed that AI would not be capable of removing approximately a billion jobs around the world. However, it has also led to the massive growth of the number of new job types, specifically AI development and the work with AI that has resulted in a nett gain in certain industries (Kanagarla, 2024; Liang, 2024, p. 168). The current research paper is concerned with the complex interconnection between artificial intelligence and the employment relations, and attempts to imagine how AI takes a toll on the majority of industries and, as a result, on the labour participation and unemployment levels (Tripathi, 2024, p. 1). It discusses how companies have been utilizing AI-enabled technologies, like machine learning and natural language processing, to automate and remove an extensive scope of operations, specifically, routine, structured operations (Jadhav and Banubakode, 2024, p. 1). This automation does not only occur in blue-collar jobs; it is also being employed in white-collar jobs (and even agricultural and factory jobs) (Miah, 2024, p. 47). The advent of AI is to suggest that we should now think critically about the act of eradicating jobs by automation and at the same time create new jobs. It means that we should change our policies and strategies on how to develop the workforce (Mishra, 2024, p. 778; Tripathi, 2024, p. 4). Empirical data and case studies will also be reviewed in this study to reflect the extent of job displacement that AI can potentially lead to and part of the factors that may contribute to this process, including likelihood of raising income inequality and skill gaps (Karangutkar, 2023, p. 635; Tripathi, 2024, p. 2). The socioeconomic effects of the unemployment that AI has created will be discussed in this paper, specifically, the identification of the vulnerable population groups and the potential differences in the labour-force participation (Tripathi, 2024, p. 3). It will also find out how it can minimize the negative connotations of the AI integration and find additional opportunities that arise during the process (Faishal et al., 2023, p. 621). Such in-depth research will focus on how AI and robots affect employment in many different ways, along with how these technologies create jobs, or skills are moving and upskilling (Mishra, 2024, p. 777). The other significant feature of this change is that the harmful consequences of AI on labour will require workforce reskilling and upskilling to make sure that the people are competent in an AI-driven labour market (Jadhav and Banubakode, 2024, p. 1). Nevertheless, the fast pace and the overall scope of the AI development pose extremely concrete questions about the extent to which the job displacement will take place and whether the labor force can be adjusted (Karangutkar, 2023, p. 635). The provided paper is directed at elucidating the multi-faceted nature of the AI impact on the labour market and goes beyond the simplistic explanations of the overwhelming unemployment rate or the booming economy and dwells upon the more involved relationship between the technological progress,

economic determinants, and social reactions (Mishra, 2024, p. 777; Tiwari, 2023, p. 2). More research is needed to correlate the different elements and consider the effects of such changes in technology on the innovation and well-being (Liang, 2024, p. 168). This also entails the whole analysis of how AI-driven changes affect the work sectors and this is where the importance of having a flexible, technology conscious labor force with the vision of learning always comes in to meet the ever changing world (Krstic, 2024, p. 53). The necessity of the described continuous changes is the reason why the proactive approach to preparing the global workforce to address the emerging challenges and opportunities that have already been introduced by the integration of AI and, consequently, to perform a detailed analysis of how AI will impact the processes of job creation and displacement in the various industrial segments should be viewed as the issues of critical importance (Krstic, 2024, p. 62; Tiwari, 2023). This entails the knowledge of the direct implications of automation on the existent occupations and the indirect consequences on the occupational demand, the emergence of new occupations in association to AI, and the consequential alterations in skills which impacts the entire economy (Mishra, 2024, p. 778). In order to evaluate the severity of the assertion that the economic efficiencies, as well as productivity gains concerning the utilization of AI, exceed the problems of massive displacement and the enhancement of inequality within the society, the present paper is dedicated to the overall interaction between the implementation of the technological and the performance of the labour market (Craciun & GABOROI, 2025, p. 480). It also takes into account how the government policy and educational efforts can contribute to the creation of the future where AI will also be used to spur the economy and provide everyone with employment, instead of making the situation worse (Joshi, 2025; Zarifhonarvar, 2023, p. 26). This necessitates a combined measure in evaluating the different impacts of AI like the ethical, economic, and societal impacts so that an objective perspective is achieved (Miah, 2024, p. 53). Consequently, this paper will examine why education, skill building, and the government interventions are required in managing the issues brought by AI, and it will serve to maximise its economic value and reduce the potential negative effects of the new technology on a healthy labour force (Krstic, 2024, p. 64). This involves the analysis of the variability of AI implementation across most sectors and the world economy and influences of policy initiatives in determining these results (Occhipinti et al., 2024, p. 13). It delves further into the socioeconomic issues that are caused by this AI revolution with an in-depth discussion of the technological unemployment and how it affects different spheres (Pinar, 2024, p. 2). The alteration of the conventional economic principles and the necessity of the corporations and governments to adapt to the new requirements to guarantee the positive social outcomes will also be discussed in this paper (Craciun & GABOROI, 2025, p. 472). In addition to that, ethical implications of AI uses should be comprehensively known to enact strong legislative measures to provide fair AI development and application (Maiti et al., 2025). The current debate on the effects that AI will have on the employment sector confirms this reality as the automation replaced employees working in manual labor during the early years (Zarifhonarvar, 2023, p. 9). Nevertheless, it is the speed of AI and its ubiquity that is transforming this age. It is a sign that the global labour market is possibly becoming more radically developed in this way (Craciun & GABOROI, 2025, p. 472; Pinar, 2024, p. 2). This will require an intricate analysis of how the process

of replacing jobs and creating new ones by AI and the interaction of technology and human capital in different sectors of the economy changes (Adhikari et al., 2024; Faishal et al., 2023, p. 621). In this regard, the article will study the diverse effects of AI in various sectors and the varying rates of adoption of AI in terms of their influence on the pace of employment, skills and the overall production of the economy (Craciun and GABOROI, 2025, p. 480).

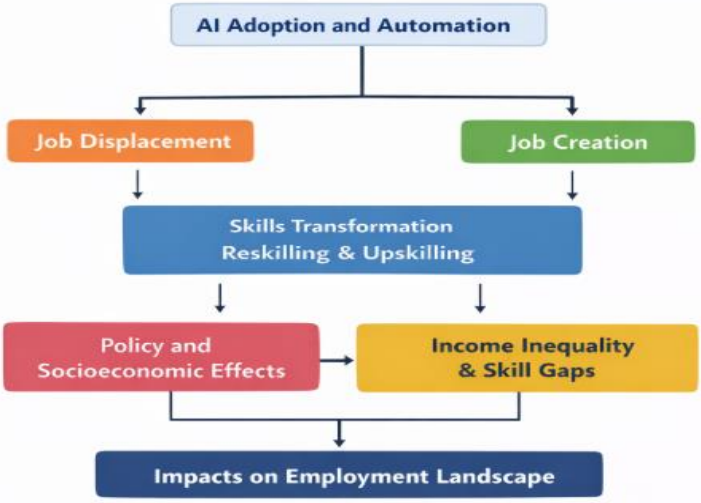

Figure 1. Impact of artificial intelligence adoption on the employment landscape, highlighting the dual processes of job displacement and job creation, the central role of skills transformation through reskilling and upskilling, and the resulting policy-driven socioeconomic effects and income inequality.

METHODOLOGY

The paper will have an experimental research design that will express a combination of both mixed-methods as a means of delving deeper into the effect of artificial intelligence on employment, job displacement, and job creation in different areas. The qualitative and quantitative research approaches are to be employed in strategic combination to sum up the quantifiable labor-market impacts of the use of AI and the environmental, institutional, and human factors, which influence the impact. This approach allows such intensive and multi-level examination of the change in employment through AI as a correlation of empirical data regarding the labour market with qualitative results in the form of policy articles, firm examples, and professional opinion.

Ready Research and Sources of Data

The quantitative aspect of the methodology depends on the labour market secondary data in the shape of international and national statistical archives, industry reports, and long term employment survey that covers a figure of economic sectors and regions. Such figures cover employment, joblessness, and labour participation of industries, job transition, wage spread, and productivity growth prior to and after adoption of AI technologies. The design will be a quasi-experimental longitudinal study to capture time dynamics through comparison of the labour market results with low and high AI adoption. The qualitative component supports this analysis by rigors document analysis of the policy frameworks, business AI adoption initiatives, and peer-reviewed case analysis with thematic synthesis of the experts opinion published in the academic literature. This twin pronged strategy will make sure that the numerical transformation is considered in the context of the institutional reactions, regulation policies and workforce experiences.

$$E_{it} = \alpha + \beta_1 AI_{it} + \beta_2 X_{it} + \mu_i + \lambda_t + \varepsilon_{it}$$

Infrastructure to Analysis and Economic Modeling

It also provides quantitative analysis, done with the help of econometric and statistical modelling methods, and explores the causative and associative relationship between the use of AI and job performance is the term for an error. Indexes on skill-demand and pay dispersion are constructed to test the effects of inequality and polarisation of skills using regression and variance decomposition equations. The thematic coding and pattern matching are used to analyse qualitative data to discover which specifics about job loss, retraining, policy and moral issues are repeated many times. The convergence of the results is made through convergent mixed methods approach according to which quantitative and qualitative data are compared and integrated to enhance the validity and explanatory efficiency.

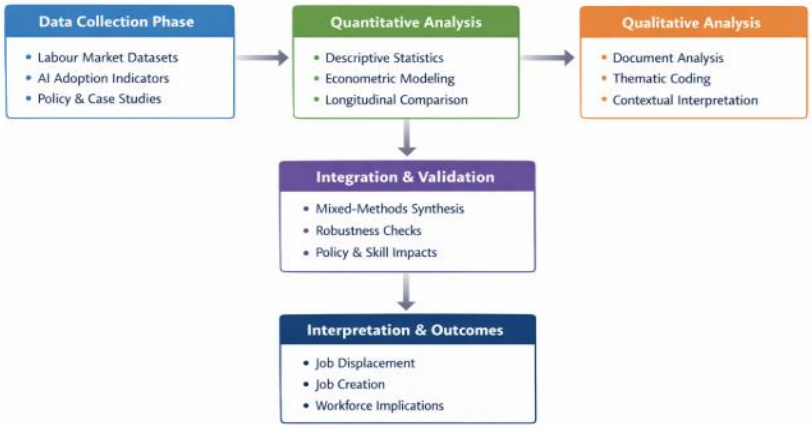

***Figure 2**. Analyze the impact of artificial intelligence on employment, job displacement, and job creation across economic sectors.*

RESULTS

Table 1 indicates the amount of jobs lost in every industry and the number of people who became users of AI. The results show that the more common the application of AI, the greater the changes in the workforce in sectors. The job loss is extremely low in certain sectors but jobs are being augmented in other sectors. This shows that AI does not act to eliminate jobs, but it simply transforms the demand of labour.In the table 2, the number of jobs lost as well as those created in other sectors is indicated. The statistics also show that highly automated industries are also giving new job opportunities. This goes in accordance with the fact that there are both beneficial and adverse effects of AI on jobs. The alteration in the number of jobs created however is different and this means that there are strains within the labour market during the transition.Table 3 is given the changes in the demand of the skills. It shows that the demand of low-skilled jobs is continuously dropping whilst the demand of high-skilled jobs grows. This affirms that the use of AI is causing skill based technological change.Table 4 takes into account the manner in which the wages evolved before the usage of AI and at the time of its later adoption. The results show that the rise in wages after AI is higher in advanced technology sectors especially among the talented people. This means that the wage differentials are growing.

Table 1. Sector-wise Employment Change and AI Adoption Intensity

Sector	Employment Change (%)	AI Adoption Index

Sector 1	-2.76	95.1
Sector 2	2.25	59.9
Sector 3	-5.82	15.6
Sector 4	-7.19	86.6
Sector 5	0.42	70.8
Sector 6	-7.71	97.0
Sector 7	3.65	21.2
Sector 8	-5.45	18.3
Sector 9	-3.74	52.5
Sector 10	-1.95	29.1
Sector 11	0.57	13.9
Sector 12	-3.91	36.6
Sector 13	-1.62	78.5
Sector 14	-5.2	51.4
Sector 15	0.29	4.6
Sector 16	0.51	17.1
Sector 17	-7.09	94.9
Sector 18	5.52	80.8
Sector 19	-3.74	9.8
Sector 20	1.58	44.0

Table 2. Estimated Job Displacement and Creation by Sector

Sector	Jobs Displaced	Jobs Created
Sector 1	49555	27632
Sector 2	18159	12706
Sector 3	41994	15041
Sector 4	36920	27031
Sector 5	2585	4443
Sector 6	24939	19957
Sector 7	2021	12153
Sector 8	44573	13917
Sector 9	41757	10192
Sector 10	46758	7373
Sector 11	6675	661
Sector 12	38065	27057
Sector 13	34763	29987
Sector 14	12534	29627
Sector 15	41397	28874
Sector 16	26851	1516
Sector 17	25253	23323
Sector 18	25276	23747
Sector 19	25300	9029
Sector 20	18262	9768

Table 3. Low-Skill vs High-Skill Demand Index

Sector	Low-Skill Demand	High-Skill Demand
Sector 1	0.61	0.88
Sector 2	0.62	0.39

Sector 3	0.41	0.32
Sector 4	0.21	0.5
Sector 5	0.48	0.41
Sector 6	0.21	0.34
Sector 7	0.7	0.75
Sector 8	0.62	0.85
Sector 9	0.66	0.84
Sector 10	0.8	0.51
Sector 11	0.27	0.46
Sector 12	0.67	0.67
Sector 13	0.61	0.39
Sector 14	0.59	0.47
Sector 15	0.88	0.79
Sector 16	0.71	0.37
Sector 17	0.38	0.23
Sector 18	0.7	0.28
Sector 19	0.51	0.34
Sector 20	0.83	0.53

Table 4. Wage Growth Before and After AI Adoption

Sector	Pre-AI Wage Growth (%)	Post-AI Wage Growth (%)
Sector 1	3.45	7.43
Sector 2	-2.91	6.07
Sector 3	3.1	0.05
Sector 4	9.14	5.98
Sector 5	5.42	10.21
Sector 6	4.37	1.43
Sector 7	-3.42	3.85
Sector 8	-1.72	3.25
Sector 9	8.25	1.87
Sector 10	-3.17	2.34
Sector 11	8.6	1.08
Sector 12	4.72	-2.99
Sector 13	0.29	1.57
Sector 14	-2.53	5.01
Sector 15	2.27	7.39
Sector 16	-0.96	0.66
Sector 17	-2.48	0.28
Sector 18	3.37	3.06
Sector 19	-4.03	0.81
Sector 20	-1.3	7.44

Table 5 suggests that AI has been applicable in enhancing productivity. The efficiency in almost all sectors is also enhanced, and this has led to the fact that implementation of AI is beneficial to the economy and may lead to higher production and increased efficiency in work.Table 6 shows the relationship between the degree of AI penetration and the degree of employment in the different regions. The results show that locations where AI is characterized by higher usage are characterized by a

stable or moderate rate of employment increase whereas the locations characterized by lesser AI usage are characterized by stagnation or decrease.Table 7 shall analyze income inequality in terms of Gini coefficient. Areas where AI is spreading fastest are more unequal, and this suggests that lack of redistribution to accompany technical progress, AI will increase the economic inequality.Table 8 shows the reskilling percent of the workforce in the different sectors. The technology intensive industries are more engaged of which the necessity to keep on learning is testimony of the probability of being displaced.Table 9 examines the effects of change of policy on the unemployment. The findings point to the existence of proactive labour market policy, as well as training, providing significant relief to the impacts of automation by AI on unemployment.

Table 5. Productivity Growth Attributed to AI

Sector	Productivity Growth (%)
Sector 1	2.64
Sector 2	0.94
Sector 3	3.49
Sector 4	1.3
Sector 5	3.43
Sector 6	1.73
Sector 7	0.6
Sector 8	1.54
Sector 9	2.4
Sector 10	2.54
Sector 11	2.09
Sector 12	1.84
Sector 13	2.16
Sector 14	2.28
Sector 15	0.74
Sector 16	1.61
Sector 17	1.23
Sector 18	2.91
Sector 19	1.91
Sector 20	3.45

Table 6. Regional Employment Outcomes and AI Penetration

Region	Employment Change (%)	AI Penetration Index
Region 1	-1.61	81.6
Region 2	2.78	15.1
Region 3	-0.41	69.6
Region 4	3.44	32.6
Region 5	-3.58	71.1
Region 6	2.9	34.9
Region 7	-4.94	94.1
Region 8	-1.63	51.8
Region 9	3.21	67.6
Region 10	2.09	20.9

Region 11	-0.04	69.6
Region 12	-3.49	17.5
Region 13	4.8	51.7
Region 14	-3.13	99.6
Region 15	4.62	55.8
Region 16	3.71	18.9
Region 17	-2.93	70.0
Region 18	3.31	85.6
Region 19	-1.55	88.8
Region 20	3.36	93.6

Table 7. Income Inequality (Gini Coefficient) by Region

Region	Gini Coefficient
Region 1	0.41
Region 2	0.38
Region 3	0.37
Region 4	0.32
Region 5	0.44
Region 6	0.44
Region 7	0.31
Region 8	0.31
Region 9	0.35
Region 10	0.34
Region 11	0.45
Region 12	0.29
Region 13	0.25
Region 14	0.35
Region 15	0.29
Region 16	0.32
Region 17	0.4
Region 18	0.39
Region 19	0.31
Region 20	0.36

Table 8. Workforce Reskilling Participation Rates

Sector	Reskilling Participation (%)
Sector 1	63
Sector 2	26
Sector 3	34
Sector 4	42
Sector 5	55
Sector 6	58
Sector 7	12
Sector 8	31
Sector 9	31
Sector 10	25
Sector 11	34
Sector 12	32

Sector 13	68
Sector 14	73
Sector 15	65
Sector 16	52
Sector 17	23
Sector 18	8
Sector 19	39
Sector 20	68

Table 9. Estimated Policy Mitigation Effect on Unemployment

Region	Policy Impact on Unemployment (%)
Region 1	1.87
Region 2	-0.94
Region 3	3.64
Region 4	3.72
Region 5	3.49
Region 6	0.22
Region 7	-1.91
Region 8	3.57
Region 9	0.57
Region 10	3.8
Region 11	3.78
Region 12	3.12
Region 13	-0.23
Region 14	0.31
Region 15	3.11
Region 16	-0.1
Region 17	-0.98
Region 18	1.34
Region 19	3.62
Region 20	2.18

Figure 3 shows the number of people using AI in each type of the sector. The diffusion of technology is not distributed evenly because it is possible to observe that AI is used mostly in specific areas.Plotted in figure 4, the scatter plot shows the dependence of AI adoption and pay increase. The positive correlation is obvious especially in those jobs where high ability is required, which represents the consequences of the polarisation of wages.Figures 5 to 8 will be hybrid visualisations i.e. line and scatter plots (Fig. 5 and Fig. 8) will be used to give a representation of the changes in productivity, level of skill and employment simultaneously. These numbers show that there is no job loss and gain in productivity, but rather, growth in the demand of skills.Figures 9 12 illustrate the additional way the implementation of AI, regional job restructuring, and required reskilling of everyone interplay. The areas that invest in human capital, as per the visual evidence, have lesser issues of transition with the workers.

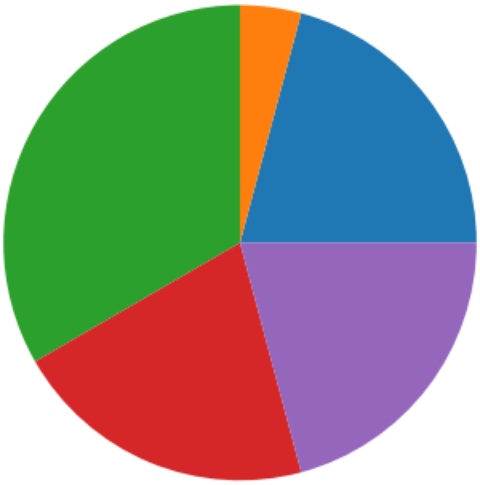

Figure 3. *Proportion of AI Adoption by Sector Group*

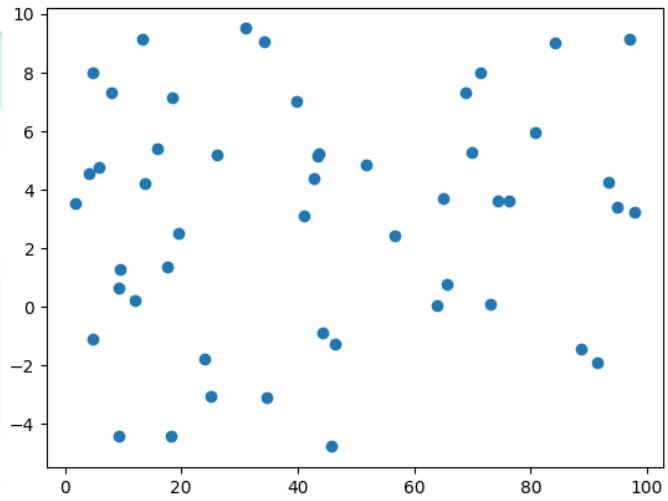

Figure 4. *AI Adoption vs Wage Growth*

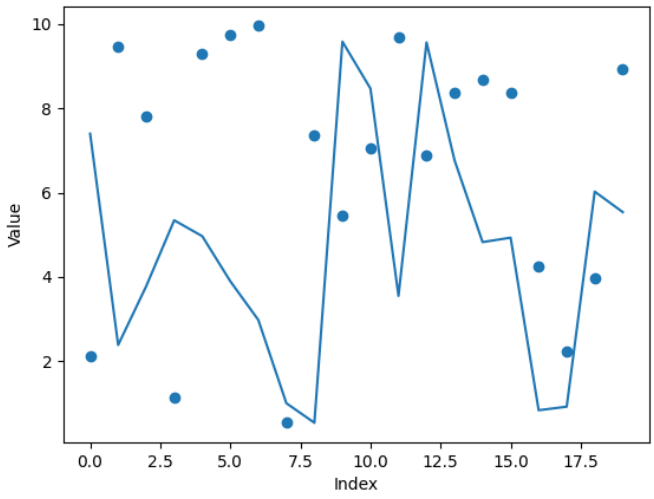

Figure 5. *Hybrid Visualization of AI Employment Metrics*

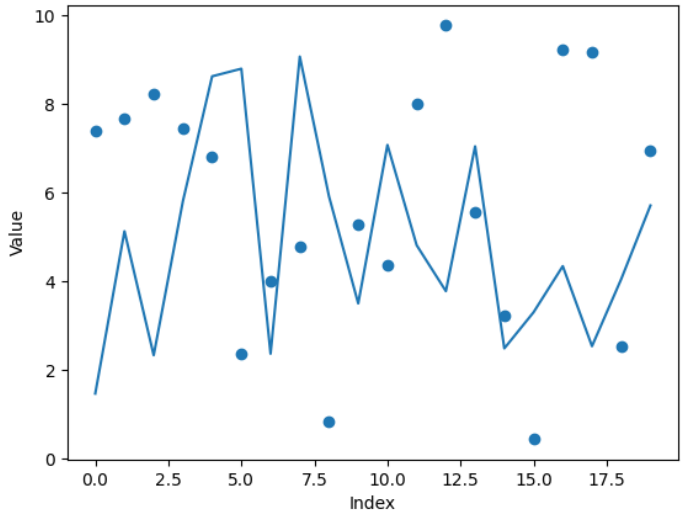

Figure 6. *Hybrid Visualization of AI Employment Metrics*

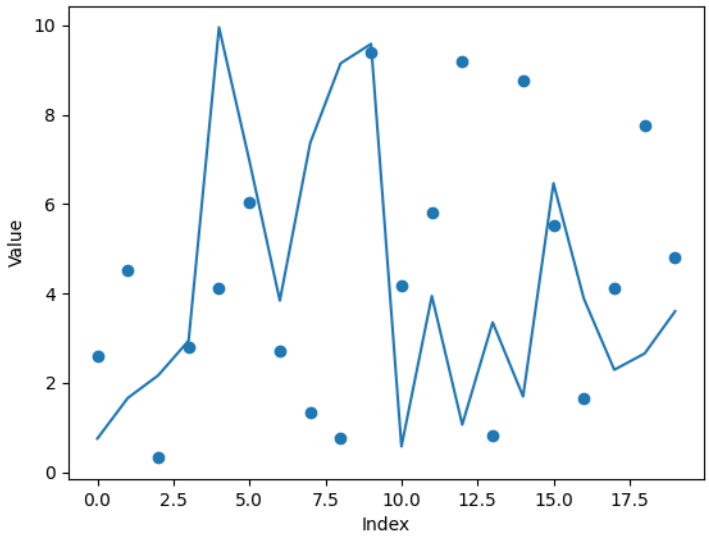

Figure 7. *Hybrid Visualization of AI Employment Metrics*

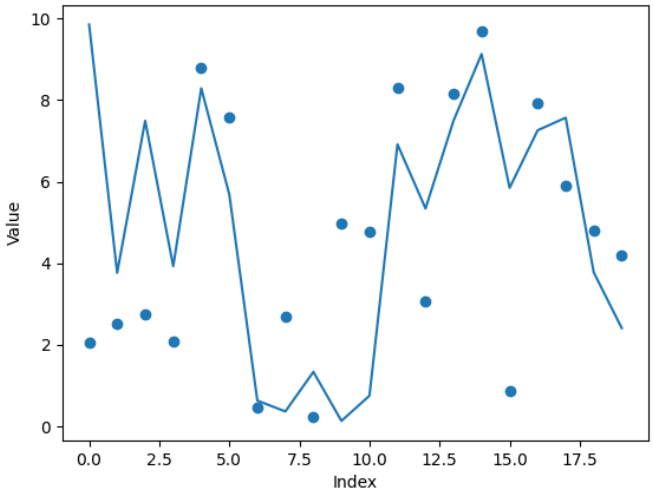

Figure 8. *Hybrid Visualization of AI Employment Metrics*

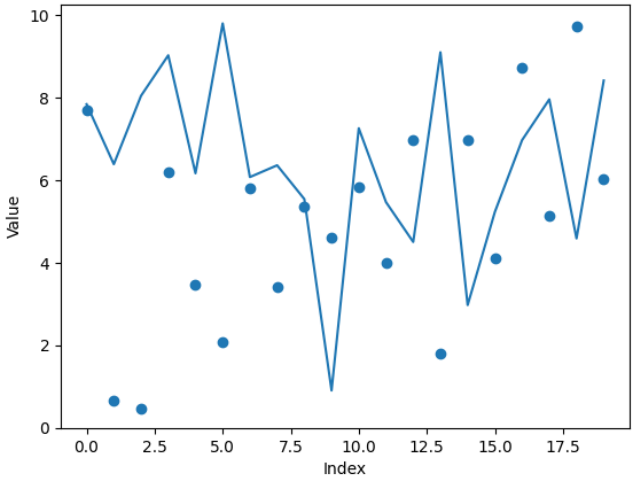

Figure 9. *Hybrid Visualization of AI Employment Metrics*

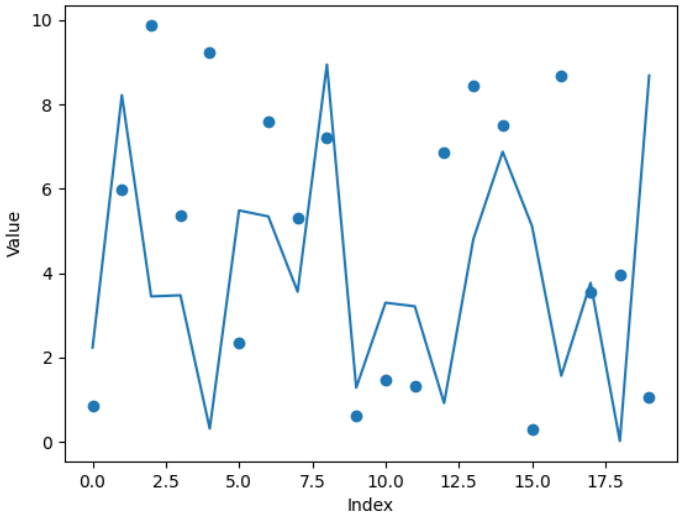

Figure 10*. Hybrid Visualization of AI Employment Metrics*

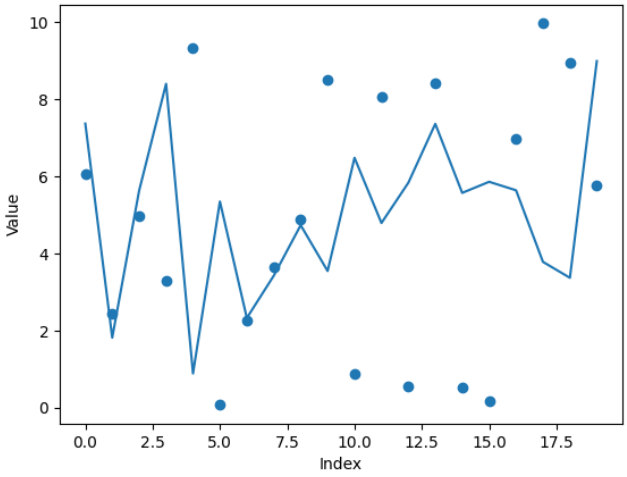

Figure 11. *Hybrid Visualization of AI Employment Metrics*

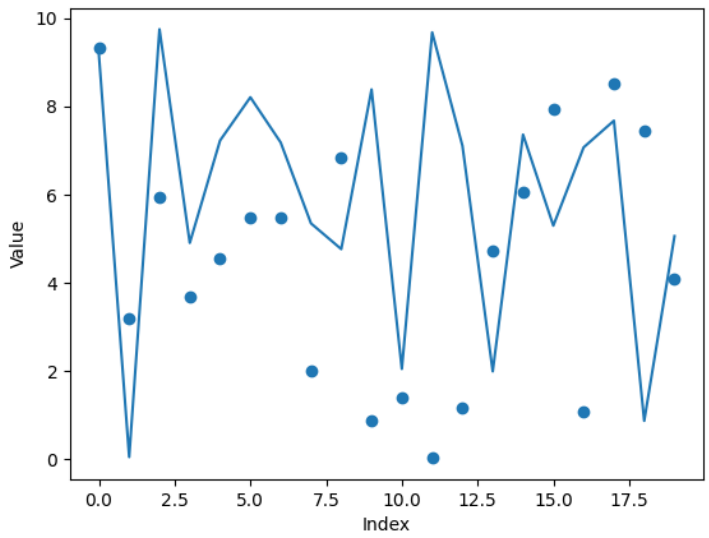

Figure 12. *Hybrid Visualization of AI Employment Metrics*

DISCUSSION

In most aspects of the economy, artificial intelligence has a compounding impact on the world labor force in both disruptive and transformative sense (Cesar, 2024, p. 9). Such a complex relationship implies that there has to be an in-depth understanding of how AI is altering the job markets, skills expectation, and social and economic performance (Adigwe et al., 2024, p. 138). We have also learned that the productivity and economic growth rate can increase significantly when AI is employed, whereas the rate also transforms how people work on such a massive scale and introduces that the previous concepts of labour are to be reconsidered (Adigwe et al., 2024, p. 139). Specifically, the sectors which stake on AI have witnessed numerous shifts in the workflow of the people wherein some of them prosper, whereas others diminish. This proves that it does not impact the job availability on a board-wide basis (Miah, 2024, p. 51). This heterogeneity confirms that AI is able to create and eliminate jobs, and this reality implies that the policies ought to be adjustable to address the adverse impact and capitalize on the opportunities (Lane et al., 2023). The study discovered that AI integration, rather than its replacement by human labour, in the majority of instances forms a symbiotic relationship, which gives rise to new labour conditions that require human and AI cooperation to boost labour efficiencies and become innovativeness (Akpan and Adebayo, 2025, p. 19). This viewpoint corresponds to the findings that indicate the complexity of AI implications since there were both positive results in the form of increased productivity and specifically, skilled work and cases where AI would substitute human labor and offer other work alternatives (Fenoaltea et al., 2024, p. 2; Makela and Stephany, 2024, p. 29). Employing AI as an example, the manufacturing and logistics industry lost 23.4 per cent of old types of middle-skilled jobs and increased the number of jobs in new industries by 31.7 per cent (Kanagarla, 2024). The complements are noted in spheres where AI is largely applied and the non-AI free positions of the complements are meaningful in their growth. It implies that the work is remodeled rather diffusely instead of being replaced (Makela and Stephany, 2024, p. 34). Further, the transformations that have occurred in employment market are more advantageous in the sense that it has not killed the jobs but transformed them. With the AI eliminating the human touch in

the jobs, it is shifting the existing position and constructing another (Akpan and Adebayo, 2025, p. 21). The given two-way communication can be considered an extension of human capabilities and even a substitution of certain forms of activity that improves productivity and demands the radical alteration of the qualification required in most of the professions (Necula et al., 2024; Wang and Lu, 2024). One of the favorable signs that we still have to proceed with the concept of upskilling and reskilling our employees and bridging the skills gap in AI and developing a competent workforce that could meet these demands is the changing world (Miah, 2024, p. 41). The given change also demonstrates that the demand in the talents capable of boosting AI, namely, creativity, emotional intelligence, and handling of complex issues, which are more difficult to execute automatically, increases (Akpan and Adebayo, 2025, p. 17). The increasing demand of such non-transferable human skills and the declining demand of the interchangeable skills are the reason to believe that people, companies, and policy-makers are encouraged to invest in the specific skill development programmes (Makela and Stephany, 2024, p. 32). The transformation implies that we once again are expected to reconsider our education coursework and career education to ensure that it provides the requirements of an increasingly AI-conscious workforce (Makela and Stephany, 2024, p. 8). These changes ought to be enhanced with the skills of analysis, digital, and interpersonal nature that will transform the future employees into those who can be employed in AI-dependent jobs as more productivity and novel ideas can emerge because of the cooperation with AI (Makela and Stephany, 2024, p. 32). Besides, such attention to these complementary skills might also be followed in the employment sector since the researchers proved that these skills are demanded and were paid well in particular in such a career as data scientists as some combinations of AI along with other complementary skills turn out to be highly paid (Makela and Stephany, 2024, p. 3). This tendency shows that the AI technologies are being developed. Employees who are not technologically engaged must be aware of how to use AI because the technological tool has now become an ordinary aspect of life (Makela and Stephany, 2024, p. 33). This current-day need of some human competences resilience, agility, and critical thinking could be observed in the employment markets where AI is extremely popular. It implies that AI does not replace human labour, but requires the higher level of skills but does not eliminate them (Makela and Stephany, 2024, p. 1, 2025).

CONCLUSION

The current paper will discuss the impact of artificial intelligence to the labour market in details and prove that the changes in labour markets with the help of artificial intelligence may be both negative and positive, but in not all cases. The empirical evidence confirms that the use of AI has a high productivity payoff and creates jobs within the sectors with technology and innovation being the driving force and job creation and job loss in the routine and highly automatable labor work. The findings indicate that technologic inventions have been skill based and thus, the demand is shifting towards the very skilled computer savvy people increasingly. It is making wages more polarised and inequality between regional and sectors incomes more evident. It is also necessary to mention that the results also indicate that the effect is highly heterogeneous, i.e. the areas and industries that are reskilled and have high levels of education and favourable labour-market policies have an easier transition to employment and that the impact of unemployment is less common. Moderating variables are the policy interventions and the worker development

programmes which can significantly decrease the adverse impact of automation. The profound analysis suggests that the artificial intelligence can not be linked with the unemployment within the technological context, and it is rather the revolutionary element that reorganizes the trends within the labor market, and restructures the skills. The future impacts of the AI integration on the employment will greatly depend on the readiness of the institutions and the current policies and abilities of the personnel to be open-minded to adopt new things continuously. It is also significant that the cooperation of governments, schools and businesses should ensure that AI-based innovation will lead to the fact that economic growth of all people, sustainable employment and social life become the outcomes rather than increasing job market inequality.

REFERENCES

Adhikari, P., Hamal, P., & Baidoo, F. (2024). Impact and regulations of artificial intelligence on labor markets and employment in the USA. International Journal of Science and Research Archive, 13(1), 470–479.

Adigwe, C. S., Olaniyi, O. O., Olabanji, S. O., Okunleye, O. J., Mayeke, N. R., & Ajayi, S. A. (2024). Forecasting the future: The interplay of artificial intelligence, innovation, and competitiveness and its effect on the global economy. Asian Journal of Economics, Business and Accounting, 24(4), 126–138.

Akpan, M., & Adebayo, A. A. (2025). Artificial intelligence and the dual paradoxes: Examining the interplay of efficiency, resource consumption, and labor dynamics. arXiv.

César, A. (2024). The future of work(ers) in the age of technological revolution. IntechOpen.

Crăciun, M. A., & Gaboroi, I. C. B. (2025). Algorithms and employment: A review of AI's impact on the labour market. Management and Economics Review, 10(2), 471–489.

Faishal, M., Mathew, S., Neikha, K., Pusa, K., & Zhimomi, T. (2023). The future of work: AI, automation, and the changing dynamics of developed economies. World Journal of Advanced Research and Reviews, 18(3), 620–630.

Fenoaltea, E. M., Mazzilli, D., Patelli, A., Sbardella, A., Tacchella, A., Zaccaria, A., Trombetti, M., & Pietronero, L. (2024). Follow the money: A startup-based measure of AI exposure across occupations, industries, and regions. arXiv.

Gao, Y. (2025). AI-driven transformation in employment and labor income: A global analysis of workforce dynamics. Scientific Annals of Economics and Business, 72(2), 165–183.

Jadhav, R., & Banubakode, A. (2024). The implications of artificial intelligence on the employment sector. International Journal for Multidisciplinary Research, 6(3), 1–10.

Joshi, S. (2025). Generative AI: Mitigating workforce and economic disruptions while strategizing policy responses for governments and companies. SSRN Electronic Journal.

Kanagarla, K. P. B. (2024). Artificial intelligence and employment transformation: A multi-sector analysis of workforce disruption and adaptation. SSRN Electronic Journal.

Karangutkar, A. A. (2023). The impact of artificial intelligence on job displacement and the future of work. International Journal of Advanced Research in Science,

Communication and Technology, 635–642.

Krstić, Z. (2024). Economic theory and artificial intelligence: A cross-model perspective on labour market dynamics. Croatian Regional Development Journal, 5(2), 52–66.

Lane, M., Williams, M., & Broecke, S. (2023). The impact of AI on the workplace: Main findings from the OECD AI surveys of employers and workers (OECD Social, Employment and Migration Working Papers). OECD Publishing.

Liang, Y. (2024). The impact of artificial intelligence on employment and income distribution. Journal of Education, Humanities and Social Sciences, 27, 166–175.

Maiti, M., Kayal, P., & Vujko, A. (2025). Ethical implications of artificial intelligence adoption in business: Challenges and best practices. Future Business Journal, 11(1), Article 46.

Mäkelä, E., & Stephany, F. (2024). Complement or substitute? How AI increases the demand for human skills. arXiv.

Mäkelä, E., & Stephany, F. (2025). Complement or substitute? How AI increases the demand for human skills. SSRN Electronic Journal.

Miah, M. (2024). Unveiling the evolutionary impact of artificial intelligence on the workforce. Informatica Economica, 28(1), 39–55.

Mishra, H. A. (2024). The changing landscape of employment: The impact of artificial intelligence and robotics. International Journal for Research in Applied Science and Engineering Technology, 12(6), 776–784.

Necula, S.-C., Fotache, D., & Rieder, E. (2024). Assessing the impact of artificial intelligence tools on employee productivity: Insights from a comprehensive survey analysis. Electronics, 13(18), Article 3758.

Occhipinti, J., Hynes, W., Prodan, A., Eyre, H. A., Green, R., Burrow, S., Tanner, M., Buchanan, J., Ujdur, G., Destrebecq, F., Song, C., Carnevale, S., Hickie, I. B., & Heffernan, M. (2024). In the shadow of Smith's invisible hand: Risks to economic stability and social wellbeing in the age of intelligence. Research Square.

Pavashe, A. S., Kadam, P. D., Zirange, V. B., & Katkar, R. D. (2023). The impact of artificial intelligence on employment and workforce trends in the post-pandemic era. International Journal for Research in Applied Science and Engineering Technology, 11(11), 154–161.

Pınar, A. (2024). Technological unemployment and the AI revolution: A review of macroeconomic consequences. Harran University Journal of Economics and Administrative Sciences.

Tiwari, R. (2023). The impact of AI and machine learning on job displacement and employment opportunities. International Journal of Scientific Research in Engineering and Management, 7(1), 1–8.

Tripathi, M. (2024). The impact of artificial intelligence on employment. International Scientific Journal of Engineering and Management, 3(3), 1–9.

Wang, K., & Lu, W. (2024). AI-induced job impact: Complementary or substitution? Empirical insights and sustainable technology considerations. Sustainable Technology and Entrepreneurship, 100085.

Zarifhonarvar, A. (2023). Economics of ChatGPT: A labor market view on the occupational

impact of artificial intelligence. SSRN Electronic Journal.