Policy Network on Artificial Intelligence (PNAI)
Discussion Paper
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Promoting multistakeholder dialogue on AI related labor issues

PNAI Sub-group on Labor issues throughout AI's life cycle

1. Introduction

Artificial intelligence (AI) is increasingly becoming a fundamental part of modern society, permeating sectors, such as healthcare, finance, manufacturing, and the service industry. AI is transforming the workforce landscape, for example automating tasks and creating new job roles that demand advanced technical skills. As AI evolves, its impact on labor and employment is of critical concern. As other major technological innovations in the past, AI holds the potential to both enhance and disrupt labor markets all over the world. The transformative capabilities of AI are reshaping industries, leading to both opportunities and challenges for the workforce.

On the one hand, AI's capacity to both complement or substitute tasks previously handled by humans[1], might be particularly beneficial for workers whose skills are complemented, as they would see a substantial increase in their productivity and income. On the other hand, while it is too early to claim how many jobs have been directly impacted,[2] there are concerns on job substitution (where tasks are entirely taken by AI systems) and displacement (where tasks are replaced with new ones, because they are partially taken by AI systems), as well as unemployment and other labor issues.

Additionally, from a development perspective, AI holds potential to accelerate the achievement of Sustainable Development Goals (SDGs), as well as create jobs in new and emerging sectors such as renewable energy. Examples can be found in waste management, and recycling, mining, and manufacturing industries. Also, it could help close inequalities by integrating traditionally excluded populations into the workforce, using AI. Examples of AI supporting digital inclusion of differently abled persons are

[1] ILO. Information web page: Artificial Intelligence. Accessed in September 2024
[2] There is research that estimates that 84% of tasks in UK central government bureaucratic decision-making processes can be automated to some degree. See: Vincent J. Straub, Youmna Hashem, Jonathan Bright et al. AI for bureaucratic productivity: Measuring the potential of AI to help automate 143 million UK government transactions (March 2024))

deaf people using speech to text AI to participate in the labor market more easily, and neurodiverse persons who are provided with content in Easy Read format (in multiple languages including visuals) through generative AI.

We note that the accelerating development and uptake of AI systems across sectors has translated into new roles and new career paths, for example AI scientists, AI trainers, AI UX developers, AI assisted health and disability care workers, and AI governance specialists. Because of this, vocational and technical training is required, as well as reskilling or upskilling large parts of the workforce around the world, especially in the Global South. Also, some of the new positions, for example those related to data labeling for AI training, are mainly carried out in the Global South and raise new challenges regarding fair working conditions and protection of workers' rights[3].

Besides this, as AI is being used to perform managerial tasks (such as hiring, monitoring, supervising, and training workers) to optimize human resources (HR) processes, issues regarding the role of AI oversight over workers and guaranteeing workers' rights in this new employer-employee relation emerge. A pertinent example would be the increasing use of AI-powered Applicants Tracking Systems (ATS) in resume screening, which may sometimes overlook candidates in the initial screening process.[4]

Taking this into account, in the following pages we analyze examples that show how labor issues related to AI are being tackled, propose best practices and review ILO, OECD, and UNESCO recommendations. With this scope in mind, we advise on how the labor market stakeholders (employers, employees, unions, and the government) might carry out valuable dialogue. Our goals are:

- Provide an overview of key concerns, challenges, and opportunities arising from the impact of AI on labor and the workforce
- Review laws, policy, and other global initiatives in relation to AI and labor
- Explore policy recommendations and strategies that can help mitigate some of the labor challenges and appropriately deploy the benefits of AI

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[3]Adrienne Williams and Milagros Miceli, Essay Data Work and its Layers of (In)visibility. (Accessed in September)2024 and (https://dl.acm.org/doi/10.1145/3415186, Milagros Miceli andJulian Posada, The Data-Production Dispositif, Proceedings of the ACM on Human-Computer Interaction (November 2022) and Milagros Miceli, Martin Schuessler and Tianling Yang, Between Subjectivity and Imposition: Power Dynamics in Data Annotation for Computer Vision, Proceedings of the ACM on Human-Computer Interaction (October 20202)

[4]Claire Cain Miller and Josh Katz (April 2024) What Researchers Discovered When They Sent 80.000 Fake Resumes to U.S. Jobs, New York Times. Katarina Drucker (2016)Avoiding Discrimination and Filtering of Qualified Candidates by ATS Software.
Glassdoor, Is your ATS discriminatory?, blog post (January 2023). Dave Zielinski (March 2022) Is Your Applicant Tracking System Hurting Your Recruiting Efforts?,HR Magazine.Alex Rosenblat, Tamara Kneese, and Danah Boyd (2014) Networked Employment Discrimination, Data & Society Working Paper

Our multi-stakeholder drafting team will provide recommendations on how to better assess the labor related issues pointed out, and how to promote meaningful policy discussions that defend a human-centered and human rights-based development and deployment of AI systems in the labor market.

2. Opportunities and challenges of AI in the labor market: A state of the art

AI has many converging interests of workers, however, without an international labor standard or instrument that addresses emerging technologies, governing AI remains both an opportunity and a challenge. It is important to consider how both arise on the labor market with the use of AI. We highlight the following examples of opportunities and challenges of AI in the labor market:

1.1. Opportunities of AI in the labor market

AI's positive impact on worker productivity and competitiveness. Given AI's complementarity with human work, it will increase in productivity and competitiveness of workers and companies. For example, generative AI can boost performance of highly skilled workers almost by 40% compared with workers who don't use it[5]. Additionally, in recent OECD survey most employees who use AI in their work reported improved performance, improved job enjoyment as well as better mental and physical health[6].

AI-based new occupations and new fields of work. The advent and general deployment of AI around the world will require new roles and occupations to be carried out by humans. This will translate into new jobs in the labor markets. WEF uses the concept of creative destruction to point out how AI might lead to some jobs disappearing, while at the same time creating new roles and positions. WEF[7] clusters the roles under three categories: 1) Trainers, people involved in developing AI[8], 2) Explainers, people making AI easy to use for members of the public[9], and 3) Sustainers, people guaranteeing AI systems are used as good as possible[10].

AI governance empowers workers and addresses current challenges and inequalities in the workplace. AI can be used to reach broader talent pools, reduce biases, and

[5] Dell'Acqua, F.„ et al (2023) Navigating the jagged technological frontier: Field experimental evidence of the effects of AI on knowledge worker productivity and quality. Harvard Business School Draft Paper 24-013. Available at: https://mitsloan.mit.edu/sites/default/files/2023-10/SSRN-id4573321.pdf
[6] Lane, M., Williams, M., & Broecke, S. (2023) The impact of AI on the workplace: Main findings from the OECD Ai survey of employers and workers, *OECD Social, Employment and Migration Working Papers*, OECD.
[7] World Economic Forum (2023) Jobs of tomorrow: Large Language Models and Jobs
[8] Roles such as engineers and scientists working on AI.
[9] Roles such as AI user experience designers, personalized AI assistants, tutors or coaches.
[10] Roles such as content creators, data curators, and ethics and governance specialists.

promote diversity in hiring processes[11], additionally AI might empower Diversity, Equity and Inclusion (DEI) processes in HR departments. This is due to reduction of harmful biases in hiring processes, as well as promotion of more neutral analysis of workers, both translating into more inclusive hiring of groups that have been often excluded from the workforce. In addition, AI could help to include traditionally excluded groups through digital inclusion, such as differently abled people.

AI to empower education and reskilling of workers. AI has the potential to transform teaching and learning practices across different levels and innovate new kinds of teaching and developing skills that are required for life and work in the AI era[12]. On that note, AI will play a key role in empowering workers and providing them with traditional and new skills to improve their livelihoods and participation in the workplace.

AI supports more capacity in strained sectors such as healthcare, other critical public services and utilities. Increasing demand in the provision of critical public services and utilities requires an ever-growing number of workers to take care of basic needs in countries all over the world. In key sectors, such as healthcare[13], there are major deficits of workers that affect the quality and coverage of the provision of fundamental services. On that note, strengthening current workers with AI would improve their capacity and productivity, reducing pressure in these sectors.

1.2. Challenges of AI in the labor market

Data workers' conditions. Workers in countries of the Global South are increasingly engaged in data work such as data labeling, cleaning, moderation, tending to the ever-increasing demand for training data for AI systems. In some instances, they have been forced to work long hours in repetitive, monotonous, and precarious conditions.[14]

Job loss and decrease of income due to automation. As task automation substitutes and replaces workers' activities, this might translate into job losses especially in sectors particularly exposed to automation[15]. Additionally, task automation might lead to less human workforce needed in certain roles, which could translate in less wages and income for workers.

Skills gap and upskilling requirements. AI's impact has been seen with the need to upskill, and adequately train the workforce for new jobs or tasks required as AI

[11] PWC (2024) How AI is being adopted to accelerate gender equity in the workplace
[12] UNESCO (2019) Beijing consensus on Artificial Intelligence and education
[13] WEF estimates a shortfall of 10 million healthcare workers worldwide by 2030.
[14] Billy Perrigo (January 2023)OpenAI Used Kenyan Workers on Less Than $2 Per Hour to Make ChatGPT Less Toxic, Time magazine
[15] Holzer, H. (2022) Understanding the impact of automation on workers, jobs, and wages

proliferates the workspace. While upskilling and retraining is a significant challenge for workers of all ages, there is also a growing risk of deskilling of some workers[16].

Mental health and job insecurity. Recent strikes by artists and creative unions in the USA underscore insecurity and fear around AI replacing jobs in creative industries. Additionally, psycho-social effects related to widening use of AI might affect workers. The most frequently noted effects on the psyche of the workforce have negative connotations: Replacing one's own labor force through AI might lead to fear of losing one's job, and stress from reskilling as AI is increasingly capable of tasks that traditionally required human work. However, at the same time, replacing or supplementing the workforce through AI, might have positive psycho-social consequences by giving the individual more space and time for self-fulfilment.

Wage polarization. IMF report[17] on AI's impact on wages and jobs highlights, how professionals in high income jobs are more likely to be both exposed to the impact of AI, and gain higher than proportionate income through it. Additionally, most AI models and Intellectual Property, as well as advanced model development are situated and carried out in the Global North. This situation might lead to AI capacities not being distributed equitably geographically. Both these cases risk polarization of wage and income.

Worker surveillance and privacy concerns. Companies are increasingly using AI for worker tracking and oversight tools to monitor their actions and performance. This might lead to unlawful tracking of rests, bathroom, and food breaks especially in warehouse and logistics operations[18]. This might leave workers vulnerable to privacy and surveillance risks in some sectors.

Rise in insecure and irregular work. AI has the potential to alter industrial relations, potentially leading to more insecure contracts such as 'just-in-time' worker contracts, which, as US white house reports[19], lead to less inclination of companies to engage in worker training and stable work relationships.

1.3. The role of unions on labor issues related to AI systems

Unions play a crucial role in integrating the digital dimension into collective bargaining and advocating for regulatory reforms that protect workers' rights in the age of AI. They play a key role in mitigating risks AI brings by ensuring equitable treatment for

[16] Nithya Sambasivan, Rajesh Veeraraghavan (2022) The Deskilling of Domain Expertise in AI Development, CHI 2022
[17] IMF (2024) Gen-AI: Artificial Intelligence and the Future of Work, staff discussion note
[18] European Commission (2024) Algorithmic management practices in regular workplaces, study by European Commission Joint Research Center
[19] Rebecca Stropoli (2023) AI is going to disrupt the labour market. It doesn't have to destroy it, Chicago Booth Review

all workers, regardless of gender, race, political beliefs, or other personal characteristics.

Unions have the potential to play a pivotal role in retraining workers by leveraging their bargaining power and involvement in the processes of technological adaptation across various economic sectors, as well as in the internal management of personnel within organizations. Trade unions themselves need to follow the AI development landscape closely, build understanding of AI and plan proactively, and ensure they have resources and internal AI expertise in their own organizations.

Trade unions need to actively engage in the uptake and regulation of AI and other new technologies. They can contribute to technological innovations being adopted in a manner that safeguards fair and equitable working conditions for workers in emerging digital environments.

Unions can lead in key actions such as: forming strategic alliances with social actors who advocate for workers' rights, promoting continuous training to update skills, integrating new competencies for managing AI and other emerging technologies, and ensuring mechanisms for oversight to prevent misuse and ensure ethical, responsible technology use.

As an example, African labor unions have voiced significant concerns regarding the impact of AI on Labor and employment security. Their stance typically addresses several key issues: job displacement, wage pressure, workers' rights, inclusive policy development, social safety nets, and the regulation of AI. Unions in South Africa and across Africa advocate for proactive measures to tackle the challenges posed by AI, emphasizing worker protections, equitable transitions, and the necessity for inclusive policymaking. Some examples can be found in the South African Mining Sector, Kenya's Digital Economy, the Nigerian Health Sector and South African Transport Sector.

1.4. Current regulation of AI in the labor market

The norm-setting of AI governance to realize justice and equity for the workers must be done in a comprehensive manner that promotes workers' rights as well as innovation. Therefore, the available global Internet governance fora is an ideal scenario for guiding recommendations, discussing common consensus, and exploring possible pathways and modalities to establish AI norm-setting.

Taking the opportunities and challenges into account, and even though there is not a globally binding agreement on AI in the workplace, we recognize valuable advances made in some countries and regions around the world that can provide valuable insights for recommendations to address labor issues related to AI. Namely, we bring forward the following:

i) The US Department of Labor established the AI Principles for developers and employers, which lay out guidelines for the use of AI in the labor market[20], that promote empowering workers employment in the design, development, testing, training, use, and oversight of AI systems for use in the workplace and ethically developing AI systems to protect workers, that consider AI governance and human oversight.

ii) The EU AI Act [21] laid out protections for workers' rights by establishing selected uses of AI systems in the workplace as high-risk. Particularly, the regulation states that certain AI systems used should have special oversight considering the impact they might have on future career prospects of individuals, livelihoods of those persons and workers' rights.

iii) In response to Chinese governmental concerns about algorithms controlling the dissemination of news and online content, the Cyberspace Administration of China enacted the Provisions on the Management of Algorithmic Recommendations in Internet Information Services in 2021. The regulation includes extensive provisions for content control and provides protections for workers impacted by algorithms, among other measures. It also establishes the "algorithm registry" for use in future regulatory frameworks. Article 20 of the regulation establishes protections for workers whose schedules and salaries are determined by algorithmic systems.[22]

On that note, we recognize relevant efforts being carried out to develop regulatory frameworks for AI in the labor market, that establish different levels of worker protection in different regions of the world such as the USA, the EU and China.

3. Recommendations - promoting workers-led AI governance

In general terms, we underline the importance of promoting workers-led AI governance, that considers the promotion of workers' rights in the AI era as well as innovation and productivity. On that sense, we lay out a framework of recommendations based on the principles of empowerment and participation:

- **Establish frameworks that enable workers to actively engage in AI decision-making processes** at the national, regional, and multilateral levels, and promote

[20] US Department of Labor (2024) Department of Labor's Artificial Intelligence and Worker Well-being: Principles for Developers and Employers.
[21] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence)
[22] Cyberspace Administration of China (2021) Provisions on the Management of Algorithmic Recommendations in Internet Information Services

appropriate opportunities to engage in consultation on AI implementation at company or organization level.

- **Ensure that AI serves as a tool for productivity enhancement** rather than job replacement. Safeguard workers' rights and job security amidst AI proliferation in helping people, businesses, and communities to unlock their potential.

- **Ethical Frameworks**: Organizations should create codes of conduct that outlines responsibilities and accountability for both workers and management in AI usage, considering transparency, training and support, participatory governance, and protection of rights, laid out in international ethics and legal instruments

- **Establish Joint Committees**: Form committees with equal representation from workers and management to oversee AI integration in organizations, addressing concerns related to labor issues.

- **Encourage Sectoral Open Dialogue**: Organize regular forums for workers to voice concerns and suggestions about AI use in different sectors, building trust and open communication, while promoting workers' rights, productivity, and innovation.

- **Incorporate Worker Feedback in designing AI systems**: Involve workers in the design and testing phases of AI systems that they will interact in their work.

- **Develop both safeguard policy and AI systems** that promote respect to worker autonomy and well-being, gender-mainstreaming, respecting cultural sensitivity, ensuring the worker's freedom of belief and personal cultural and/or religious practices. The AI systems should be interoperable and respond to sectoral specificity. Encourage international organizations and development partners to provide an enabling environment, financial support. Design key pilot projects partnering with relevant government, workers' unions, and employer institutions.

- **Strengthen governance frameworks**: Develop comprehensive, human-centered, international AI governance standards that include clear ethical guidelines and labor protections to apply to algorithmic management. Promote AI transparency and accountability to ensure that workers are aware and understand how AI affects their employment, and their performance evaluation and the expected impacts towards their career pathways.

- **Support reskilling and upskilling programs**: Promote the creation of funds and capacity centers for reskilling and upskilling initiatives, particularly in sectors that are specially exposed to job displacement. On that note, stakeholders

should work together to provide accessible training on AI-related skills and roles such as data analytics, machine learning, digital tools and even prompt engineering. Partnering with educational institutions, governments, and private sector companies to develop tailored training programs that empower the workforce to adapt to the changing job market, focusing on skills in AI, data management, and technology operation.

- **Mainstream AI use in safeguarding the workers' rights**: Develop guidelines for AI use to address the intersectional issues in workplaces (gender, religious, and cultural context) to be governed by equitable standards.

- **Promote the development of global and uniform standards for monitoring AI's impact on the labor market**: There are multiple heterogeneous methodologies for monitoring AI's impact on labor, leading to inconsistencies on how to measure and tackle this issue. Without standardized metrics and methodologies, it is challenging to measure AI's effects on the workforce accurately and establish policy based on precise data.

- **Support cross-discipline research on labor issues related to AI**: Investigate the key labor challenges and opportunities that arise throughout the various stages of AI's lifecycle, including its creation, implementation, ongoing upkeep, and regulatory oversight.

4. Conclusions

Considering the impact that AI has in different tasks including those managerial ones, it is relevant to recognize the importance of governance frameworks throughout AI's lifecycle to guarantee that all relevant stakeholders are considered, to protect workers' rights while also promoting technological innovation and productivity. Tackling the labor-related issues brought on by AI calls for an all-encompassing, multistakeholder strategy that balances innovation and worker rights protection, following the example of the Internet Governance Forum. To ensure AI benefits the workforce without aggravating current disparities, it is imperative to implement tiered governance for AI, conduct thorough bias testing, develope national policies and norms, and foster international collaboration. To guarantee that AI develops in a way that upholds ethical principles and promotes an inclusive workplace, PNAI should concentrate on expanding its interactions with global organizations and regional stakeholders as we go forward.

Authors

Policy Network on AI Sub-group on Labor issues throughout AI's life cycle

Team leaders

Olga Cavalli, University of the Defense of Argentina, Argentina
Germán Lopez Ardila, Javeriana University, Colombia

Penholders

Muhammad Shahzad Aslam, Assistant Professor, Xiamen University Malaysia
Azeem Sajjad, Ministry of IT & Telecom, Pakistan
Mary Rose Ofianga, Program Manager, Wadhwani Foundation
Samuel Jose, Children and Youth Major Group, Indonesia
Lufuno T Tshikalange, Orizur Consulting Enterprise, South Africa
Shantanu Prabhat, Individual contributor, India
Shobhit S., Individual contributor, India
Christian Gmelin, GIZ, Germany
Julian Theseira, Center for AI and Digital Policy (CAIDP), Malaysia
Mondli Mungwe, Mungwe Industries International, South Africa

About the Policy Network on Artificial Intelligence

The Policy Network on Artificial Intelligence (PNAI) addresses policy matters related to artificial intelligence and data governance. It is a global multistakeholder effort hosted by the United Nations' Internet Governance Forum, providing a platform for stakeholders and changemakers in the AI field to contribute their expertise, insights, and recommendations. PNAI's primary goal is to foster dialogue and contribute to the global AI policy discourse. Participation in and contribution are open to everyone.