POLICY BRIEF





The Invisible Layer: Protecting Data Workers in Global Al Value Chains

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Trade and Investment



Abstract

Large technology corporations attempt to externalise the social costs of artificial intelligence (AI) development, including the hidden human labour. Data work tasks – including data cleaning, image labelling, transcribing, content moderation and, most recently, red teaming – are indispensable to continually train AI models and enhance the accuracy of their outcomes. These tasks are performed by a globally dispersed workforce who encounter decent work deficits such as exploitative wages, workplace surveillance, automated evaluation, absence of welfare benefits, poor mental health outcomes, arbitrary termination, and refusal of wages. Moreover, these workers are predominantly concentrated in the Global South even as they drive AI expansion in the Global North, demonstrating the inequities in global AI value chains.

Yet, data workers have remained invisible in public and policy discourse, despite numerous governance directives at national and global levels. The G20 Generic Framework for Mapping Global Value Chains is a useful starting point for investigating vulnerabilities in global value chains. This brief aims to build on this mandate to identify how workers' rights are imperilled by fragmented and precarious Al value chains, and provide an evidentiary basis for policymaking in this regard. It argues for the development of a due diligence framework in Al value chains that ensures corporations and Al developers are accountable, and data workers' human and labour rights are protected – a necessary step towards ensuring sustainability and inclusiveness in Al value chains.

Keywords: Artificial Intelligence, Global Value Chains, Data Workers, Labour Rights

Diagnosis

Data work is the labour involved in the collection, curation, classification, labelling, and verification of data.¹ The quality of data directly impacts the precision of artificial intelligence/machine learning (AI/ML) predictions, making data work an indispensable part of global AI value chains.² This is a rapidly growing industry, projected to generate \$3.6 billion in revenue by 2027.³ Millions of data workers create training datasets, validate model outcomes, and mimic computational responses through digital labour platforms⁴ and outsourcing companies⁵ to sustain AI research, development, and use. This work is predominantly carried out in Africa, Asia, and Latin America,⁶ where it is framed as an economic opportunity for workers experiencing economic crises, political unrest, or social stigma.⁷ The promise of autonomy and supplementary income also attracts women workers, for whom precarity and unsafe working conditions are even more pronounced than for men.⁸

¹ Milagros Miceli and Julian Posada, "The Data-Production Dispositif," *Proc. ACM Hum.-Comput. Interact.* 6, CSCW2 (2022): https://doi.org/10.1145/3555561.

² Anwar, M.A., 2024. Value chains of Al: Data training firms, platforms, and workers. In *The Future of Labour: How Al, Technological Disruption and Practice will Change the Way we Work*. Routledge.; Mary L. Gray and Siddharth Suri, Ghost Work: How to Stop Silicon Valley from Building a New Global Underclass (Harper Business, 2019); Nithya Sambasivan, Shivani Kapania, Hannah Highfill, et al. "Everyone wants to do the model work, not the data work: Data Cascades in High-Stakes Al," *CHI Conference on Human Factors in Computing Systems*, (2021): 1-15, https://dl.acm.org/doi/abs/10.1145/3411764.3445518.

³ Research and Markets, "Data Annotation and Labeling Market Component, Data Type, Application (Dataset Management, Sentiment Analysis), Annotation Type, Vertical (BFSI, IT and ITES, Healthcare and Life Sciences) and Region - Global Forecast to 2027," (2023): https://www.researchandmarkets.com/reports/5744079/data-annotation-labeling-market-component-data.

⁴ Julian Posada, "Embedded Reproduction in Platform Data Work." Information, Communication & Society 25 (6) (2022): 816, doi:10.1080/1369118X.2022.2049849.

⁵ Sana Ahmad, Martin Krzywdzinski, "Moderating in Obscurity: How Indian Content Moderators Work in Global Content Moderation Value Chains," in Digital Work in the Planetary Market, ed Mark Graham and Fabian Ferrari (The MIT Press, 2022).; Milagros Miceli, Martin Schuessler, and Tianling Yang, "Between Subjectivity and Imposition: Power Dynamics in Data Annotation for Computer Vision," Proc. ACM Hum.-Comput. Interact. 4, CSCW2 (2020): 115, https://doi.org/10.1145/3415186.; Ding Wang, Shantanu Prabhat and Nithya Sambasivan, "Whose Al Dream? In search of the aspiration in data annotation," Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems (2022): 1, https://doi.org/10.48550/arXiv.2203.10748.

⁶ Mohammad A. Anwar and Mark Graham, The Digital Continent: Placing Africa in Planetary Networks of Work (Oxford University Press, 2022); Tubaro, P., Casilli, A.A., Cornet, M., Le Ludec, C. and Torres Cierpe, J., 2025. Where does Al come from? A global case study across Europe, Africa, and Latin America. New Political Economy, pp.1-14.

⁷ Philip Jones, Work Without the Worker: Labour in the Age of Platform Capitalism (Verso Books, 2021).; Tuukka Lehtiniemi and Minna Ruckenstein, "Prisoners Training Al Ghosts: Humans and Values in Data Labour," in Everyday Automation: Experiencing and Anticipating Emerging Technologies (Routledge, 2022), 184 - 197.

⁸ Anita Gurumurthy, Khawla Zainab and Sadhana Sanjay, "The Macro Frames of Microwork: A Study of Indian Women Workers on AMT in the Post-Pandemic Moment," IT for Change (2021):

However, data workers are paid exploitative wages (in many cases below the national minimum wage) that are not commensurate with their contribution to the Al economy. They face severe delays in payment, arbitrary rejections of work, and a lack of stable inflow of work, which adversely impacts their livelihood and income security.9 In a striking example, data workers who were essential to making OpenAI's ChatGPT safe for public consumption by labelling and marking up hateful, violent, or offensive content were paid less than \$2 a day. 10 Intense productivity demands are imposed, such as unachievable targets, constant surveillance, long hours of work, and quick turnaround times for deliverables. 11 This takes a huge toll on the health and wellbeing of data workers, as they are constantly under pressure to deliver high-quality datasets at an unreasonable pace. Further, data work for content moderation, red teaming (or the adversarial testing of AI systems), and allied tasks involve viewing highly disturbing content containing traumatising, graphic, violent imagery and language, and visuals depicting sexual assault, child abuse, violent executions, self-harm, suicide, war, and conflict. 12 When workers speak out and attempt to bargain for better working conditions, they are met with retaliation and reprisals. 13

Despite recognition of this work and its importance, and the concerns raised by data workers, outsourcing firms and transnational tech corporations alike continue to evade responsibility through loopholes in policy, regulation, and contractual terms. Big tech firms whose AI products are developed on the back of this labour shift the risks and responsibilities to third-party vendors or

⁹ Dinika, A. The Human Cost of our Al-Driven Future. Noema. URL: https://www.noemamag.com/the-human-cost-of-our-ai-driven-future/.

¹⁰ Billy Perrigo, "OpenAl Used Kenyan Workers on Less Than \$2 Per Hour to Make ChatGPT Less Toxic," TIME, January 18, 2023, https://time.com/6247678/openai-chatgpt-kenya-workers/

¹¹ Srravya Chandhiramowuli, Alex S. Taylor, et al., "Making data work count," Proceedings of the ACM on Human-Computer Interaction, 8(CSCW1) (2024): 26, https://dl.acm.org/doi/10.1145/3637367.

¹² Fasica Berhane Gebrekidan, "Content moderation: The harrowing, traumatizing job that left many African data workers with mental health issues and drug dependency," True Story Award (2024): https://truestoryaward.org/story/508. ¹³ Billy Perrigo, "Inside Facebook's African Sweatshop," TIME, February 17, 2022, https://time.com/6147458/facebook-africa-content-moderation-employee-treatment/.

intermediaries (such as outsourcing firms and/or labour platforms). These actors hire data workers on contingent employment contracts, putting them outside the purview of responsibilities that employers owe workers such as social security, maternity leave, redressal for occupational harms, and recognition of collective bargaining. Governments that are keen to attract foreign investment and address high unemployment rates, especially in the Global South, create a permissive regulatory environment for such practices to thrive. 14 Countries like Kenya, India and the Philippines, where data work is prominent, have not updated their national legislation to prevent third-party contractors and big tech companies from evading legal responsibility towards data workers. Through provisions in regional and bilateral free trade agreements, they also sign away their regulatory sovereignty (eg., conceding to no performance requirements obligations) in return for foreign investment. 15 In effect, the costs of Al development are externalised to Global South jurisdictions where labour is relatively cheap and regulations often lax.

Furthermore, data workers are kept in the dark about the objects of their labour, without insight into which AI systems and companies depend on their work through restrictive non-disclosure agreements. This limits their ability to acquire transferable skills and on-the-job learning possibilities, which could enable career progression into more secure and safe employment. Workers also undergo dull and repetitive training programmes that do not provide upskilling opportunities. These arrangements are intended to segment routine tasks and treat labour as a disposable commodity to which no rights or guarantees are owed.

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¹⁴ The Economist. "Young Africans are logging in and clocking on," February 23, 2023,

https://www.economist.com/middle-east-and-africa/2023/02/23/young-africans-are-logging-in-and-clocking-on.

15 Deborah James, "Rigging the Rules: How Big Tech Uses Stealth "Trade" Agreements and How We Can Stop Them,"

State of Big Tech, February 2023, https://www.twn.my/title2/twe/2023/765.pdf.

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¹⁶ Srravya Chandhiramowuli, Alex S. Taylor, et al., "Making data work count," Proceedings of the ACM on Human-Computer Interaction, 8(CSCW1) (2024): 26, https://dl.acm.org/doi/10.1145/3637367.

¹⁷ Yasser Yousef Alrayes, "Annotate to Educate: The Dual Life of a Syrian Student & Data Annotator," Data Workers Inquiry, 2024, https://data-workers.org/yasser/.

Recommendations

Data work has the potential to boost local economies through job creation. Among South Africa's high-level priorities for its G20 presidency are Al and innovation for sustainable development. The G20's pivotal role in international economic coordination makes it uniquely positioned to lead global norms-setting on this issue. To that end we propose the following recommendations.

1. Ensuring due diligence and human rights protections in Al value chains

The G20 must come together to ensure that tech corporations carry out due diligence for human and labour rights in their value chains. In this regard, the OECD Due Diligence Guidance for Responsible Business Conduct is an instructive tool that also represents global consensus on the responsibility of corporations to ensure human rights are protected in their value chains. 18 This includes proactive assessment and honest reporting of supply chain conditions to identify, prevent, mitigate, and account for how they address actual and potential adverse impacts with respect to human rights and labour guarantees. 19 These assessments should be subject to independent audits and verifications to ensure that tech corporations and developers do not evade responsibility for poor working conditions. Work is always place-based. This means governments of the countries where data work gets done must hold unscrupulous firms accountable through legal means and penalise them (including fines and temporary suspensions of operations until corrective measures are put in place by the firms). A Kenyan court ruled that Meta was the principal employer of content moderators hired through Sama (a third-party agency) and thus responsible for protecting the mental health of these moderators, demonstrating that Big Tech corporations can be

¹⁸ OECD, OECD Due Diligence Guidance for Responsible Business Conduct (2018), https://mneguidelines.oecd.org/OECD-Due-Diligence-Guidance-for-Responsible-Business-Conduct.pdf.

¹⁹ OECD, "Steering Al's Future: Strategies for Anticipatory Governance," OECD Artificial Intelligence Papers 32 (2025): https://doi.org/10.1787/5480ff0a-en.

held accountable using domestic legal systems. By adopting such measures, the G20, drawing on its mandate to address vulnerabilities in global value chains (adopted during India's G20 presidency),²⁰ can set the norms for global governance of AI value chains.

2. Regulatory frameworks for recognition, rights and remedies

We propose that the G20 adopt a policy framework that defines the category of data work and obliges outsourcing firms and subcontractors to ensure fundamental labour rights are respected in data work.²¹ All workers, regardless of employment status, are entitled to fundamental labour rights (eg., safe working conditions, freedom of association, and freedom from forced labour) under the International Labour Organization's (ILO) Declaration on Fundamental Principles and Rights at Work. Governments of the countries where tech firms are headquartered have more responsibilities to protect workers employed by these firms. This could include mandating firms to legally commit to minimum thresholds while outsourcing their data work to the Global South. Such obligations can also be made enforceable by introducing them as performance requirements in trade agreements, which are a tool available to host states to ensure investors further national economic and social goals. Participating governments, especially in Global South countries where data work is undertaken such as India and Brazil, as well as the AU, should also support direct action by workers in enforcing these rules against firms and labour platforms. In recent years, worker-led initiatives have emerged in several regions²² to advocate for better working conditions, including

²⁰ "G20 Trade and Investment Ministers Meeting Outcome Document and Chair's Summary," G20, August 25, 2023, https://g7g20-documents.org/fileadmin/G7G20 documents/2023/G20/India/Sherpa-Irade%20and%20Investment%20Ministers/2%20Ministers%27%20Annex/G20 Trade%20and%20Investment%20Ministers%20Meeting AnnexA 25082023.pdf.

²¹ Mohammad Amir Anwar et al., 2025, "Africa's Data Workers Are Being Exploited by Foreign Tech Firms – 4 Ways to Protect Them," The Conversation, March 31, 2025, https://theconversation.com/africas-data-workers-are-being-exploited-by-foreign-tech-firms-4-ways-to-protect-them-252957.

²² Anonymous, "Big Win in Kenya! 185 Former Facebook Content Moderators to Take Their Case Against Mass Firing to Trial After Courts Slap Down Meta Appeal," Foxglove, September 23, 2024,

https://www.foxglove.org.uk/2024/09/23/facebook-content-moderators-kenya-meta-appeal/. And Niamh McIntyre, Rosie Bradbury, and Billy Perrigo, "Behind TikTok's Boom: A Legion of Traumatized, \$10-a-Day Content Moderators," Time, October 20, 2022, https://time.com/6223340/tiktok-content-moderators-latin-america/.

limits on working hours, health and well-being support, among other safeguards and protections. Through labour departments, inspectors, and legal aid cells, governments can also support workers in filing claims and taking legal action against companies that violate labour standards. Finally, the G20 can play a proactive role in the multilateral process to determine decent work standards for digital economy workers (set to be negotiated this year at the ILO) to fill the regulatory vacuum that allows exploitative labour practices to thrive.

3. Developing digital industrial policies for meaningful employment

Governments must prioritise quality of employment over quantity in emerging sectors. This requires a coordinated approach across G20 countries to ensure that the gains of AI development are fairly distributed to workers, who can contribute to local economies in stable, secure, and safe employment conditions. G20 countries, in particular from the Global South, must invest in strengthening their domestic digital industrial capabilities and ensuring that the emerging platform and data economy provides decent employment for their citizens. This is aligned with South Africa's high-level priority of encouraging inclusive economic growth, industrialisation, and employment, and reducing inequality. Prioritising investments in domestic industry and local economies is therefore critical to reduce the dependency on insecure employment in data work as a remedy to national unemployment.²³ G20 countries should also engage in exchange of information, strategies, and outcomes to adopt rights-oriented labour and corporate regulations that enable sustainable digital economies to thrive.

Finally, there is an urgent imperative for a coordinated approach among Global South countries to update their national labour legislation to effectively protect

²³ Anita Gurumurthy, Khawla Zainab and Sadhana Sanjay, "The Macro Frames of Microwork: A Study of Indian Women Workers on AMT in the Post-Pandemic Moment," IT for Change (2021):

workers' rights in the new reality of work. Standard employment is fast giving way to contingent and insecure work contracts, facilitated by the rapid growth of digital labour platforms and third-party employment agencies. Antiquated labour legislation that makes access to a range of essential labour rights dependent on employment status thus needs an urgent upgrade, to ensure that fundamental labour rights are respected and protected across global value chains.





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